

DCR-DVD110E/DVD115E/DVD310E/DVD410E/DVD610/ DVD610E/DVD710/DVD710E/DVD810/DVD810E RMT-835

SERVICE MANUAL

LEVEL 2

Ver. 1.1 2008.03

Revision History

Revised-1

Replace the previously issued
SERVICE MANUAL 9-852-249-31
with this manual.



Photo: DCR-DVD810

US Model
Canadian Model
AEP Model
UK Model
East European Model
North European Model
E Model
Australian Model
Hong Kong Model
Chinese Model
Korea Model
Argentine Model
Brazilian Model
Tourist Model
Japanese Model

Link

SPECIFICATIONS	DISASSEMBLY	SCHEMATIC DIAGRAMS
MODEL INFORMATION TABLE	BLOCK DIAGRAMS	PRINTED WIRING BOARDS
SERVICE NOTE	FRAME SCHEMATIC DIAGRAM	REPAIR PARTS LIST

• Precaution on Replacing the VC-520 Board

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

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



DIGITAL VIDEO CAMERA RECORDER

SONY®



SPECIFICATIONS

System

Video compression format

MPEG2/JPEG (Still images)

Audio compression format

DCR-DVD110E/DVD610E

Dolby Digital 2ch

Dolby Digital Stereo Creator

DCR-DVD115E/DVD310E/DVD410E/

DVD710E/DVD810E

Dolby Digital 2/5.1ch

Dolby Digital 5.1 Creator

Video signal

PAL color, CCIR standards

Internal memory (DCR-DVD410E/ DVD810E)

8 GB

When measuring media capacity, 1 GB equals 1 billion bytes, a portion of which is used for data management.

Usable discs

8 cm DVD-RW/DVD+RW/DVD-R/
DVD+R DL

Movie recording format

Internal memory (DCR-DVD410E/

DVD810E)

MPEG2-PS

Disc

DVD-RW: DVD-VIDEO (VIDEO mode),

DVD-Video Recording (VR mode)

DVD+RW: DVD+RW Video

DVD-R/DVD+R DL: DVD-VIDEO

"Memory Stick PRO Duo"

MPEG2-PS

Still image recording format

Exif Ver.2.2*

Viewfinder

Electric viewfinder (color)

Image device

DCR-DVD110E/DVD115E/DVD610E

2.25 mm (1/8 type) CCD (Charge Coupled Device)

Gross:

Approx. 800 000 pixels

Effective (Movie, 16:9)

Approx. 490 000 pixels

Effective (Still, 16:9)

Approx. 310 000 pixels

Effective (Still, 4:3)

Approx. 410 000 pixels

DCR-DVD310E/DVD410E/DVD710E/

DVD810E

3 mm (1/6 type) CCD (Charge Coupled Device)

Gross:

Approx. 1 070 000 pixels

Effective (Movie, 16:9)

Approx. 670 000 pixels

Effective (Still, 16:9)

Approx. 750 000 pixels

Effective (Still, 4:3)

Approx. 1 000 000 pixels

Lens

Carl Zeiss Vario-Tessar

DCR-DVD110E/DVD115E/DVD610E

Optical: 40×, Digital: 80×, 2000×

DCR-DVD310E/DVD410E/DVD710E/

DVD810E

Optical: 25×, Digital: 50×, 2000×

Filter diameter: 30 mm (1 3/16 in.)

Focal length

DCR-DVD110E/DVD115E/DVD610E

F 1.8 - 4.1

f = 1.9 - 76 mm (3/32 - 3 in.)

When converted to a 35 mm still camera

For movies:

41 - 1 640 mm (1 5/8 - 64 5/8 in.) (16:9)

For still images:

48 - 1 920 mm (1 15/16 - 75 5/8 in.) (4:3)

DCR-DVD310E/DVD410E/DVD710E/

DVD810E

F 1.8 - 3.2

f = 2.5 - 62.5 mm (1/8 - 2 1/2 in.)

When converted to a 35 mm still camera

For movies:

41 - 1 189 mm (1 5/8 - 46 7/8 in.) (16:9)**

For still images:

36 - 900 mm (1 7/16 - 35 1/2 in.) (4:3)

Color temperature

[AUTO], [ONE PUSH], [INDOOR]

(3 200 K), [OUTDOOR] (5 800 K)

Minimum illumination

DCR-DVD110E/DVD115E/DVD610E

6 lx (lux) (AUTO SLW SHUTTR ON, Shutter

speed 1/25 second)

0 lx (lux) (during NightShot plus function)

DCR-DVD310E/DVD410E/DVD710E/

DVD810E

8 lx (lux) (AUTO SLW SHUTTR ON, Shutter

speed 1/25 second)

0 lx (lux) (during NightShot plus function)

* "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.

**The focal length figures are actual figures resulting from wide angle pixel readout.

• Manufactured under license from Dolby Laboratories.

Input/Output connectors

A/V Remote Connector

Video/audio output jack

USB jack

mini-B

(DCR-DVD110E/DVD115E/DVD310E/

DVD410E: output only)

LCD screen

Picture

6.7 cm (2.7 type, aspect ratio 16:9)

Total number of pixels

123 200 (560 × 220)

General

Power requirements

DC 6.8 V/7.2 V (battery pack)

DC 8.4 V (AC Adaptor)

Average power consumption

Using the LCD screen or the viewfinder with

normal brightness

DCR-DVD110E/DVD115E/DVD610E

LCD: 2.9 W

Viewfinder: 2.7 W

DCR-DVD310E/DVD710E

LCD: 3.2 W

Viewfinder: 2.8 W

DCR-DVD410E/DVD810E

LCD: 2.8 W

Viewfinder: 2.4 W

Operating temperature

0 °C to +40 °C (32 °F to 104 °F)

Storage temperature

-20 °C to +60 °C (-4 °F to +140 °F)

Dimensions (Approx.)

55 × 89 × 130mm (2 1/4 × 3 5/8 × 5 1/8 in.)

(w × h × d) including the projecting parts

55 × 89 × 130mm (2 1/4 × 3 5/8 × 5 1/8 in.)

(w × h × d) including the projecting parts with

the rechargeable battery pack NP-FH40 attached

Mass (Approx.)

DCR-DVD110E/DVD115E/DVD610E

390 g (13 oz) main unit only

440 g (15 oz) including the rechargeable

battery pack NP-FH40 and a disc

DCR-DVD310E/DVD710E

400 g (14 oz) main unit only

450 g (15 oz) including the rechargeable

battery pack NP-FH40 and a disc

DCR-DVD410E/DVD810E

400 g (14 oz) main unit only

445 g (15 oz) including the rechargeable

battery pack NP-FH40

Supplied accessories

AC Adaptor (1)

Power cord (mains lead) (1)

A/V connecting cable (1)

USB cable (1)

Wireless Remote Commander (DCR-

DVD310E/DVD410E/DVD710E/DVD810E)

(1)

Rechargeable battery pack NP-FH40 (1)

CD-ROM "Handycam Application Software"

(1)

Operating Guide (1)

See page 5-25.

AC Adaptor AC-L200/L200B

Power requirements

AC 100 V - 240 V, 50/60 Hz

Current consumption

0.35 A - 0.18 A

Power consumption

18 W

Output voltage

DC 8.4 V*

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.)

48 × 29 × 81mm (1 15/16 × 1 3/16 × 3 1/4 in.)

(w × h × d) excluding the projecting parts

Mass (Approx.)

170g (6oz) excluding the power cord

(mains lead)

* See at the label of the AC Adaptor for other specifications.

Rechargeable battery pack NP-FH40

Maximum output voltage

DC 8.4 V

Output voltage

DC 7.2 V

Capacity

4.9 Wh (680 mAh)

Type

Li-ion

Design and specifications are subject to change without notice.



SPECIFICATIONS

System

Video compression format

MPEG2/JPEG (Still images)

Audio compression format

DCR-DVD610

Dolby Digital 2ch

Dolby Digital Stereo Creator

DCR-DVD710/DVD810

Dolby Digital 2/5.1ch

Dolby Digital 5.1 Creator

Video signal

NTSC color, EIA standards

Internal memory (DCR-DVD810)

8 GB

When measuring media capacity, 1 GB equals 1 billion bytes, a portion of which is used for data management.

Usable discs

8 cm DVD-RW/DVD+RW/DVD-R/DVD+R DL

Movie recording format

Internal memory (DCR-DVD810)

MPEG2-PS

Disc

DVD-RW: DVD-VIDEO (VIDEO mode),

DVD-Video Recording (VR mode)

DVD+RW: DVD+RW Video

DVD-R/DVD+R DL: DVD-VIDEO

“Memory Stick PRO Duo”

MPEG2-PS

Still image recording format

Exif Ver.2.2*

Viewfinder

Electric viewfinder (color)

Image device

DCR-DVD610

2.25 mm (1/8 type) CCD (Charge Coupled Device)

Gross:

Approx. 680 000 pixels

Effective (Movie, 16:9)

Approx. 410 000 pixels

Effective (Still, 16:9)

Approx. 250 000 pixels

Effective (Still, 4:3)

Approx. 340 000 pixels

DCR-DVD710/DVD810

3 mm (1/6 type) CCD (Charge Coupled Device)

Gross:

Approx. 1 070 000 pixels

Effective (Movie, 16:9)

Approx. 670 000 pixels

Effective (Still, 16:9)

Approx. 750 000 pixels

Effective (Still, 4:3)

Approx. 1 000 000 pixels

Lens

Carl Zeiss Vario-Tessar

DCR-DVD610

Optical: 40×, Digital: 80×, 2000×

DCR-DVD710/DVD810

Optical: 25×, Digital: 50×, 2000×

Filter diameter: 30 mm (1 3/16 in.)

Focal length

DCR-DVD610

F 1.8 - 4.1

f = 1.9 - 76 mm (3/32 - 3 in.)

When converted to a 35 mm still camera

For movies:

41 - 1 640 mm (1 5/8 - 64 5/8 in.) (16:9)

For still images:

48 - 1 920 mm (1 15/16 - 75 5/8 in.) (4:3)

DCR-DVD710/DVD810

F 1.8 - 3.2

f = 2.5 - 62.5 mm (1/8 - 2 1/2 in.)

When converted to a 35 mm still camera

For movies:

41 - 1 189 mm (1 5/8 - 46 7/8 in.) (16:9)**

For still images:

36 - 900 mm (1 7/16 - 35 1/2 in.) (4:3)

Color temperature

[AUTO], [ONE PUSH], [INDOOR]

(3 200 K), [OUTDOOR] (5 800 K)

Minimum illumination

DCR-DVD610

6 lx (lux) (AUTO SLW SHUTTR ON, Shutter

speed 1/30 second)

0 lx (lux) (during NightShot plus function)

DCR-DVD710/DVD810

8 lx (lux) (AUTO SLW SHUTTR ON, Shutter

speed 1/30 second)

0 lx (lux) (during NightShot plus function)

* “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.

**The focal length figures are actual figures resulting from wide angle pixel readout.

• Manufactured under license from Dolby Laboratories.

Input/Output connectors

A/V Remote Connector

Video/audio output jack

USB jack

mini-B

LCD screen

Picture

6.7 cm (2.7 type, aspect ratio 16:9)

Total number of pixels

123 200 (560 × 220)

General

Power requirements

DC 6.8 V/7.2 V (battery pack)

DC 8.4 V (AC Adaptor)

Average power consumption

Using the LCD screen or the viewfinder with normal brightness

DCR-DVD610

LCD: 2.9 W

Viewfinder: 2.7 W

DCR-DVD710

LCD: 3.3 W

Viewfinder: 2.9 W

DCR-DVD810

LCD: 2.9 W

Viewfinder: 2.5 W

Operating temperature

0 °C to +40 °C (32 °F to 104 °F)

Storage temperature

-20 °C to +60 °C (-4 °F to +140 °F)

Dimensions (Approx.)

55 × 89 × 130mm (2 1/4 × 3 5/8 × 5 1/8 in.)

(w × h × d) including the projecting parts

55 × 89 × 130mm (2 1/4 × 3 5/8 × 5 1/8 in.)

(w × h × d) including the projecting parts with

the rechargeable battery pack NP-FH40 attached

Mass (Approx.)

DCR-DVD610

390 g (13 oz) main unit only

440 g (15 oz) including the rechargeable

battery pack NP-FH40 and a disc

DCR-DVD710

400 g (14 oz) main unit only

450 g (15 oz) including the rechargeable

battery pack NP-FH40 and a disc

DCR-DVD810

400 g (14 oz) main unit only

445 g (15 oz) including the rechargeable

battery pack NP-FH40

Supplied accessories

AC Adaptor (1)

Power cord (mains lead) (1)

A/V connecting cable (1)

USB cable (1)

Wireless Remote Commander (DCR-

DVD710/DVD810) (1)

Rechargeable battery pack NP-FH40 (1)

CD-ROM “Handycam Application Software”

(1)

Operating Guide (1)

See page 5-25.

AC Adaptor AC-L200/L200B

Power requirements

AC 100 V - 240 V, 50/60 Hz

Current consumption

0.35 A - 0.18 A

Power consumption

18 W

Output voltage

DC 8.4 V*

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.)

48 × 29 × 81mm (1 15/16 × 1 3/16 × 3 1/4 in.)

(w × h × d) excluding the projecting parts

Mass (Approx.)

170 g (6 oz) excluding the power cord (mains lead)

* See at the label of the AC Adaptor for other specifications.

Rechargeable battery pack NP-FH40

Maximum output voltage

DC 8.4 V

Output voltage

DC 7.2 V

Capacity

4.9 Wh (680 mAh)

Type

Li-ion

Design and specifications are subject to change without notice.



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クリエイター搭載

映像信号

NTSCカラー、EIA標準方式

内蔵メモリー

8GB

容量は、1GBを10億バイトで計算した場合の数値です。また管理用ファイルなどを含むため、実際使用できる容量は若干減少する場合があります。

使用可能ディスク

8cmのDVD-RW/DVD+RW/DVD-R/DVD+R DL

動画記録方式

内蔵メモリー:MPEG2-PS

ディスク:

DVD-RW:

DVD-VIDEO(VIDEOモード)

DVD-Video Recording(VRモード)

DVD+RW: DVD+RW Video

DVD-R/DVD+R DL: DVD-VIDEO

"メモリースティック PRO デュオ":
MPEG2-PS

静止画記録方式

Exif Ver.2.2*

ファインダー

電子ファインダー(カラー)

撮像素子

3.0mm(1/6型)CCD固体撮像素子

総画素数:約107万画素

動画時有効画素数(16:9モード):

約67万画素

静止画時有効画素数(16:9モード):

約75万画素

静止画時有効画素数(4:3モード):

約100万画素

ズームレンズ

カール ツァイス バリオテッサー
25倍(光学)

50倍、2,000倍(デジタル)

フィルター径30mm

F1.8~3.2

f=2.5~62.5mm

35mmカメラ換算では

動画撮影時:

41~1,189mm(16:9モード)**

静止画撮影時:

36~900mm(4:3モード)

色温度切り換え

[オート]、[フンブッシュ]、

[屋内](3,200K)、[屋外](5,800K)

最低被写体照度

8 lx(ルクス)(オートスローシャッター入、

シャッタースピード 1/30秒)

0 lx(ルクス)(NightShot plus時)

* (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。

** 広角画素読み出しによる実動作値

入/出力端子

A/V リモート端子

映像音声出力端子

USB端子

mini-B

液晶画面

画面サイズ

6.7cm(2.7型、アスペクト比16:9)

総ドット数

123,200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 DC6.8V/7.2V

DC端子入力 DC8.4V

消費電力

ファインダー使用時、明るさ標準:

2.5W

液晶画面使用時、明るさ標準:

2.9W

動作温度

0℃~+40℃

保存温度

-20℃~+60℃

外形寸法

55×89×130mm(幅×高さ×奥行き)(突起部含む)

55×89×130mm(幅×高さ×奥行き)(突起部含む、付属バッテリーNP-FH40装着状態)

本体質量

約400g(本体のみ)

撮影時総質量

約445g(バッテリーNP-FH40含む)

付属品

ACアダプター (1)

電源コード (1)

A/V接続ケーブル (1)

USBケーブル (1)

ワイヤレスリモコン (1)

リチャージャブルバッテリーパック

NP-FH40 (1)

CD-ROM「Handycam Application

Software」(1)

取扱説明書 (1)

保証書 (1)

ACアダプター AC-L200/L200B

電源

AC100V-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48×29×81mm(最大突起部をのぞく)
(幅×高さ×奥行き)

質量

約170g(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-FH40

最大電圧

DC8.4V

公称電圧

DC7.2V

容量

4.9Wh(680mAh)

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。

- 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。

Model information table

Non MEGA model

Model	DCR-DVD110E	DCR-DVD115E	DCR-DVD610	DCR-DVD610E
Destination	AEP, UK, EE, NE	AEP, UK, EE, NE	US, CND, E, AR, BR	AEP, E, AUS, HK, CH
Color system	PAL	PAL	NTSC	PAL
5.1ch recording	×	○	×	×
Data copy	CAM → PC	○	○	○
	PC → CAM	×	×	○
Remote commander	×	×	×	×
Active Interface Shoe	×	×	×	×
Internal flash memory	×	×	×	×
BL board	BL-021	BL-021	BL-021	BL-021
CD board	CD-731	CD-731	CD-731	CD-731
CK board	CK-191	CK-191	CK-191	CK-191
MS board	MS-391	MS-391	MS-391	MS-391
PD board	PD-351	PD-351	PD-351	PD-351
RV board	RV-011	RV-011	RV-011	RV-011

MEGA model

Model	DCR-DVD310E	DCR-DVD410E	DCR-DVD710	DCR-DVD710E	DCR-DVD810	DCR-DVD810E
Destination	AEP, UK, EE, NE	AEP, UK, EE, NE	US, CND, E, AR	AEP, E, CH	US, CND, E, KR, AR, JE, J	AEP, E, AUS, HK, JE
Color system	PAL	PAL	NTSC	PAL	NTSC	PAL
5.1ch recording	○	○	○	○	○	○
Data copy	CAM → PC	○	○	○	○	○
	PC → CAM	×	×	○	○	○
Remote commander	○	○	○	○	○	○
Active Interface Shoe	○	○	○	○	○	○
Internal flash memory	×	○	×	×	○	○
BL board	BL-022	BL-022	BL-022	BL-022	BL-022	BL-022
CD board	CD-687	CD-687	CD-687	CD-672/CD-687	CD-687	CD-672/CD-687
CK board	CK-192	CK-192	CK-192	CK-192	CK-192	CK-192
MS board	MS-392	MS-392	MS-392	MS-392	MS-392	MS-392
PD board	PD-352	PD-352	PD-352	PD-352	PD-352	PD-352
RV board	RV-012	RV-012	RV-012	RV-012	RV-012	RV-012

- Abbreviation

- AR : Argentine model
- AUS : Australian model
- BR : Brazilian model
- CH : Chinese model
- CND : Canadian model
- EE : East European model
- HK : Hong Kong model
- J : Japanese model
- JE : Tourist model
- KR : Korea model
- MX : Mexican model
- NE : North European model

CAUTION :

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

CLASS 1 LASER PRODUCT
LASER KLASSE 1
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

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.

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:

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.

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.

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.

注意

電池の交換は、正しく行わないと破裂する恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。

サービス、点検時には次のことにご注意下さい。

1. 注意事項をお守りください。
サービスのとき特に注意を要する箇所については、キャビネット、シャーシ、部品などにラベルや捺印で注意事項を表示しています。これらの注意書き及び取扱説明書等の注意事項を必ずお守り下さい。
2. 指定部品のご使用を
セットの部品は難燃性や耐電圧など安全上の特性を持ったものとなっています。従って交換部品は、使用されていたものと同じ特性の部品を使用して下さい。特に回路図、部品表に△印で指定されている安全上重要な部品は必ず指定のものをご使用下さい。
3. 部品の取付けや配線の引きまわしはもとどおり
安全上、チューブやテープなどの絶縁材料を使用したり、プリント基板から浮かして取付けた部品があります。また内部配線は引きまわしやクランパによって発熱部品や高圧部品に接近しないよう配慮されていますので、これらは必ずもとどおりして下さい。
4. サービス後は安全点検を
サービスのために取外したネジ、部品、配線がもとどおりになっているか、またサービスした箇所の周辺を劣化させてしまったところがないかなどを点検し、安全性が確保されていることを確認して下さい。
5. チップ部品交換時の注意
 - 取外した部品は再使用しないで下さい。
 - タンタルコンデンサのマイナス側は熱に弱いため交換時は注意して下さい。
6. フレキシブルプリント基板の取扱いについて
 - 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。
7. 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。

1-1. POWER SUPPLY DURING REPAIRS

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

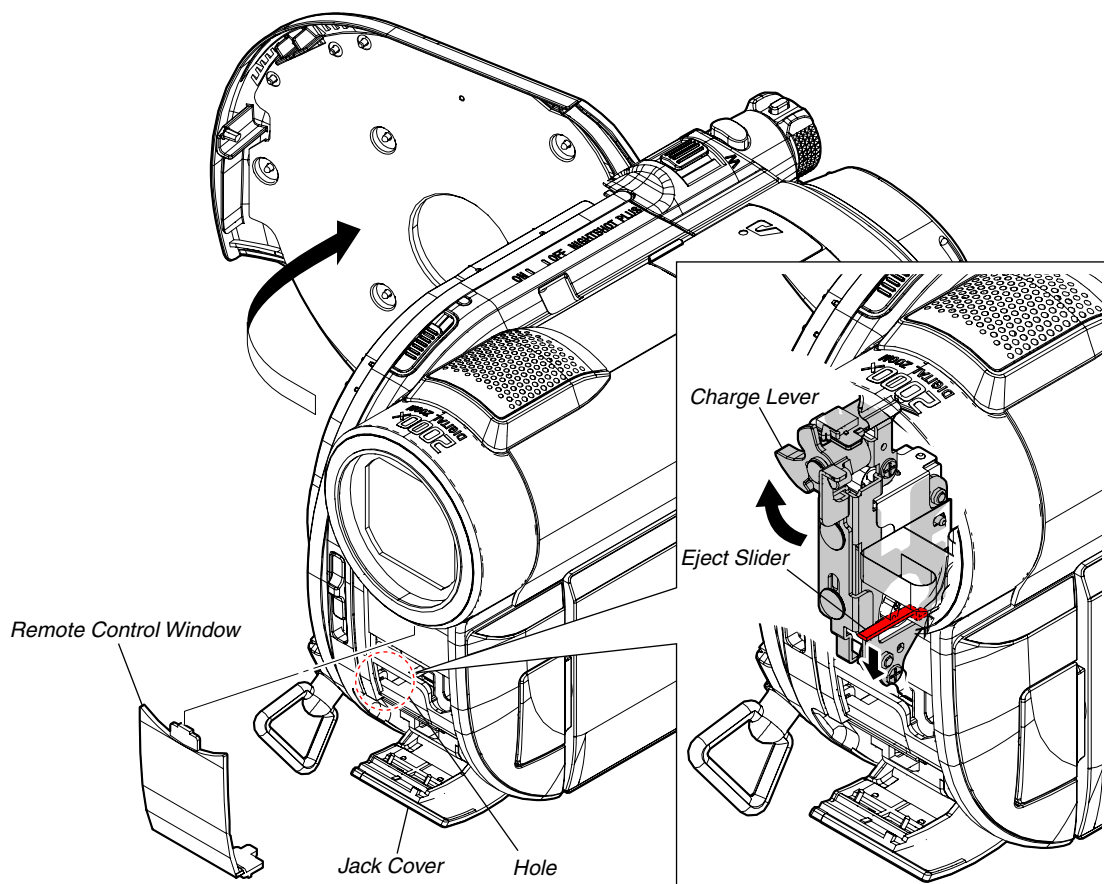
The following method is available to prevent this.

Method:

Use the AC power adaptor (AC-L200/L200B).

1-2. TO TAKE OUT A DISC WHEN NOT EJECT (FORCE EJECT)

- ① Open the jack cover and remove the remote control window.
- ② Insert the wire etc. in the hole and down the eject slider by it.

**1-3. PRECAUTION ON REPLACING THE VC-520 BOARD****DESTINATION DATA**

When you replace to the repairing board, the written destination data of repairing board also might be changed to original setting. Refer to Service Manual ADJ, and perform "DESTINATION DATA WRITE".

USB SERIAL No.

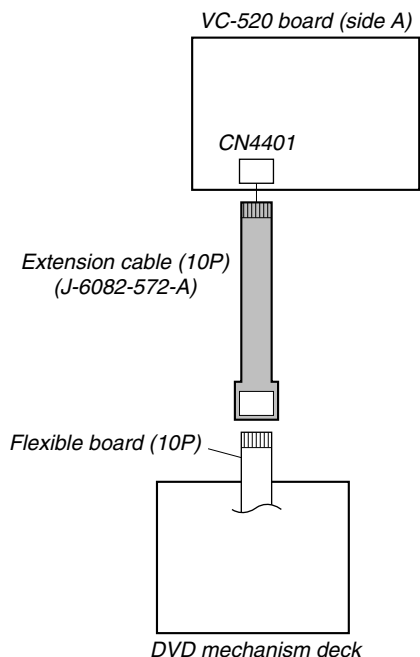
The set is shipped with a unique ID (USB Serial No.) written in it.

This ID has not been written in a new board for service, and therefore it must be entered after the board replacement.

Refer to Service Manual ADJ, and perform "USB SERIAL No. INPUT".

1-4. USING SERVICE JIG

Connect the extension cable (J-6082-572-A) between the DVD mechanism deck and CN4401 on the VC-520 board.



1-5. SELF-DIAGNOSIS FUNCTION

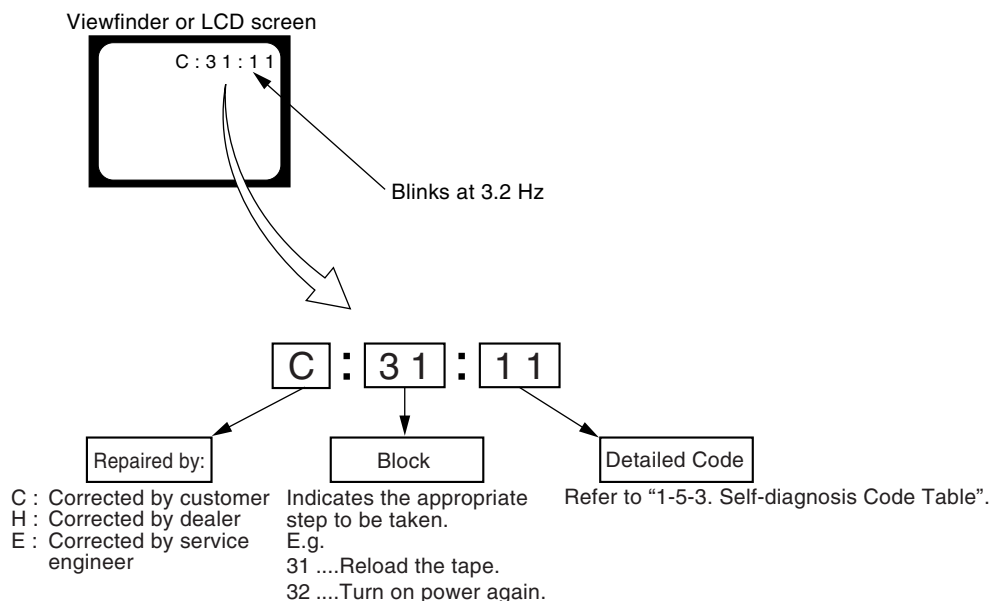
1-5-1. Self-diagnosis Function

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.

1-5-2. Self-diagnosis Display

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



1-5-3. 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 1		“Memory Stick Duo” is unformatted. “Memory Stick Duo” is broken.	Format the “Memory Stick Duo”. Insert a new “Memory Stick Duo”.
C	1 3	0 2		Disc access error	Clean the disc with the supplied cleaning cloth. Use a compatible disc with the camcorder.
E	2 0	0 0		Flash memory data are rewritten.	Make flash memory data correct value. (Note 1)
E	3 1	0 0		Drive fault	Inspect or replacement of the mechanism deck, IC (IC4401 on the VC-520 board) and drive block.
E	6 1	0 0		Difficult to adjust focus (Cannot initialize focus.)	Inspect the lens block focus reset sensor (pin ⑦ of CN5101 on the VC-520 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 (IC5401 (Non MEGA model) or IC5301 (MEGA model) on the VC-520 board) when the focusing is not performed.
E	6 1	1 0		Zoom operations fault (Cannot initialize zoom lens.)	Inspect the lens block zoom reset sensor (pin ⑩ of CN5101 on the VC-520 board) when zooming is performed when the zoom lever is operated, and the zoom motor drive circuit (IC5401 (Non MEGA model) or IC5301 (MEGA model) on the VC-520 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 (IC5401 (Non MEGA model) or IC5301 (MEGA model) on the VC-520 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 (SE7002 on the CD-672/CD-687 board) peripheral circuits. (MEGA model only)
E	6 2	0 1		Handshake correction function does not work well. (With YAW angular velocity sensor output stopped.)	Inspect YAW angular velocity sensors (SE7001 on the CD-672/CD-687 board) peripheral circuits. (MEGA model only)
E	9 4	0 0		Fault of writing to or erasing the flash memory	Inspect the flash memory (IC2101 on the VC-520 board). (Note 1)
E	9 4	0 1		Internal flash memory fault	Inspect the internal flash memory (MDL4060S3C) (DVD410E/DVD810/DVD810E only)

Note 1: Refer to “1-3. DESTINATION DATA WRITE”, ADJ (9-852-249-51).

Note 2: Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVD610E
MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E

1-1. 修理時の電源供給について

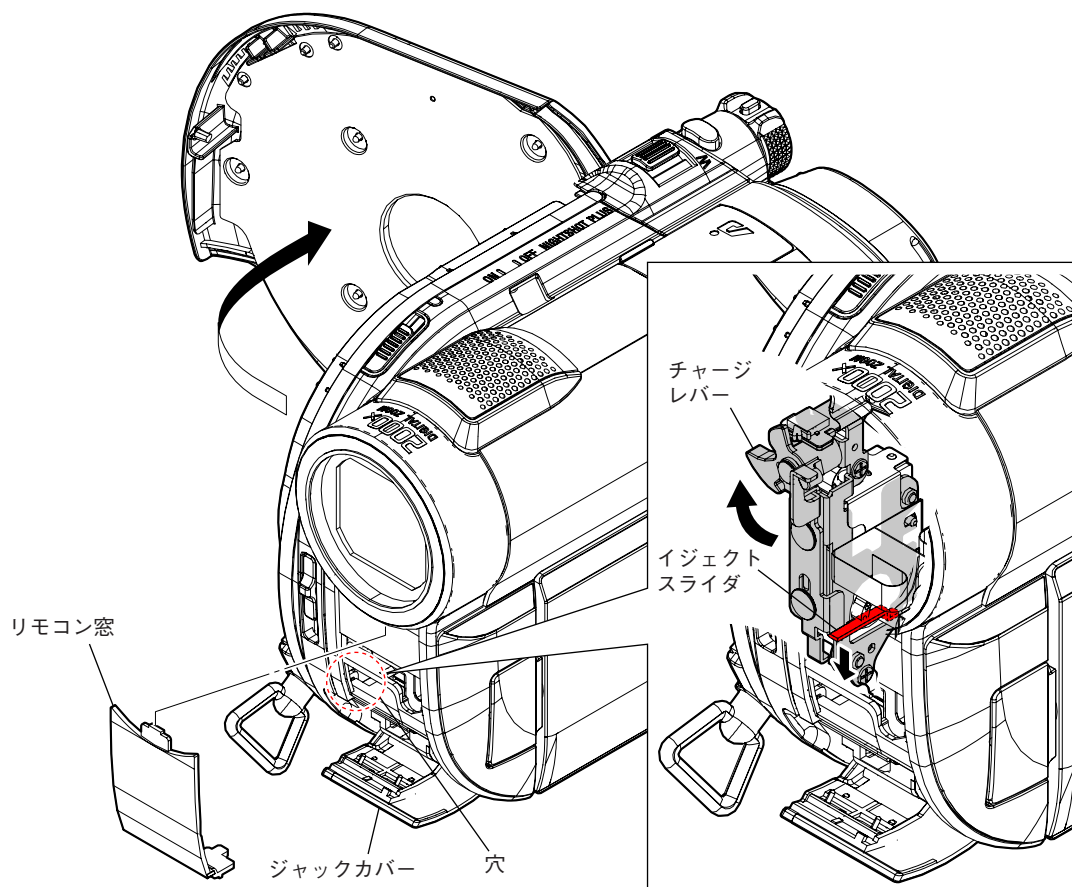
本機では、安定化電源（8.4Vdc）からバッテリー端子に電源を供給した場合、約10秒後にシャットオフし、動作しなくなります。これを避けるため、下記の方法を用いてください。

方法：

DC入力端子を使用する。（ACアダプタ（AC-L200/L200B）を使用する。）

1-2. イジェクトしない時のディスク取出し方法（強制イジェクト）

- ① ジャックカバーを開き、リモコン窓を外す。
- ② 穴に針金等を差し込み、イジェクトスライダを下げる。



1-3. VC-520基板交換時の注意

仕向けデータ

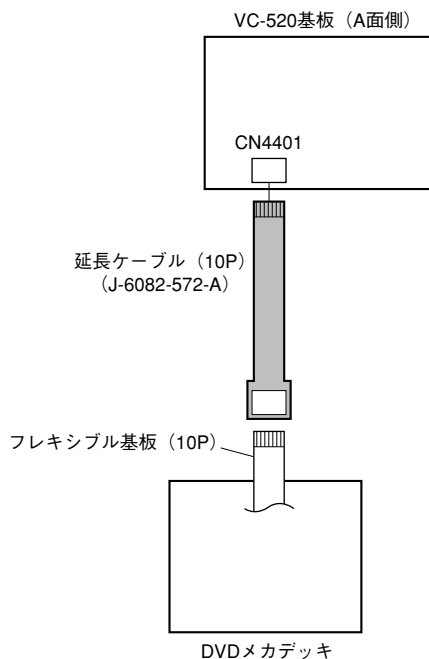
補修用基板と交換する時、補修用基板に書かれている仕向けデータは元の設定と違う場合があります。ADJ編を参照して、「DESTINATION DATA WRITE」を行ってください。

USBシリアルNo.

セットは、1台毎に異なる固有のID（USB Serial No.）を書き込んだ後、出荷されています。新品の補修用基板には、このIDが書き込まれていないので、基板交換後にIDを入力する必要があります。ADJ編を参照して、「USB SERIAL No. INPUT」を行ってください。

1-4. 使用サービス治具

延長ケーブル (J-6082-572-A) をVC-520基板CN4401とDVDメカデッキの間に接続します。



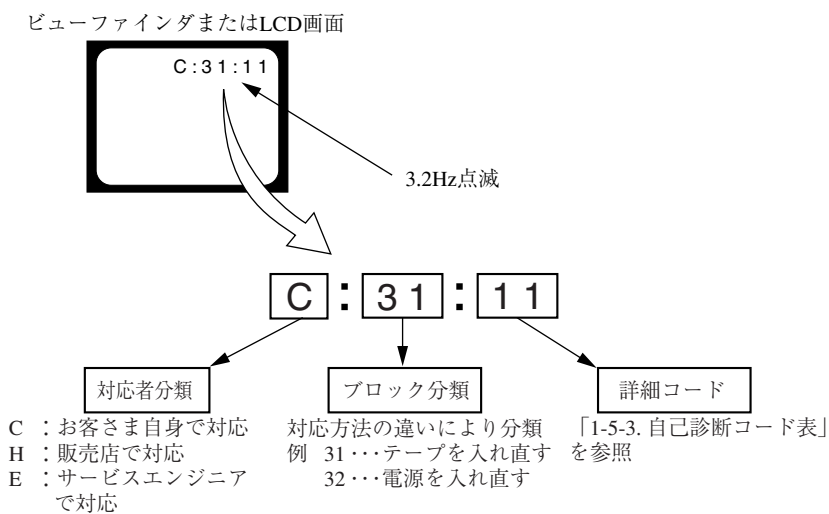
1-5. 自己診断機能

1-5-1. 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います。自己診断機能については取扱説明書にも掲載されています。

1-5-2. 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。



1-5-3. 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	標準以外のバッテリーを使用している	インフォリチウムバッテリーを使用する。
C	1 3	0 1	フォーマットしていない“メモリーステック デュオ”を入れた“メモリーステック デュオ”が壊れている	“メモリーステック デュオ”をフォーマットする。 新しい“メモリーステック デュオ”に交換する。
C	1 3	0 2	ディスクアクセスエラー	ディスククリーニングをする。または本機に対応したディスクに交換する。
E	2 0	0 0	フラッシュメモリが書き換えられている	フラッシュメモリのデータを元の値に戻す (注)
E	3 1	0 0	ドライブ不良	メカデッキ駆動IC (VC-520基板 IC4401) 周辺回路および駆動部分を点検または交換する。
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ときにフォーカス動作をすれば、レンズブロックのフォーカスリセットセンサ (VC-520基板CN5101 ⑦ピン) を点検する。フォーカス動作をしなければフォーカスマータ駆動回路 (VC-520基板 IC5301) を点検する。
E	6 1	1 0	ズーム動作の異常 (ズームレンズの初期化ができない)	ズームレバーを操作したときにズーム動作をすれば、レンズブロックのズームリセットセンサ (VC-520基板CN5101 ⑩ピン) を点検する。ズーム動作をしなければズームモータ駆動回路 (VC-520基板IC5301) を点検する。
E	6 1	1 1	フォーカス, ズーム異常	フレキ切れ, 半差し等の点検を行う。問題がない場合はフォーカス/ズームモータ駆動IC (VC-520基板IC5301) 周辺回路を点検する。
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-672/CD-687基板SE7002) 周辺回路を点検する。
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-672/CD-687基板SE7001) 周辺回路を点検する。
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-520基板IC2101) を点検する。 (注)
E	9 4	0 1	内蔵フラッシュメモリ不良	内蔵フラッシュメモリ (MDL4060S3C) を点検する。

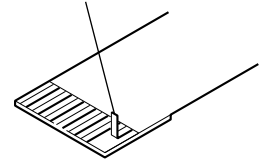
注：調整編 (9-852-249-51) 「1-3. DESTINATION DATA WRITE」を参照してください。

2. DISASSEMBLY

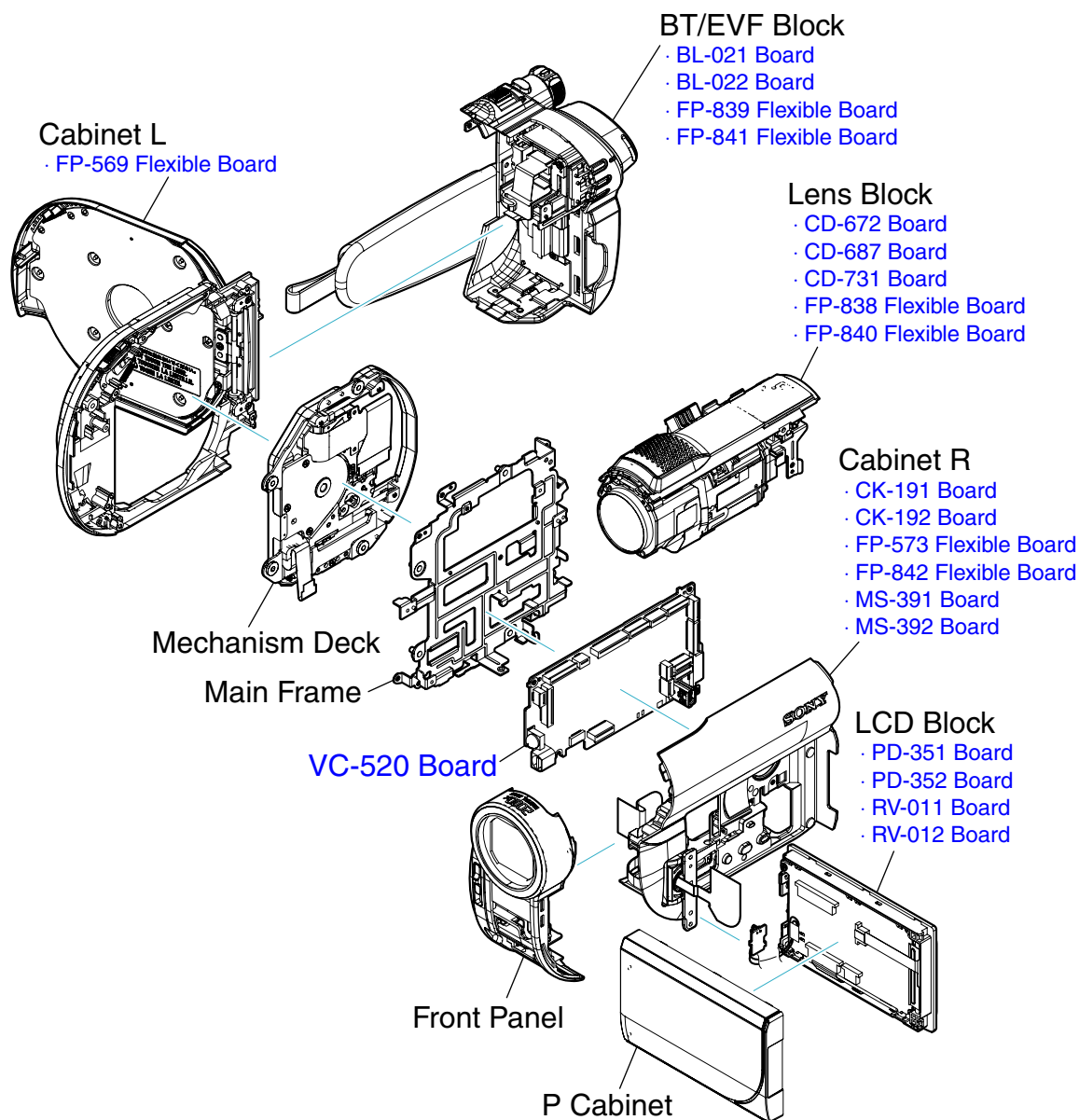
NOTE FOR REPAIR

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

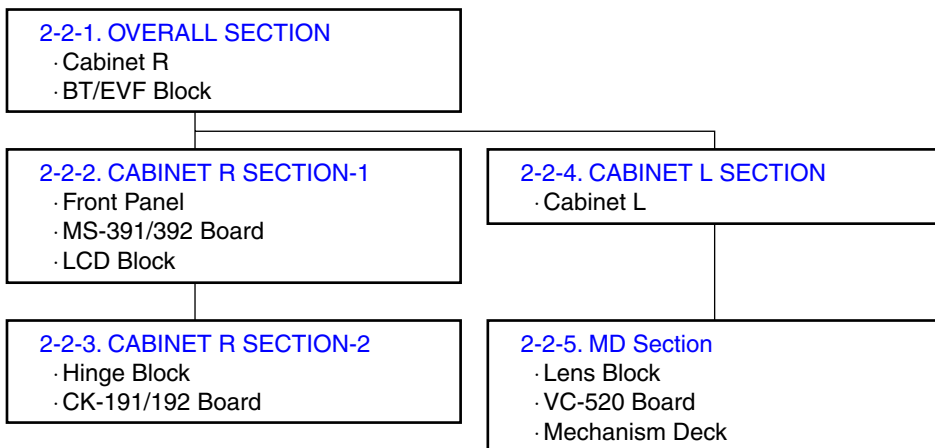
Cut and remove the part of gilt which comes off at the point.
(Be careful or some pieces of gilt may be left inside)



2-1. IDENTIFYING PARTS



- DISASSEMBLY FLOW -



2-2. DISASSEMBLY

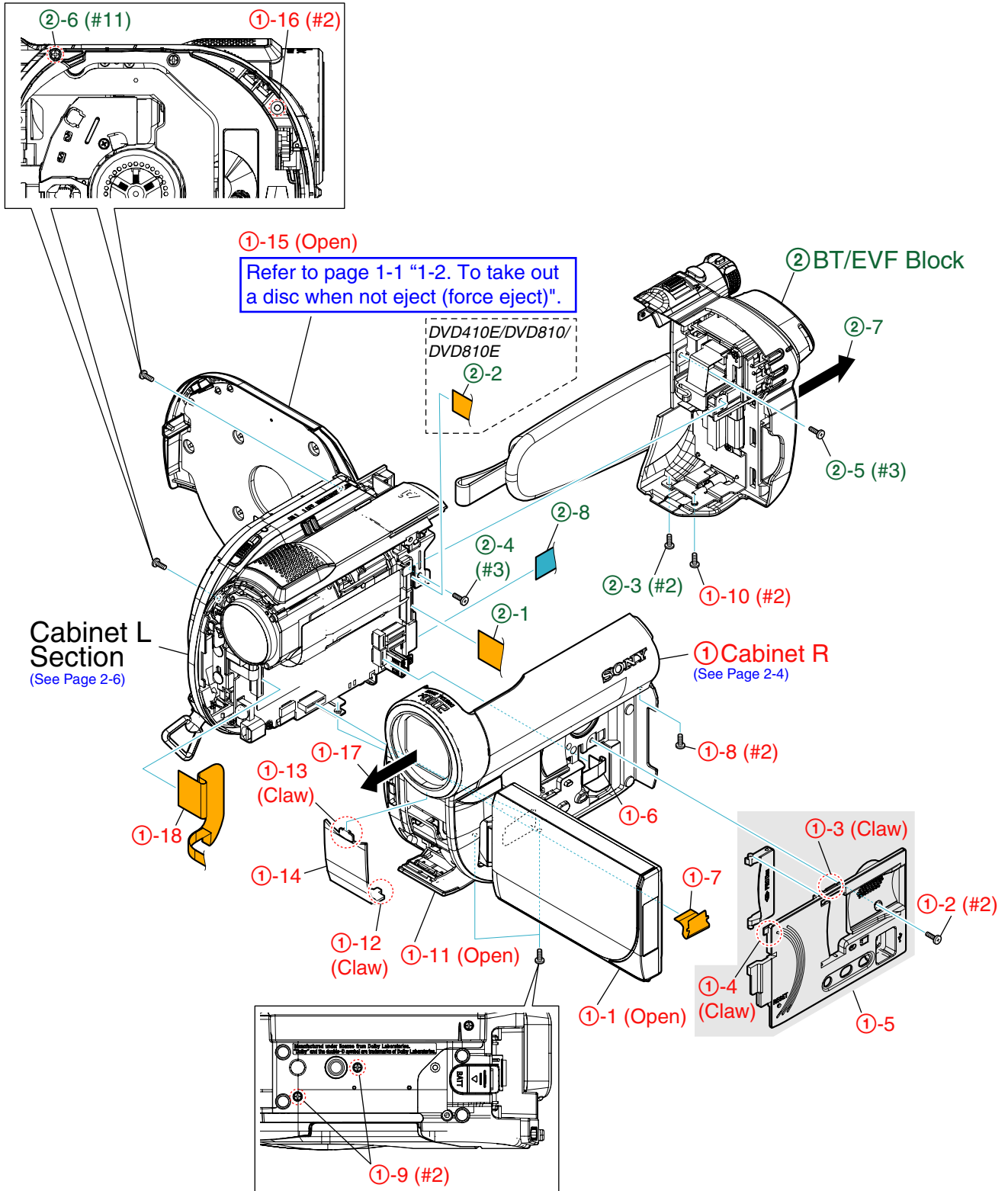
EXPLODED VIEW

HARDWARE LIST

2-2-1. OVERALL SECTION

Follow the disassembly in the numerical order given.

- ① Cabinet R (①-1 to ①-18)
- ② BT/EVF Block (②-1 to ②-8)



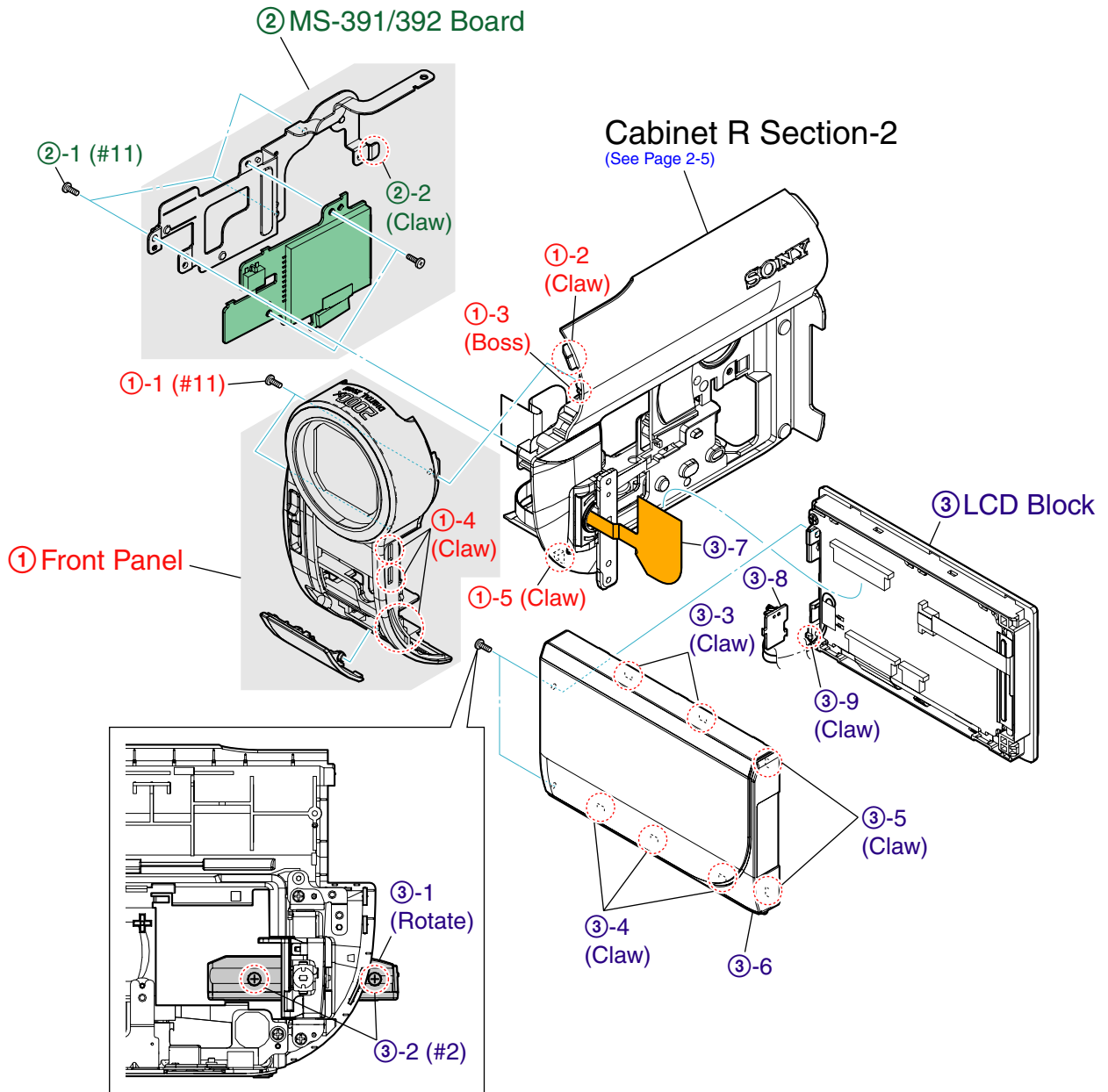
2-2-2. CABINET R SECTION-1

Follow the disassembly in the numerical order given.

- ① Front Panel (①-1 to ①-5)
- ② MS-391/392 Board (②-1 to ②-2)
- ③ LCD Block (③-1 to ③-9)

EXPLODED VIEW

HARDWARE LIST



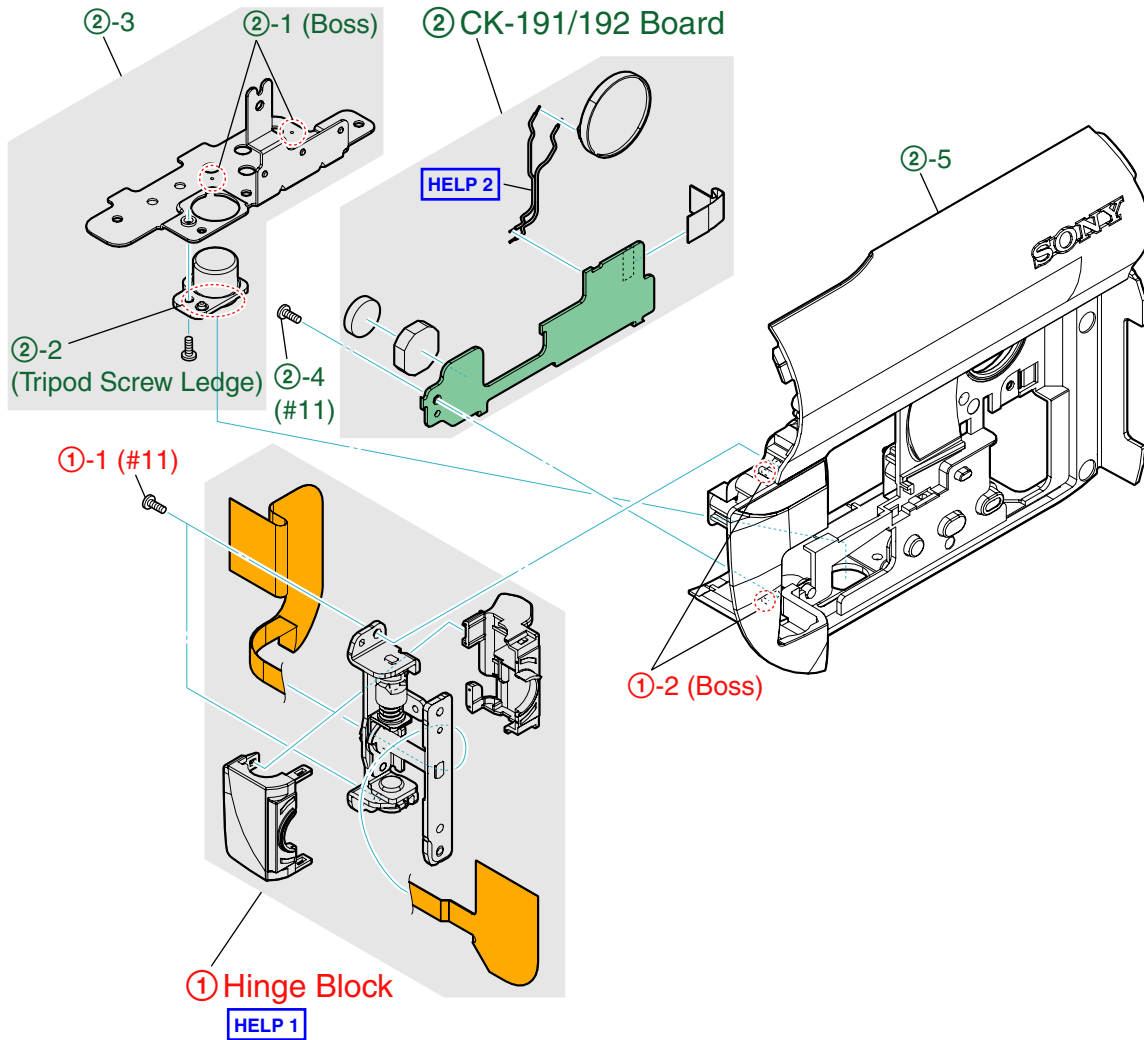
2-2-3. CABINET R SECTION-2

Follow the disassembly in the numerical order given.

- ① Hinge Block (①-1 to ①-2)
- ② CK-191/192 Board (②-1 to ②-5)

EXPLODED VIEW

HARDWARE LIST



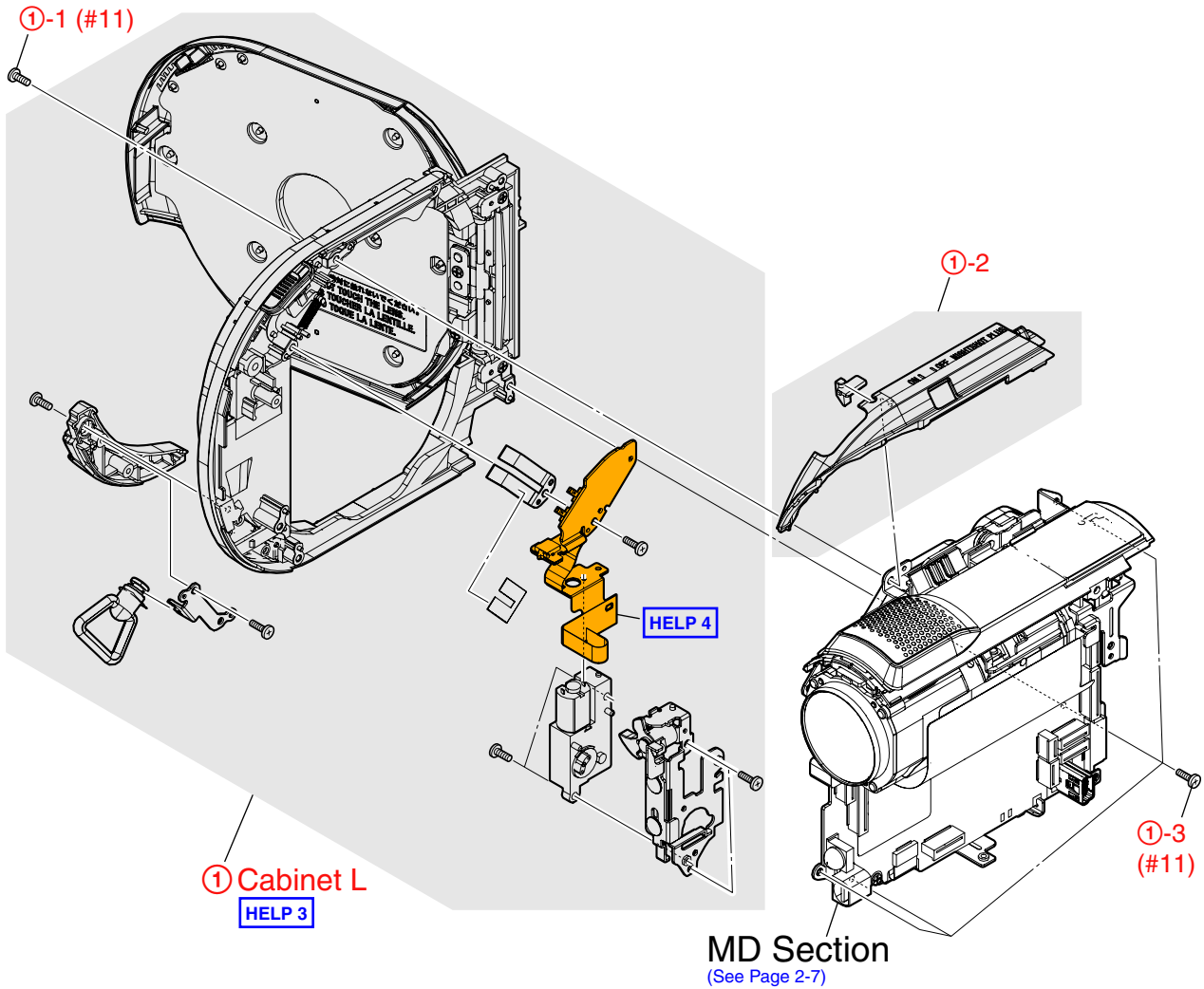
2-2-4. CABINET L SECTION

Follow the disassembly in the numerical order given.

- ① Cabinet L (①-1 to ①-3)

EXPLODED VIEW

HARDWARE LIST



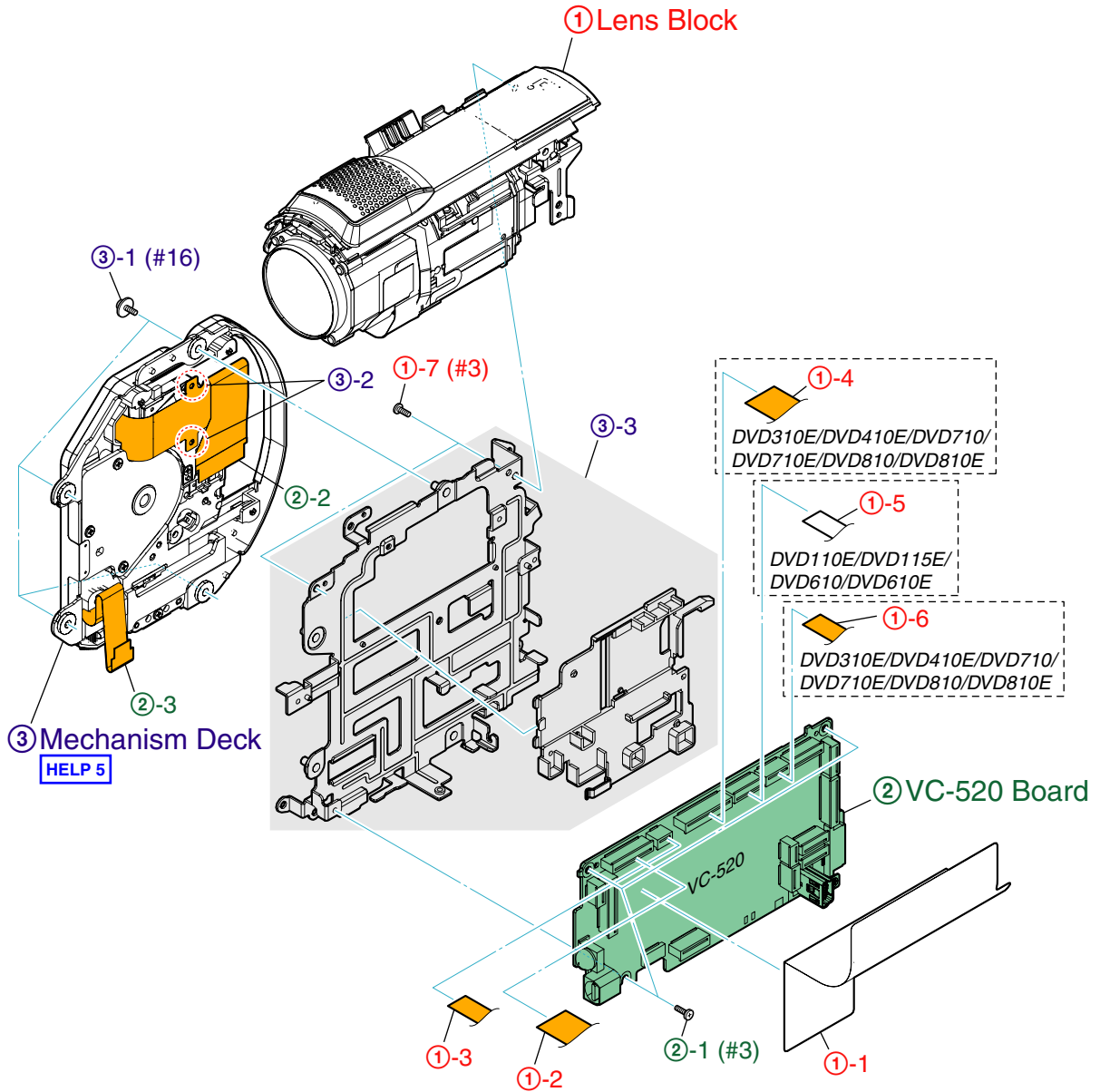
2-2-5. MD SECTION

Follow the disassembly in the numerical order given.

- ① Lens Block (①-1 to ①-7)
- ② VC-520 Board (②-1 to ②-3)
- ③ Mechanism Deck (③-1 to ③-3)

EXPLODED VIEW

HARDWARE LIST

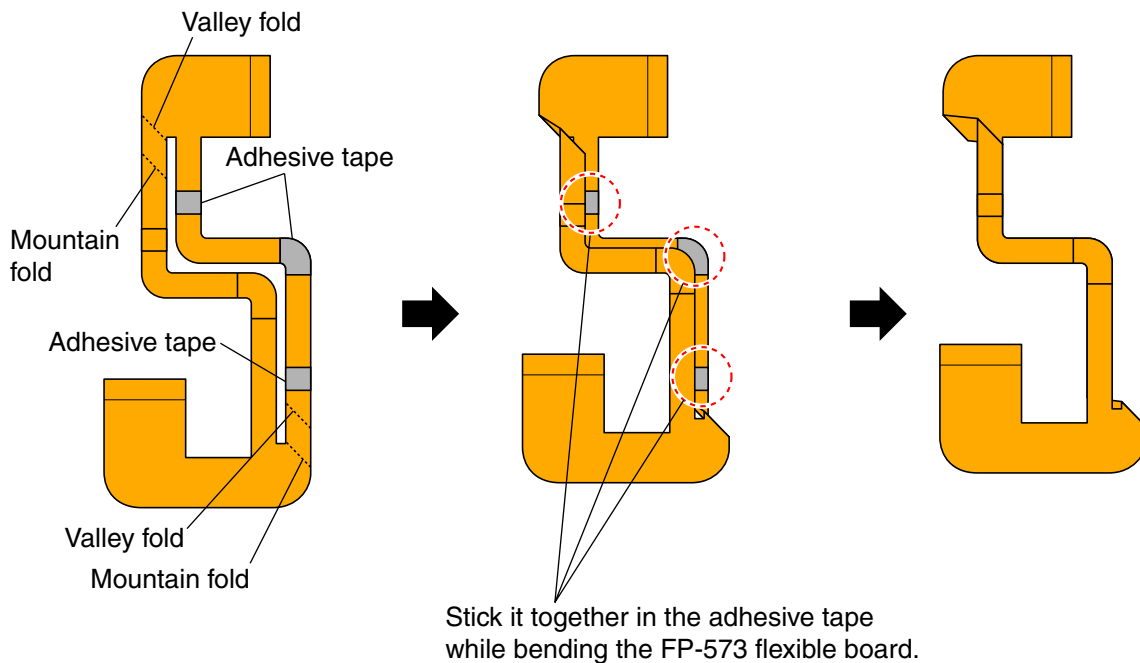


HELP

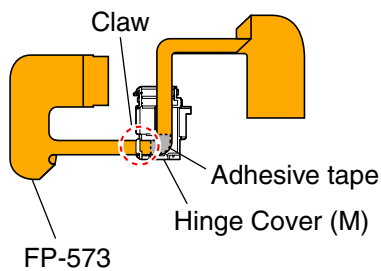
Sheet attachment positions and procedures of processing the flexible boards/harnesses are shown.

HELP 1: THE METHOD OF ATTACHMENT OF FP-573 FLEXIBLE BOARD

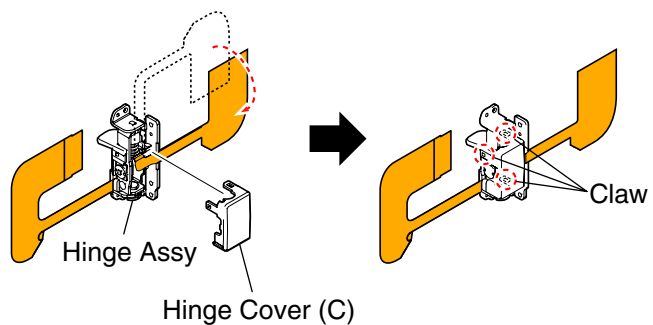
- ① Fold dotted line parts of the FP-573 flexible board as shown in figure.



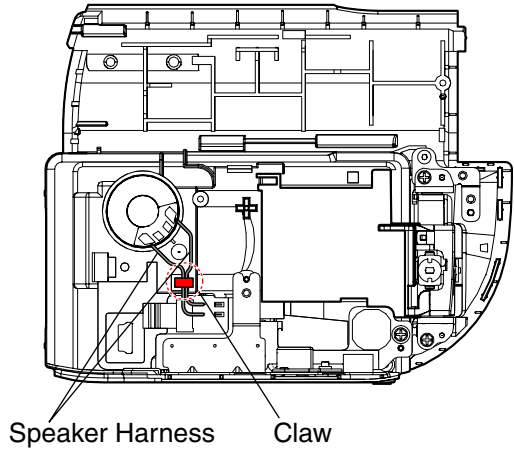
- ② Install FP-573 flexible board in the Hinge Cover (M).



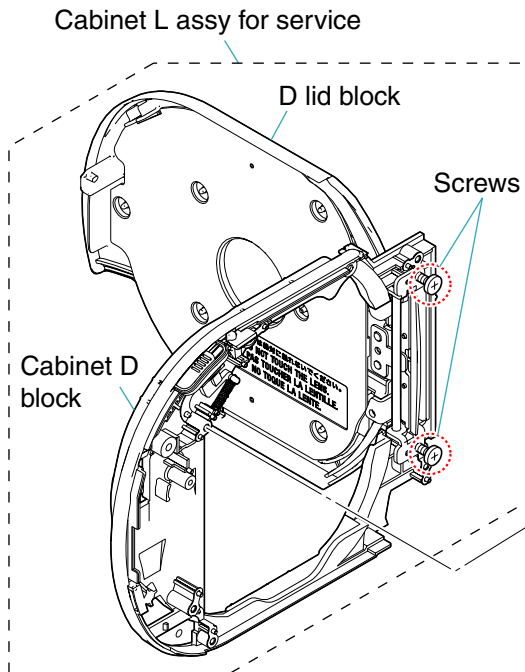
- ③ Install the Hinge Cover (C).



HELP 2: SPEAKER HARNESS

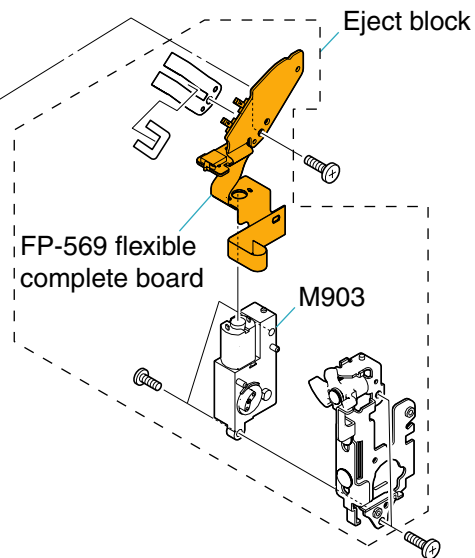


HELP 3: PRECAUTION WHEN INSTALLING THE CABINET L ASSY FOR SERVICE

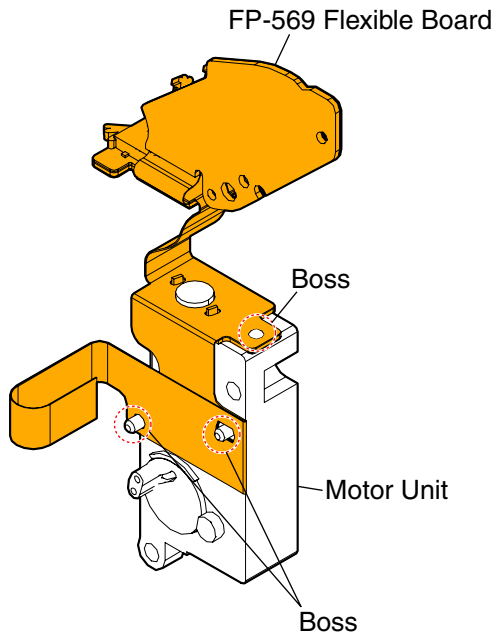


When the eject block is installed on the cabinet L assy for service, a discrepancy could be made between the cabinet D block and the D lid block, and as a result, the D lid may not be closed.

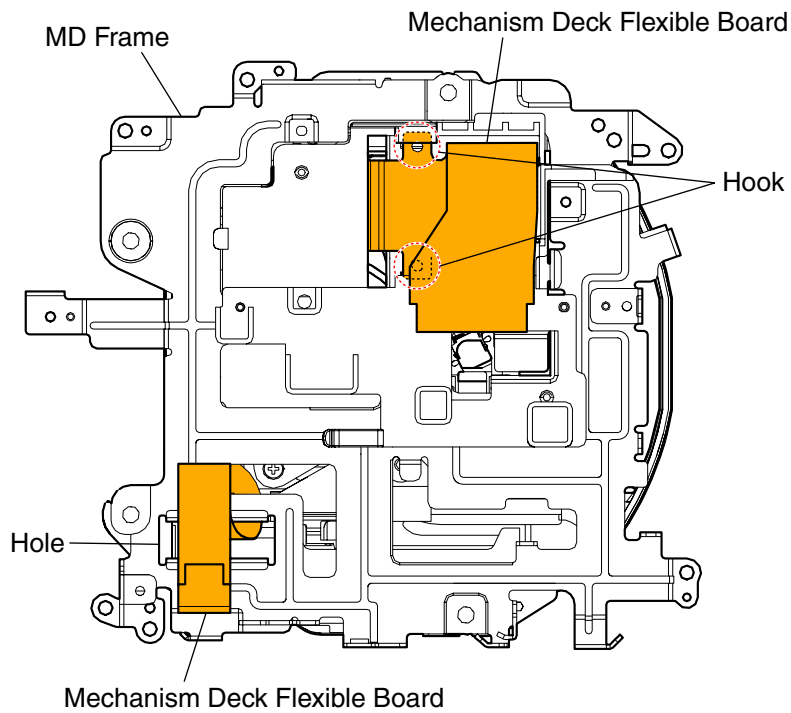
In case of such discrepancy, loosen the screws on the hinge to eliminate the discrepancy of the D lid block, and then retighten the screws.



HELP 4: FP-569 FLEXIBLE BOARD



HELP 5: MECHANISM DECK FLEXIBLE BOARD



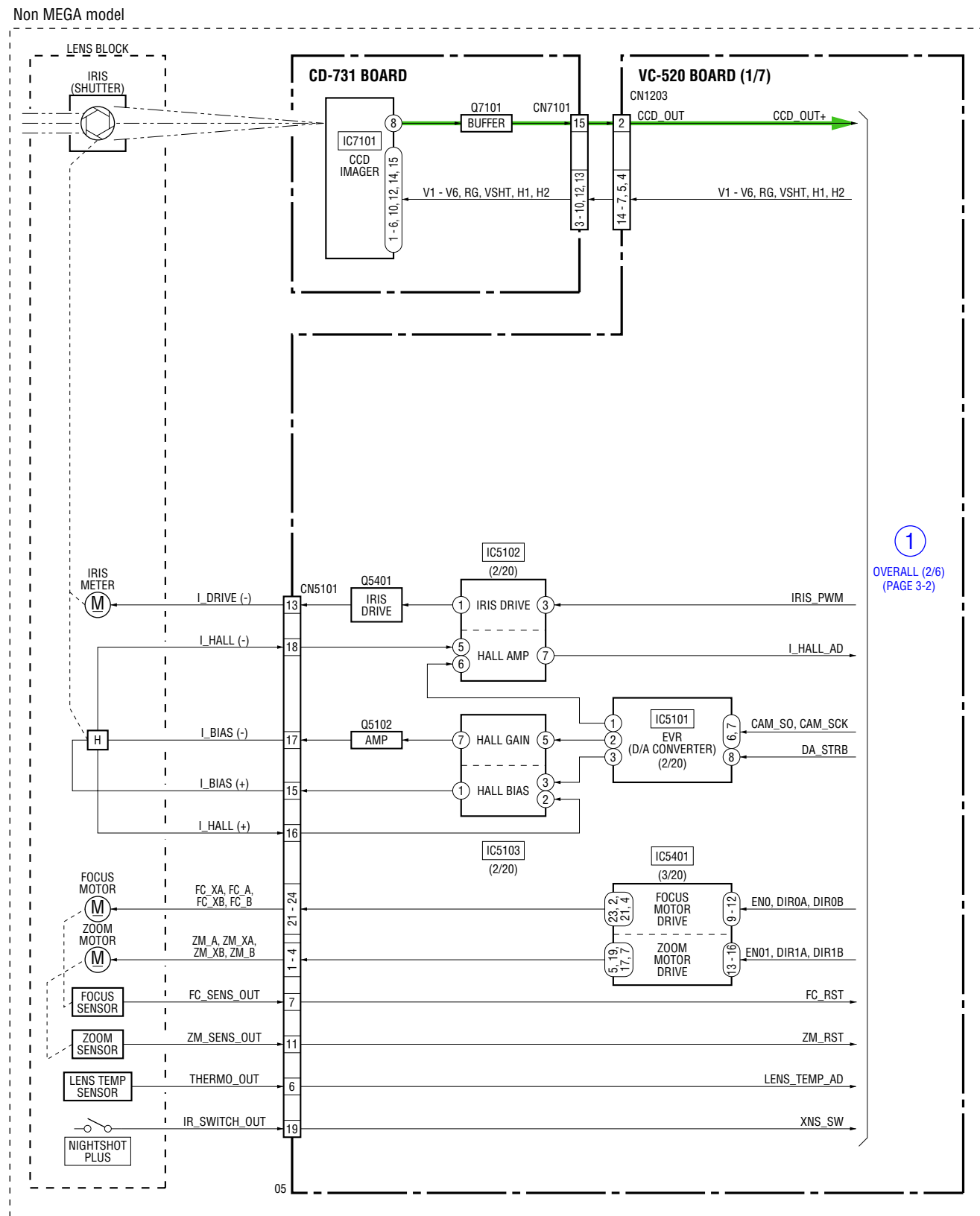
3. BLOCK DIAGRAMS

Link

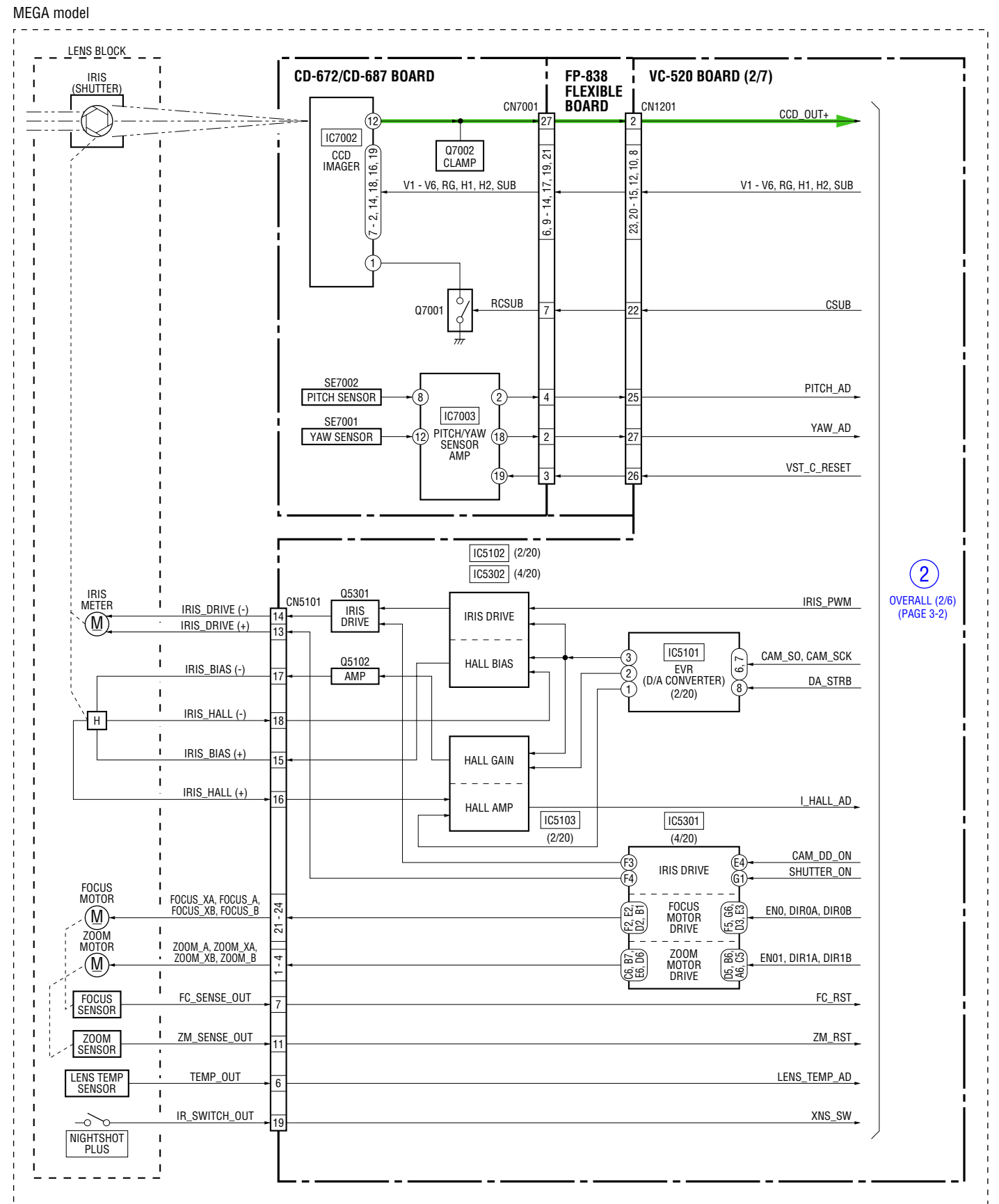
OVERALL BLOCK DIAGRAM (1/6)	OVERALL BLOCK DIAGRAM (6/6)
OVERALL BLOCK DIAGRAM (2/6)	POWER BLOCK DIAGRAM (1/3)
OVERALL BLOCK DIAGRAM (3/6)	POWER BLOCK DIAGRAM (2/3)
OVERALL BLOCK DIAGRAM (4/6)	POWER BLOCK DIAGRAM (3/3)
OVERALL BLOCK DIAGRAM (5/6)	

3. BLOCK DIAGRAMS

3-1. OVERALL BLOCK DIAGRAM (1/6) (): Number in parenthesis () indicates the division number of schematic diagram where the component is located.



①
OVERALL (2/6)
(PAGE 3-2)

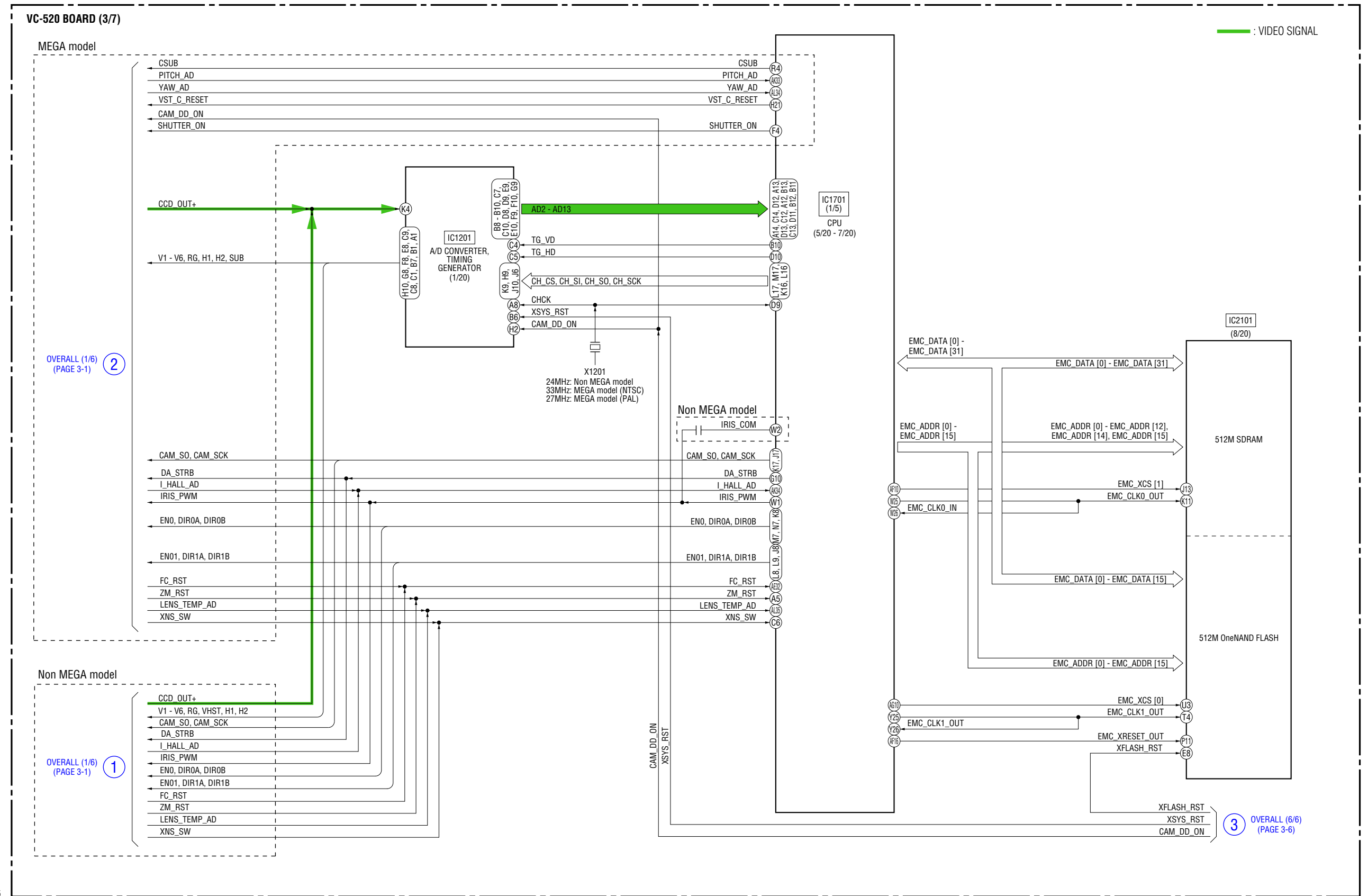


②
OVERALL (2/6)
(PAGE 3-2)

Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVD610E
MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E

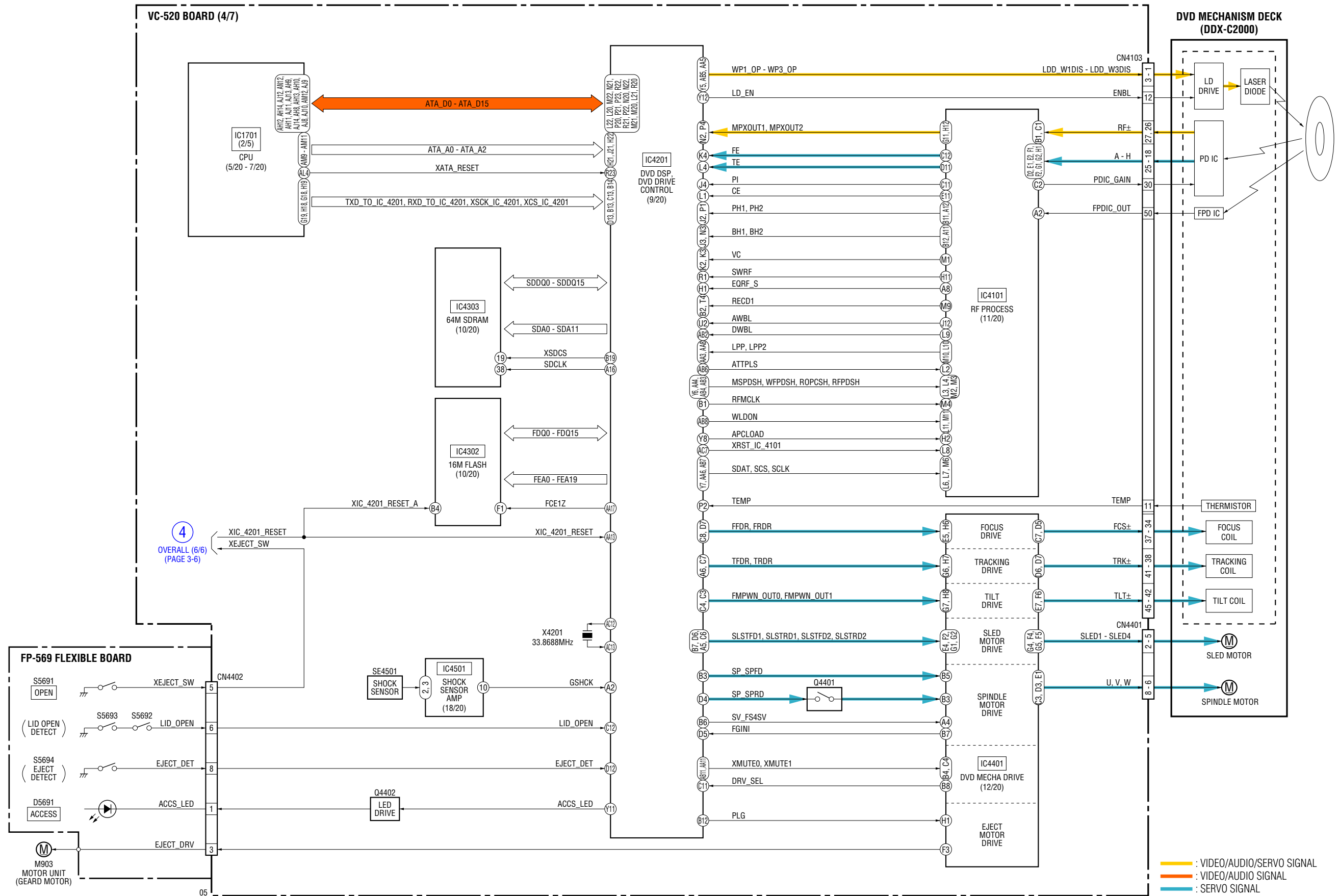
— : VIDEO SIGNAL

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

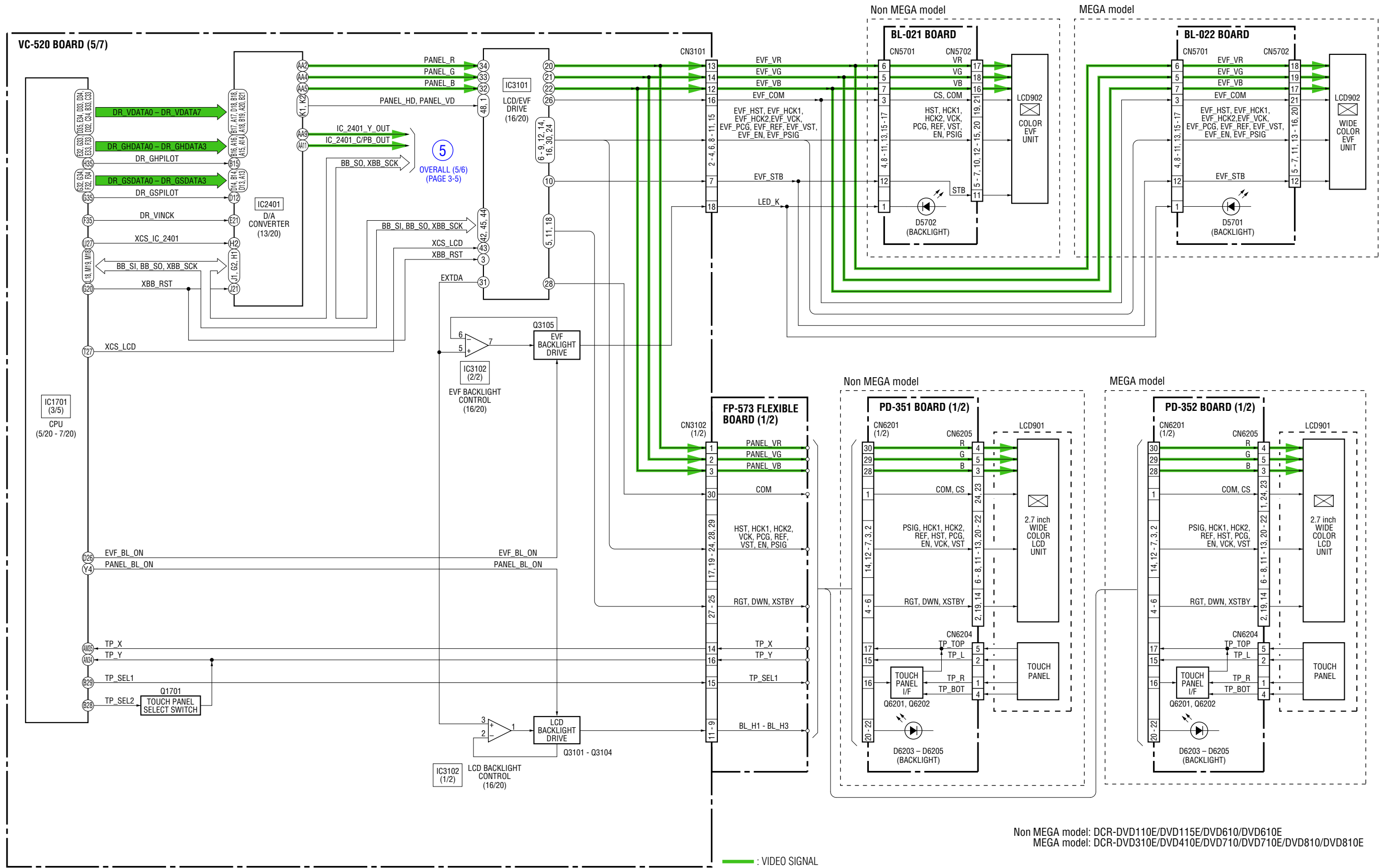


Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVD610E
 MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E

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



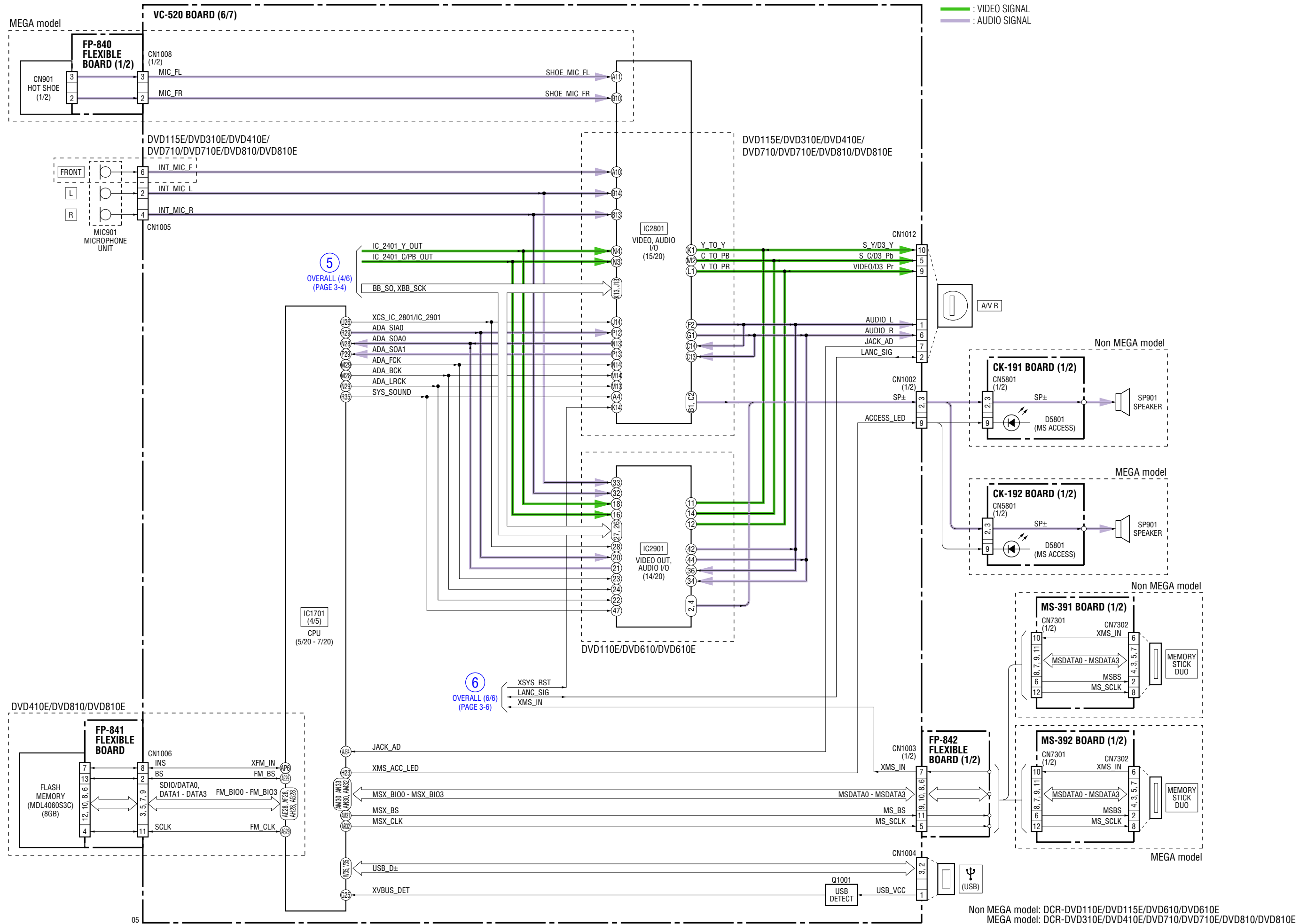
3-4. OVERALL BLOCK DIAGRAM (4/6) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



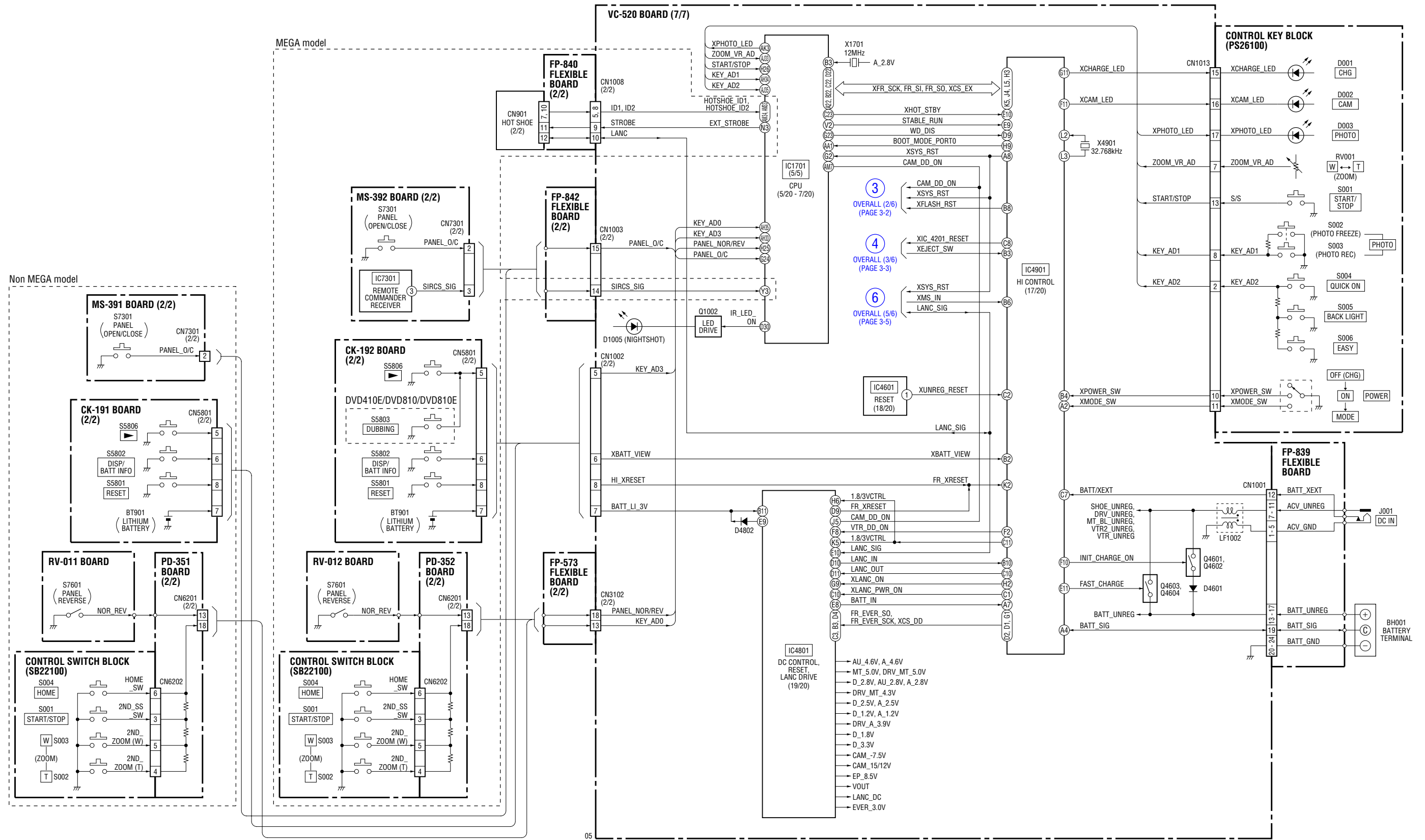
Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVD610E
 MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E

05

3-5. OVERALL BLOCK DIAGRAM (5/6) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.

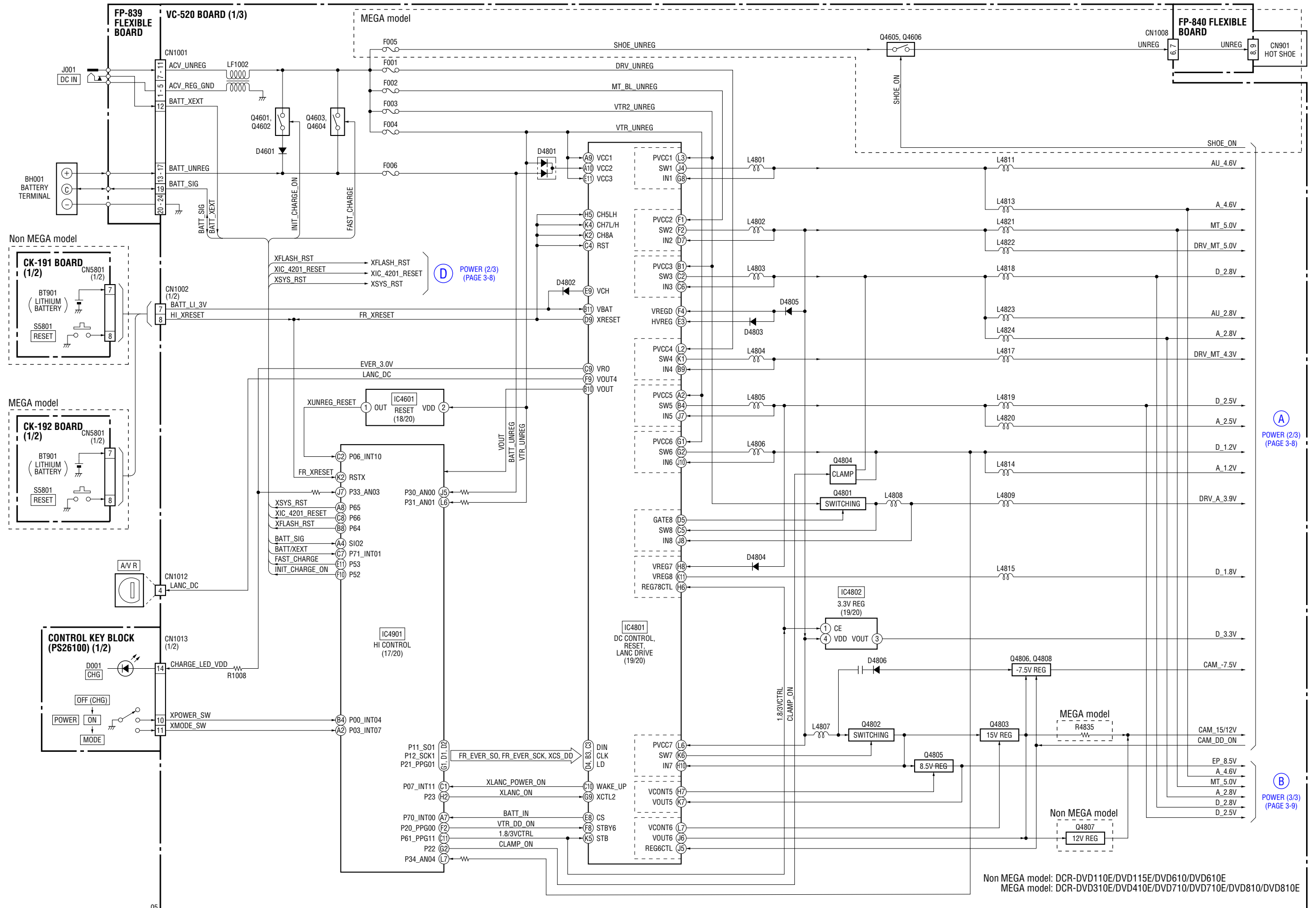


3-6. OVERALL BLOCK DIAGRAM (6/6) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVD610E
 MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E

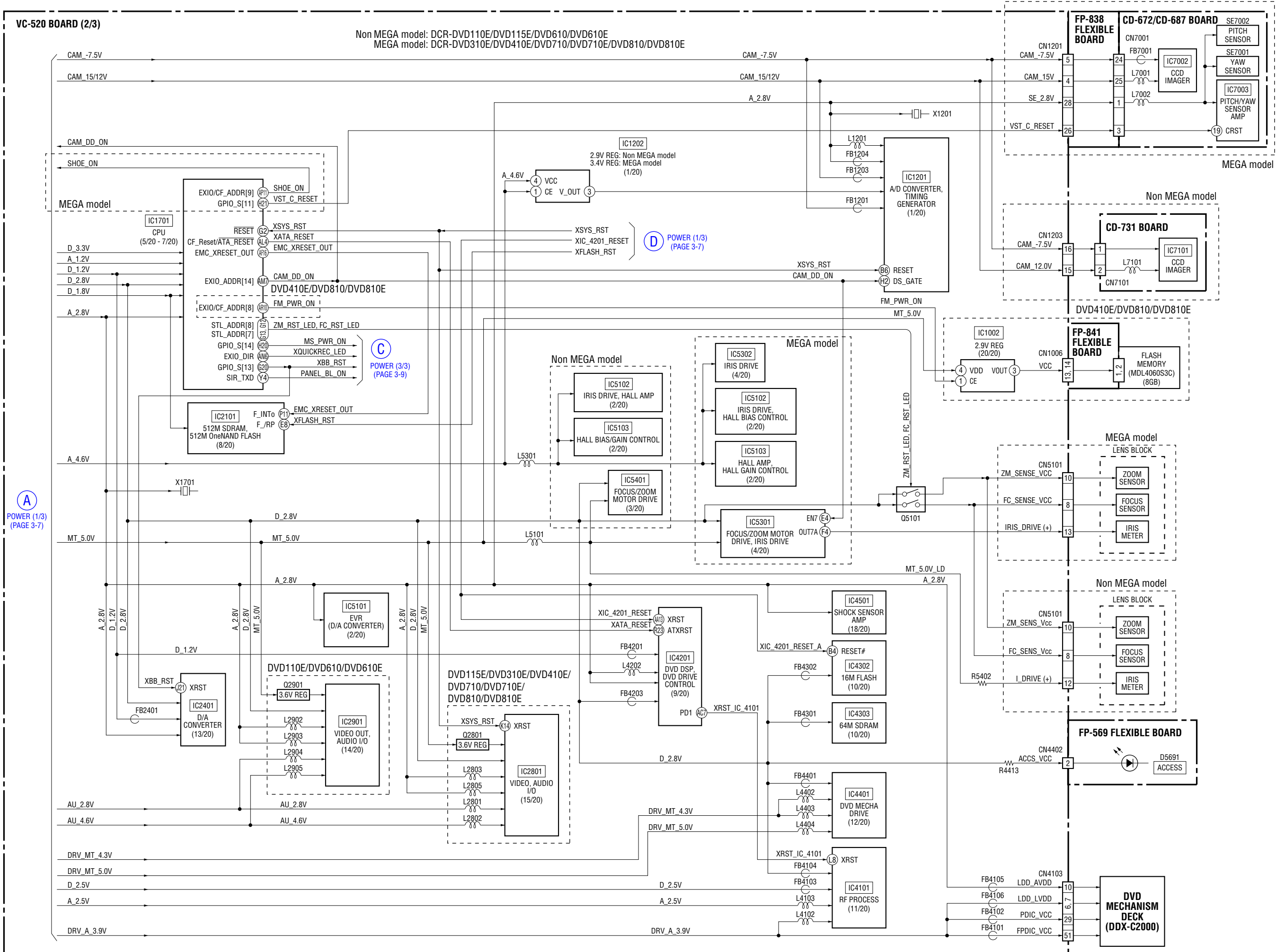
3-7. POWER BLOCK DIAGRAM (1/3) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



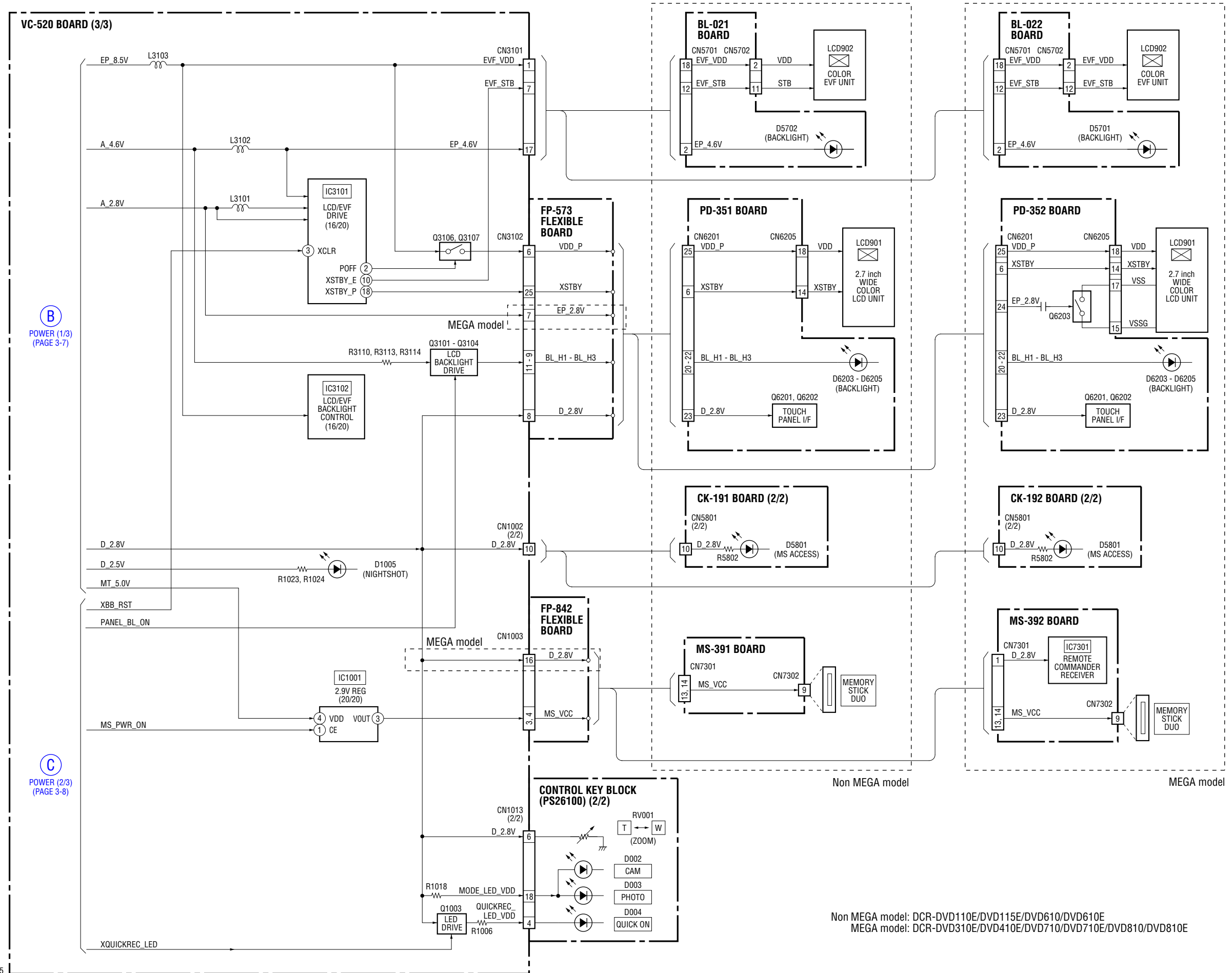
Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVD610E
 MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E

3-8. POWER BLOCK DIAGRAM (2/3)

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



3-9. POWER BLOCK DIAGRAM (3/3) () : Number in parenthesis () indicates the division number of schematic diagram where the component is located.



4-2. SCHEMATIC DIAGRAMS

Link

• CD-672/CD-687 BOARD: MEGA model (CCD IMAGER)	• CK-192 BOARD: MEGA model (CONTROL SWITCH)
• FP-838 FLEXIBLE BOARD: MEGA model (VC-CD CONNECTION)	• MS-391 BOARD: Non MEGA model (MS CONNECTOR)
• CD-731 BOARD: Non MEGA model (CCD IMAGER)	• MS-392 BOARD: MEGA model (MS CONNECTOR, REMOTE COMMANDER RECEIVER)
• BL-021 BOARD: Non MEGA model (EVF, EVF BACKLIGHT)	• FP-841 FLEXIBLE BOARD: DVD410E/ DVD810/DVD810E (FLASH MEMORY)
• BL-022 BOARD: MEGA model (EVF, EVF BACKLIGHT)	• FP-842 FLEXIBLE BOARD (VC-MS CONNECTION)
• PD-351 BOARD: Non MEGA model (LCD, LCD BACKLIGHT)	• RV-011: Non MEGA model (PANEL REVERSE DETECT)
• PD-352 BOARD: MEGA model (LCD, LCD BACKLIGHT)	• RV-012: MEGA model (PANEL REVERSE DETECT)
• FP-573 FLEXIBLE BOARD (VC-PD CONNECTION)	• CONTROL SWITCH BLOCK (SB22100)
• FP-569 FLEXIBLE BOARD (EJECT SWITCH/MOTOR)	• FP-839 FLEXIBLE BOARD (DC IN)
• FP-840 FLEXIBLE BOARD (HOT SHOE)	• CONTROL KEY BLOCK (PS26100)
• CK-191 BOARD: Non MEGA model (CONTROL SWITCH)	

• COMMON NOTE FOR SCHEMATIC DIAGRAMS

Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVE610E

MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E

(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ので注意してください。

- ・チップ部品には下記のように表示したものがああります。

例	C 541	L 452
	22U	10UH
	TA A	2520
	↑ ↑	↑
	種類 ケースサイズ	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。

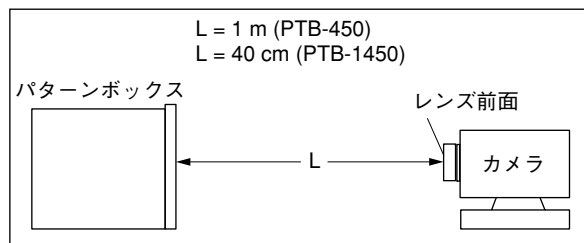
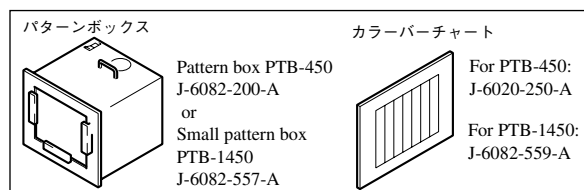
【電圧・波形測定条件ノート】

- ・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対アース間の参考値。
(デジタルマルチメータ; 入力インピーダンス DC10M Ω 使用)
- ・使用テスタの入力インピーダンスにより電圧値が多少異なります。

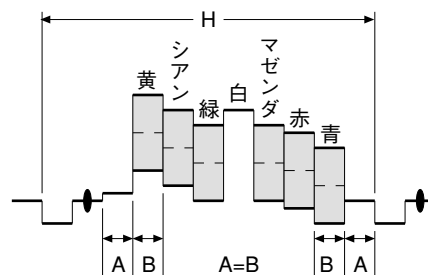
イメージ交換時の注意

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

1. 接続図

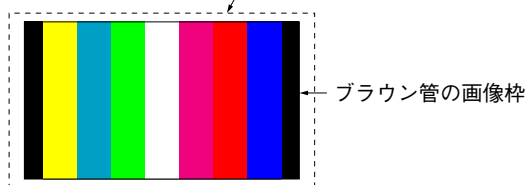


- 2. 図a及び図bの波形が得られるように画枠調整して下さい。



図a (映像入出力端子出力波形)

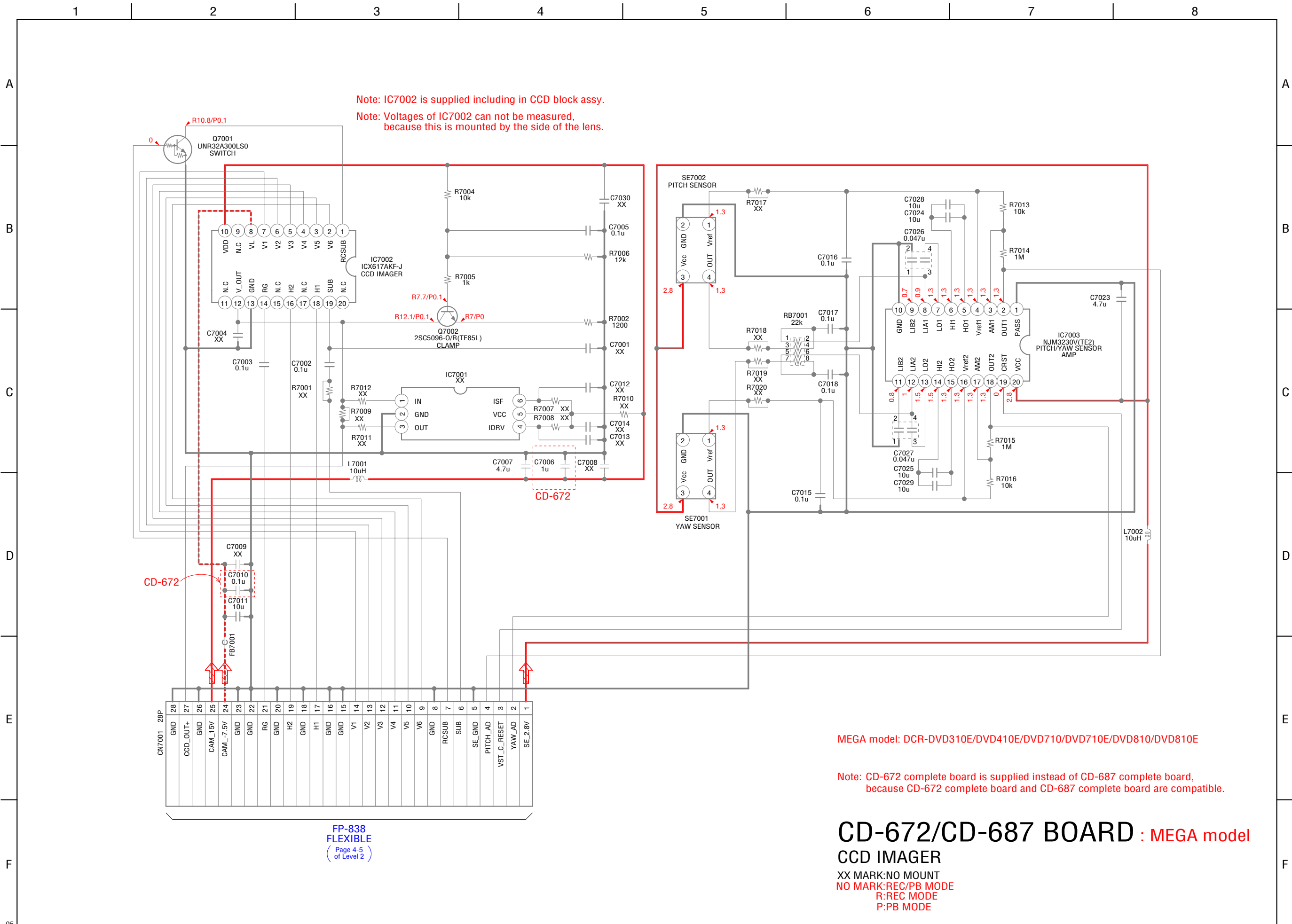
電子ビーム走査線



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。



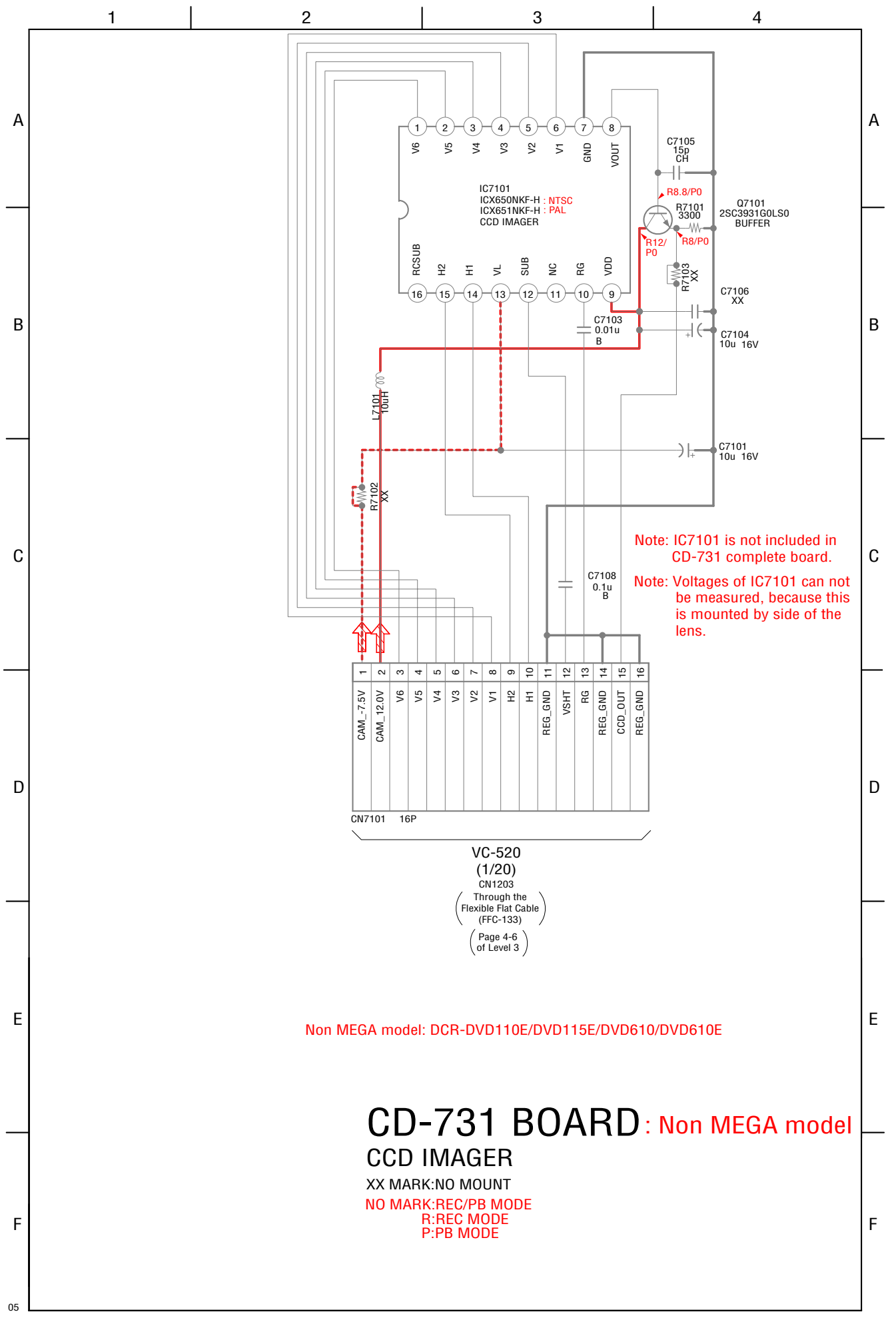
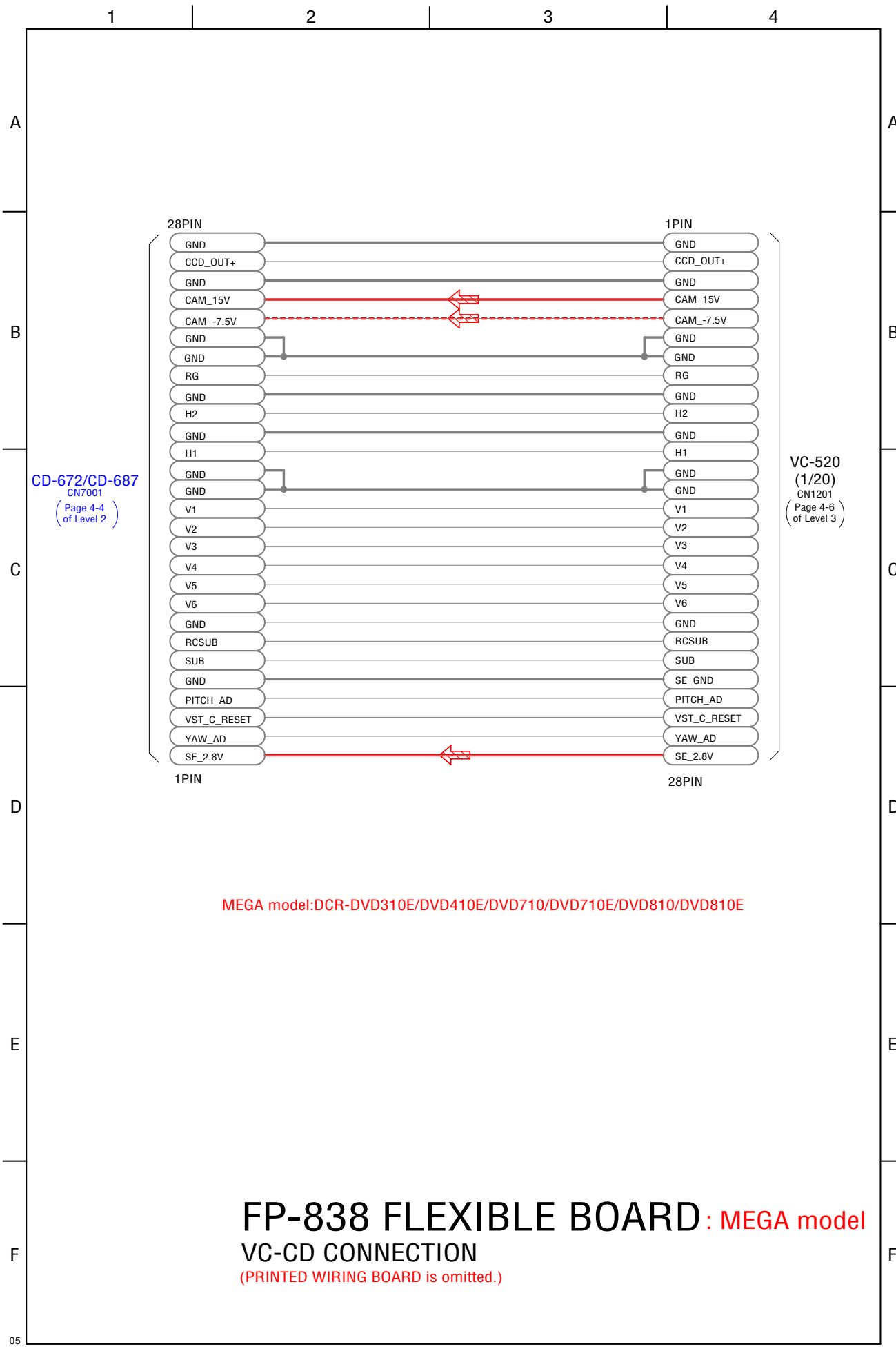
Note: IC7002 is supplied including in CCD block assy.
 Note: Voltages of IC7002 can not be measured, because this is mounted by the side of the lens.

MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E

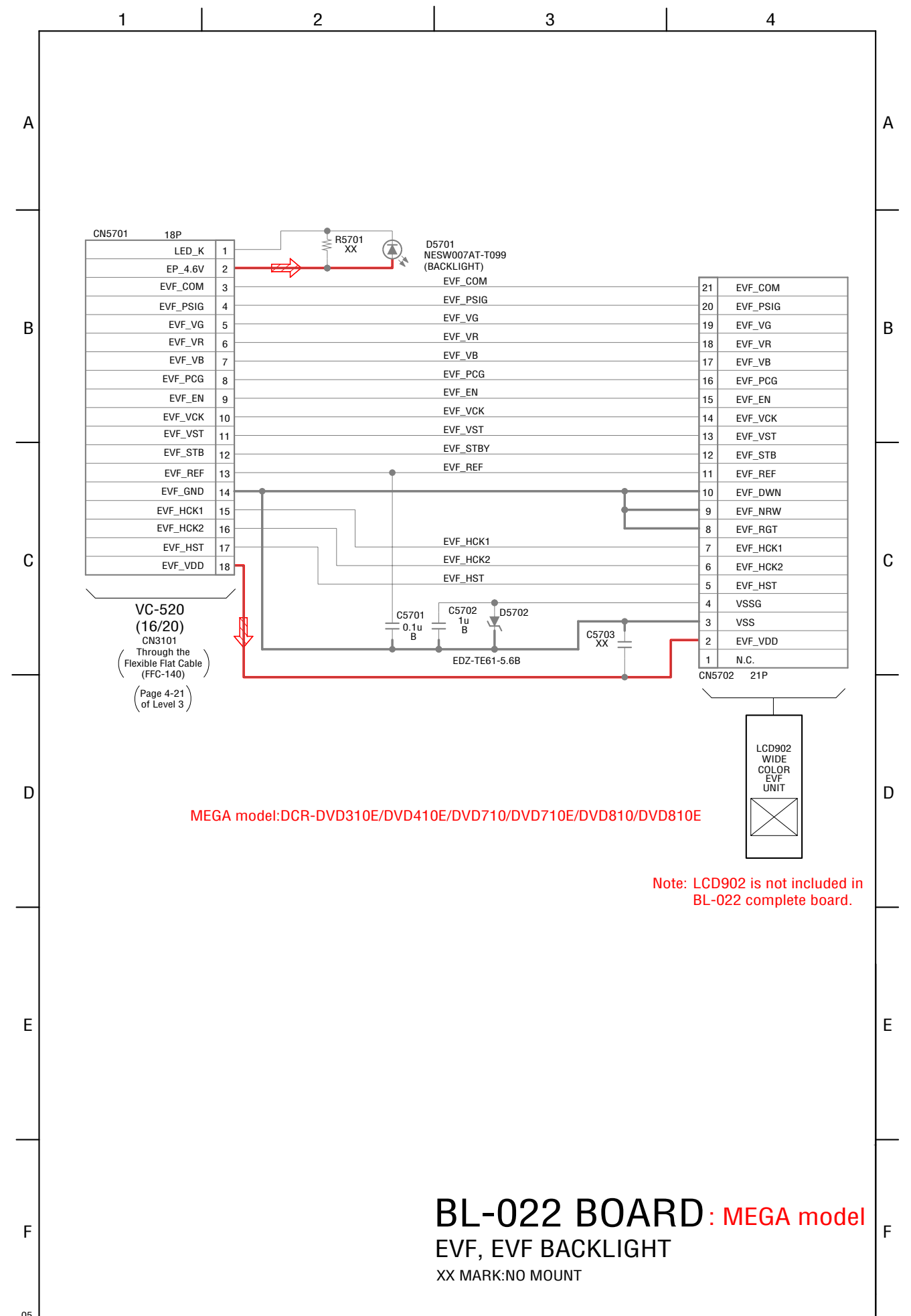
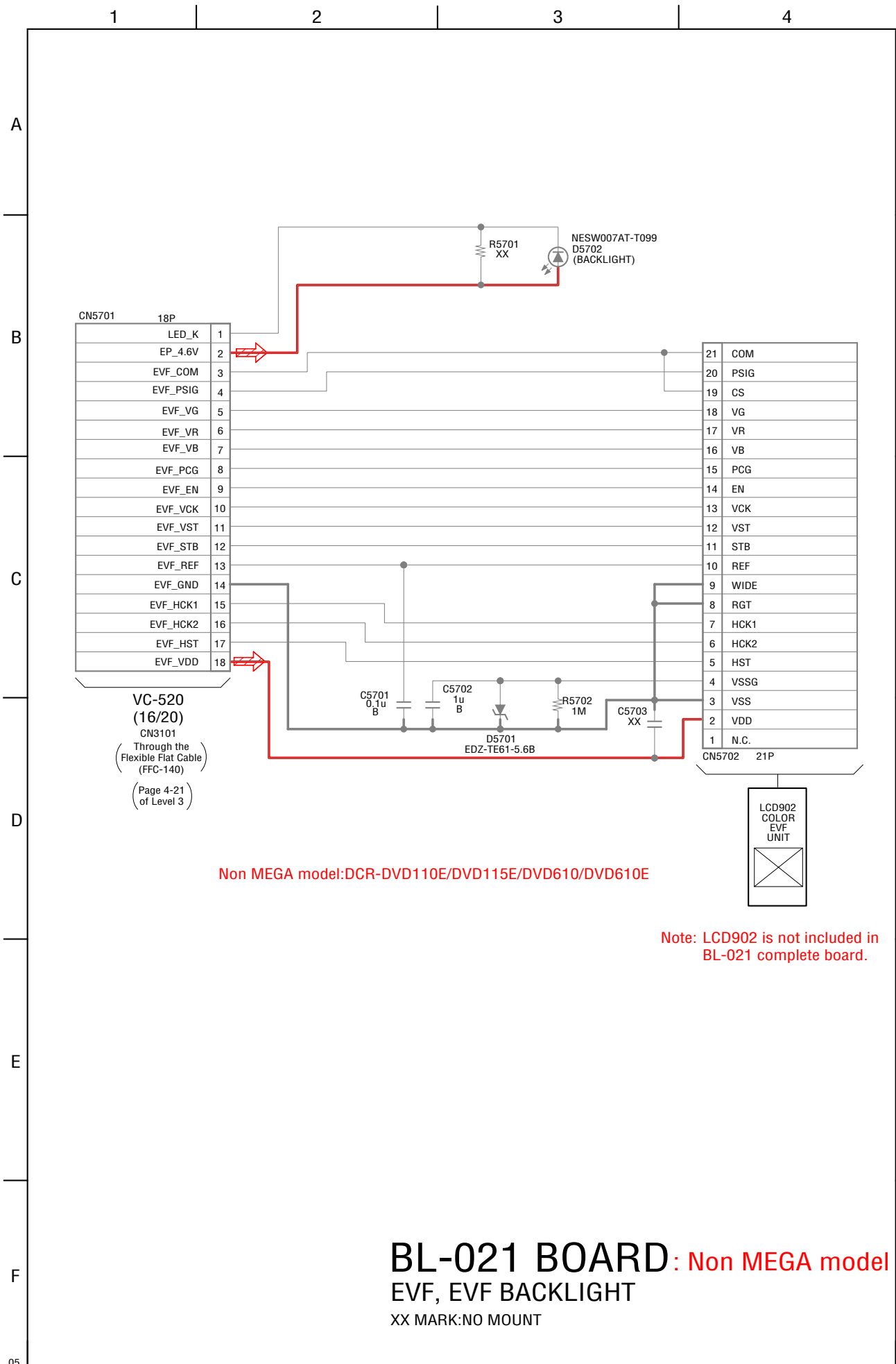
Note: CD-672 complete board is supplied instead of CD-687 complete board, because CD-672 complete board and CD-687 complete board are compatible.

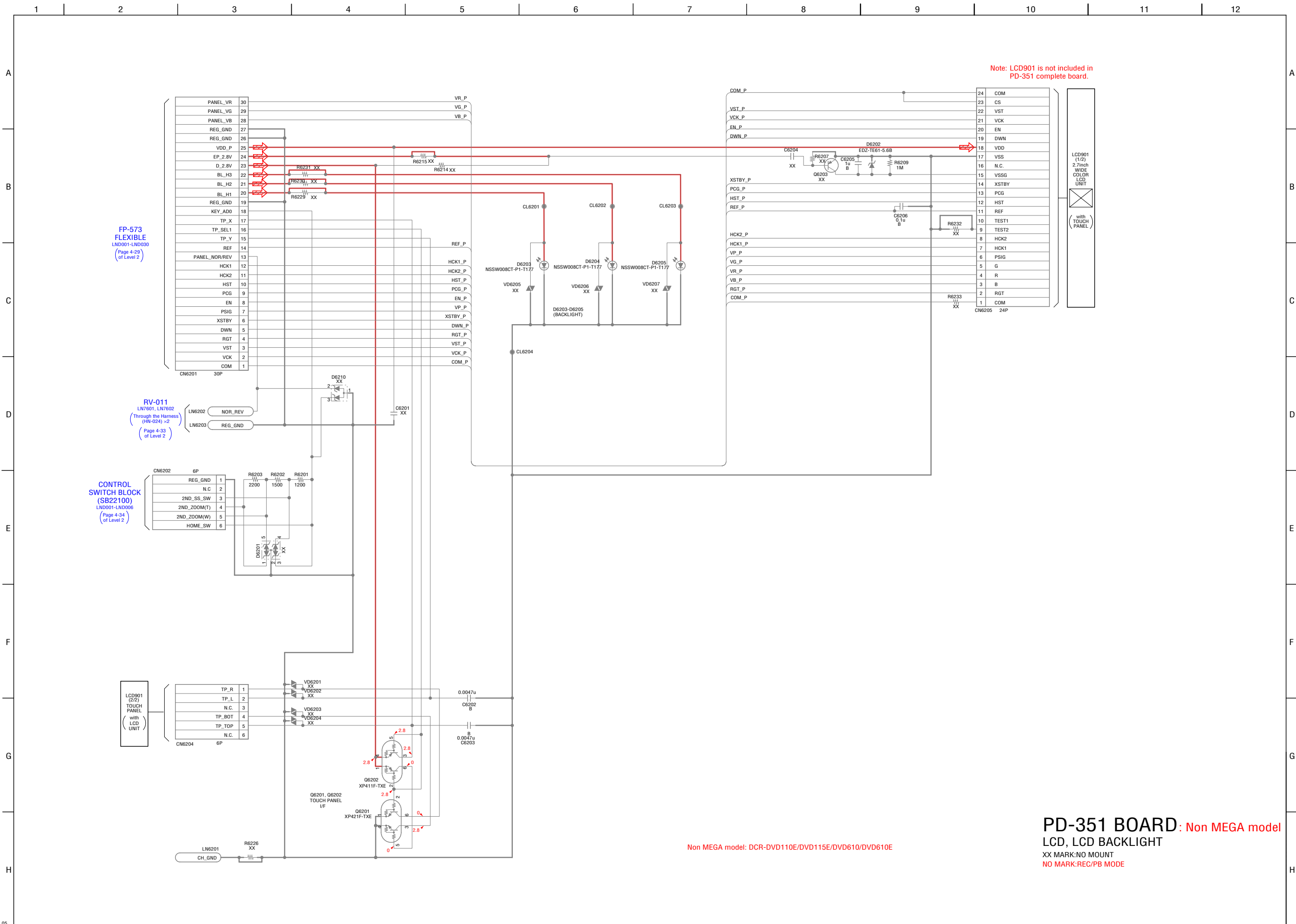
CD-672/CD-687 BOARD : MEGA model CCD IMAGER

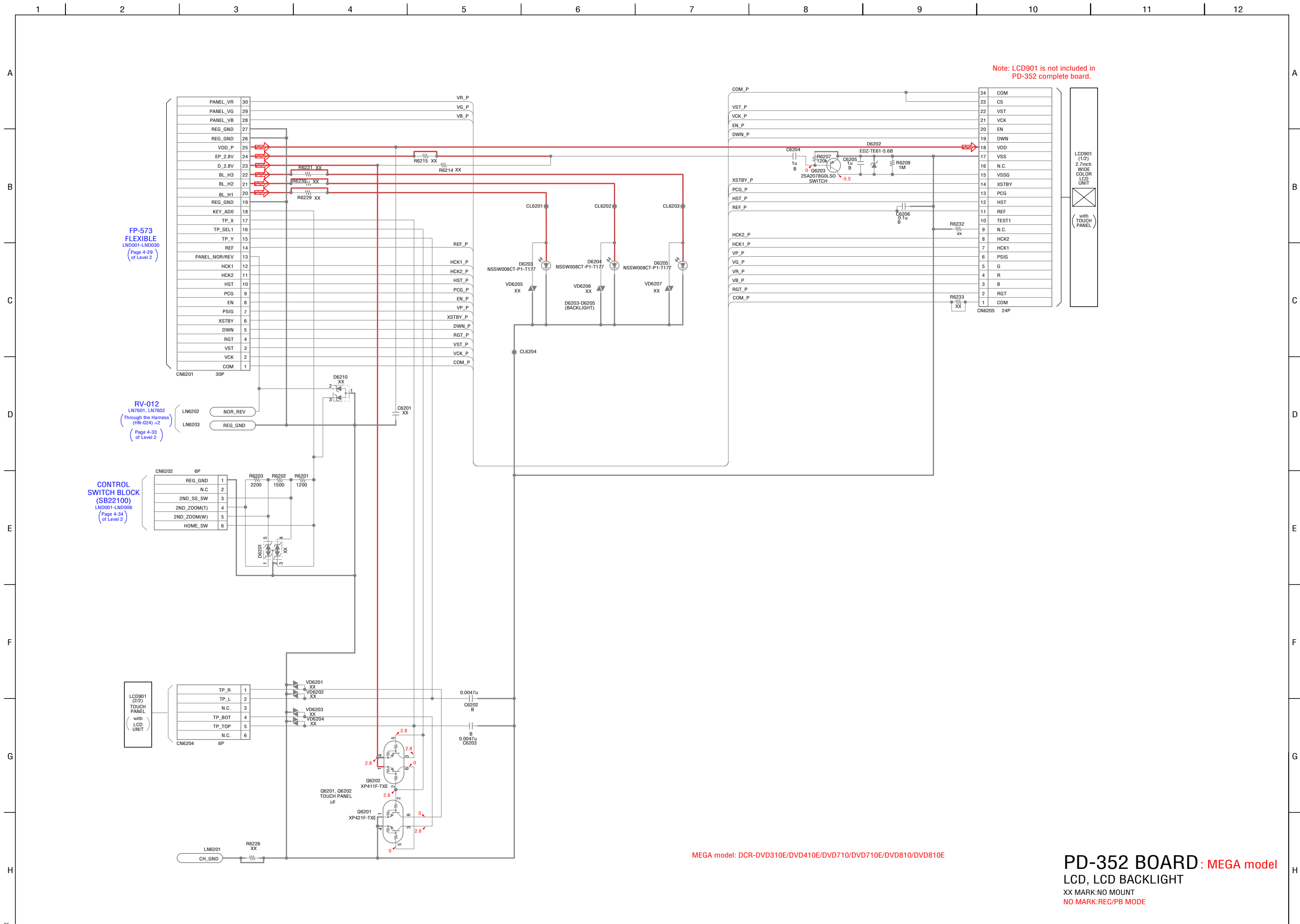
XX MARK:NO MOUNT
 NO MARK:REC/PB MODE
 R:REC MODE
 P:PB MODE

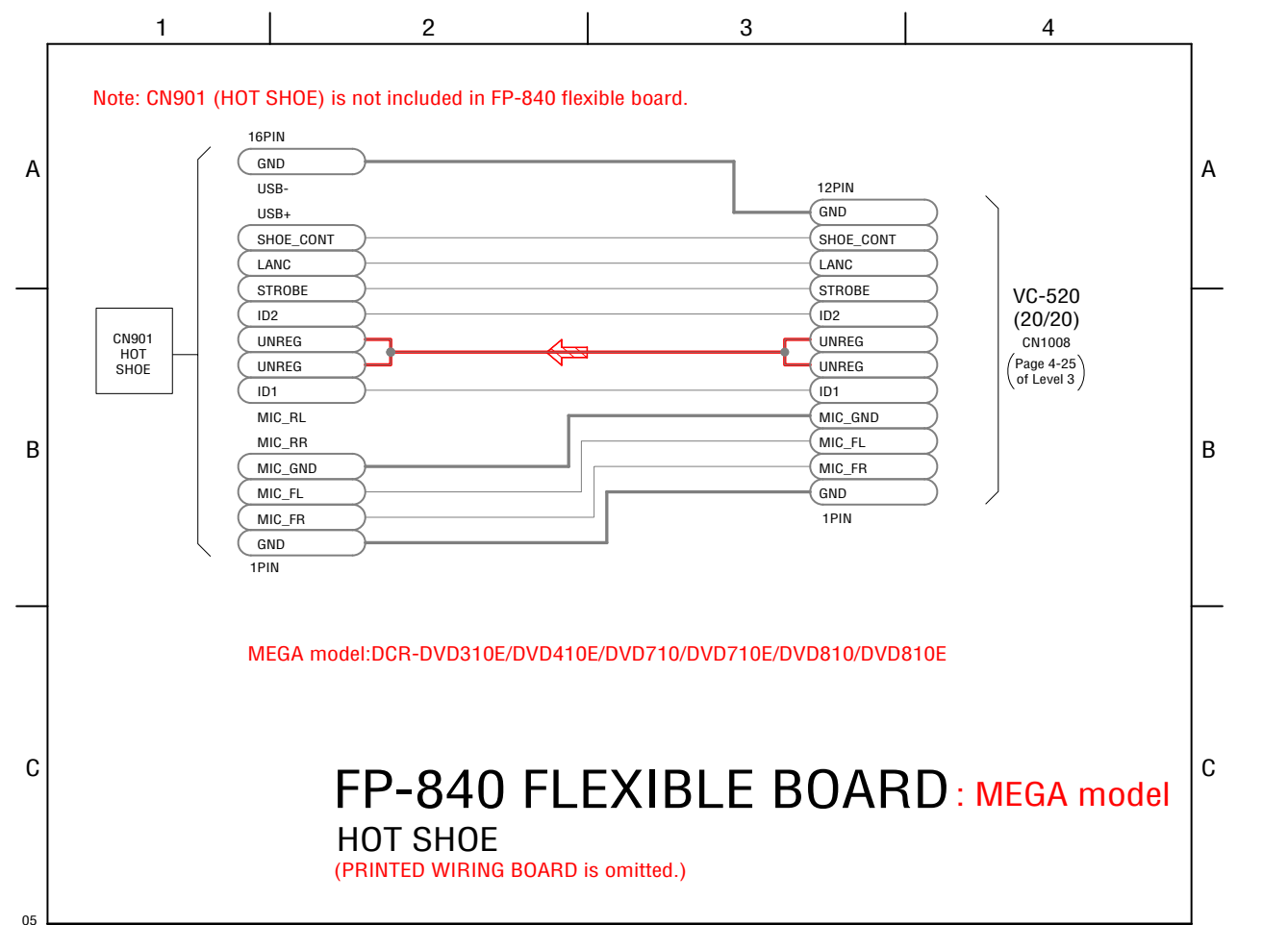
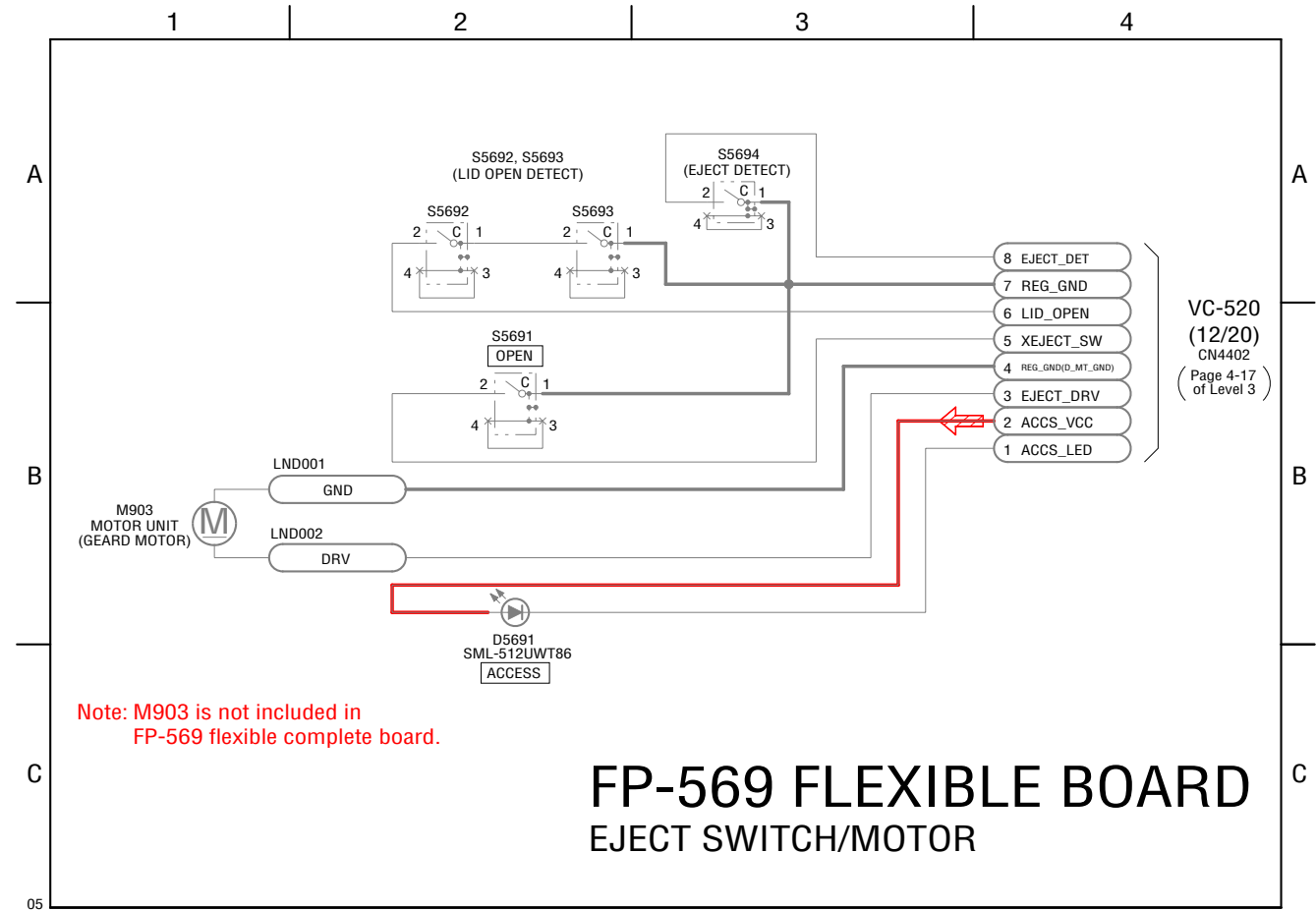
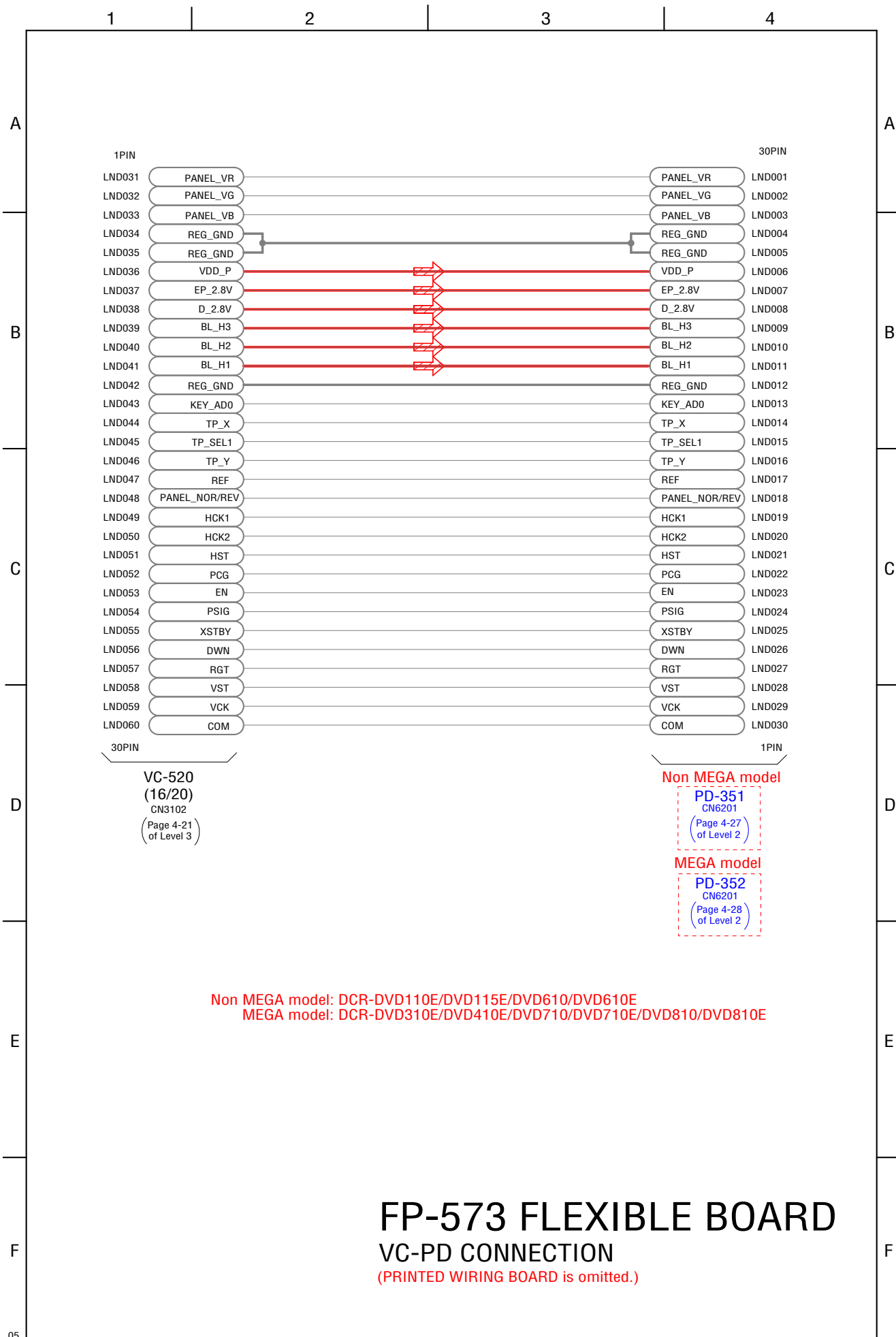


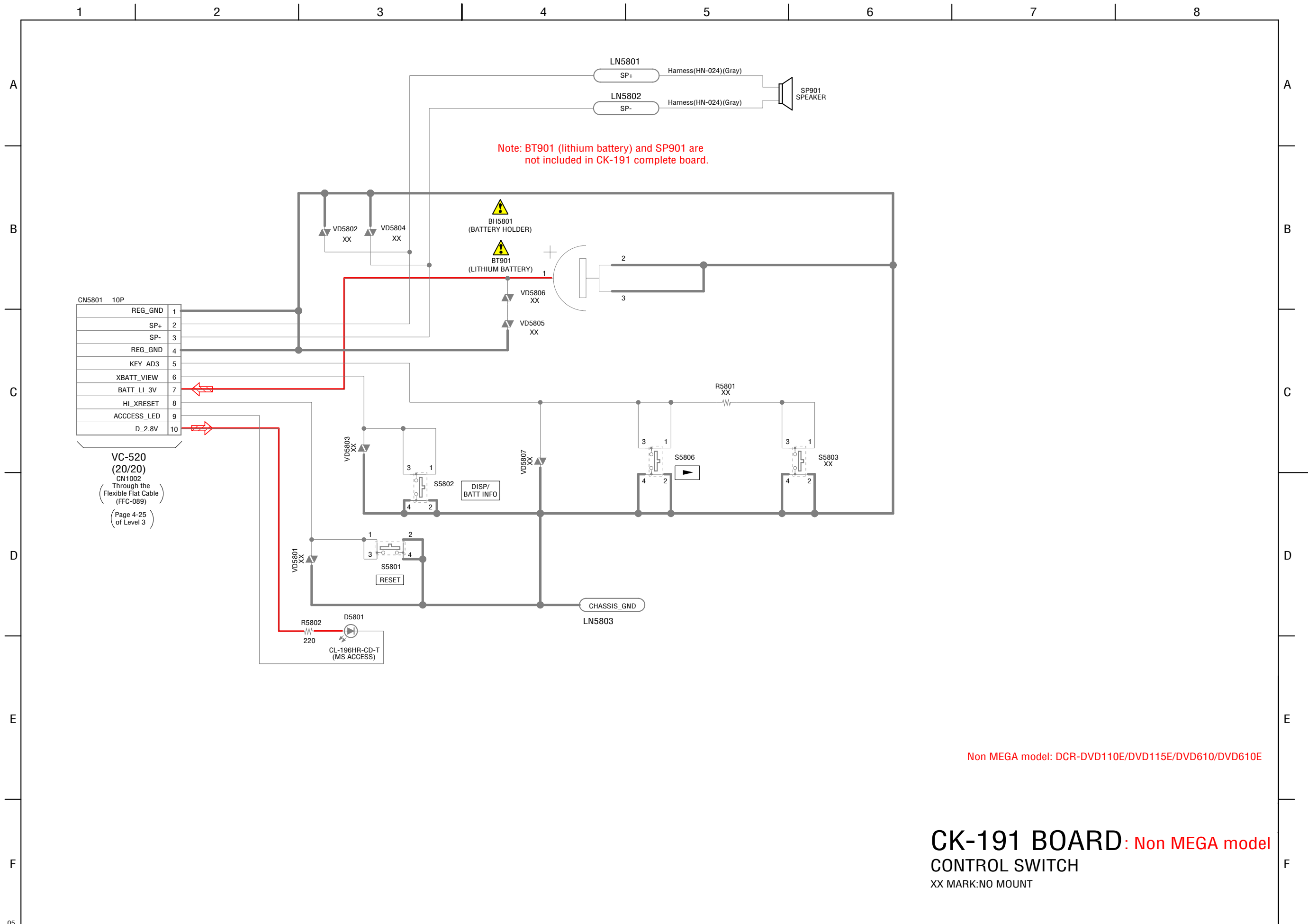
Schematic diagrams of the VC-520 board are not shown.
Pages from 4-6 to 4-25 are not shown.

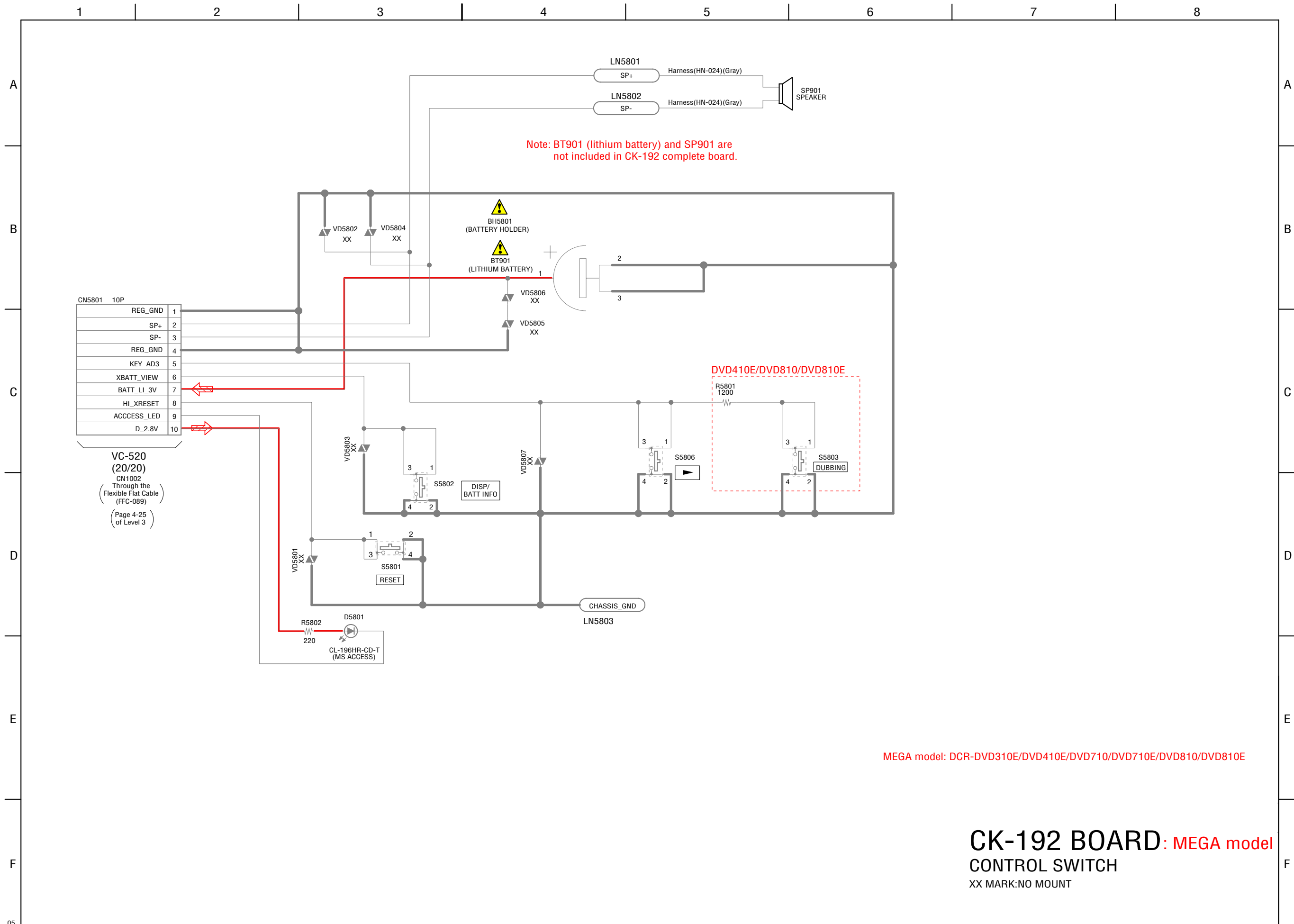






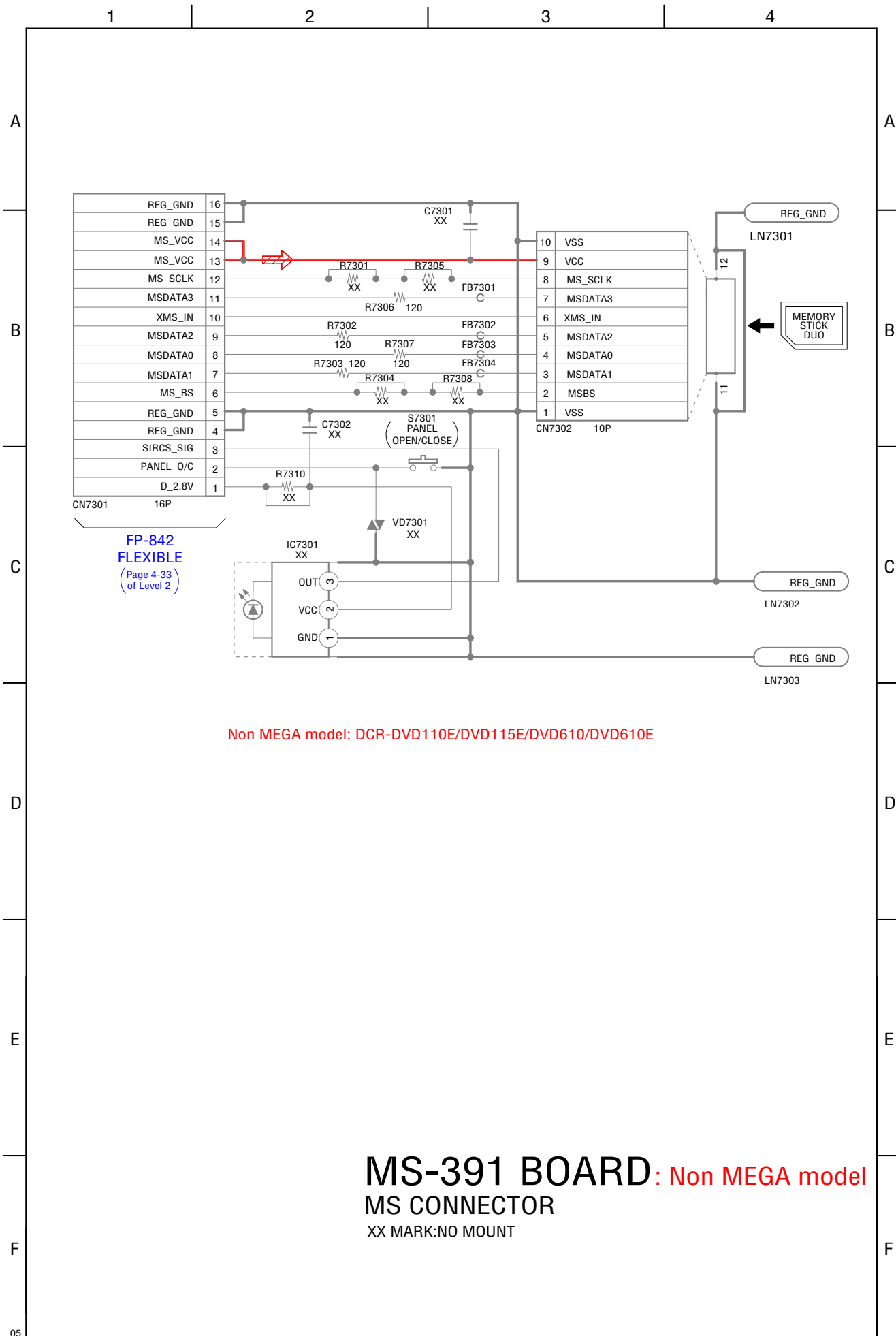




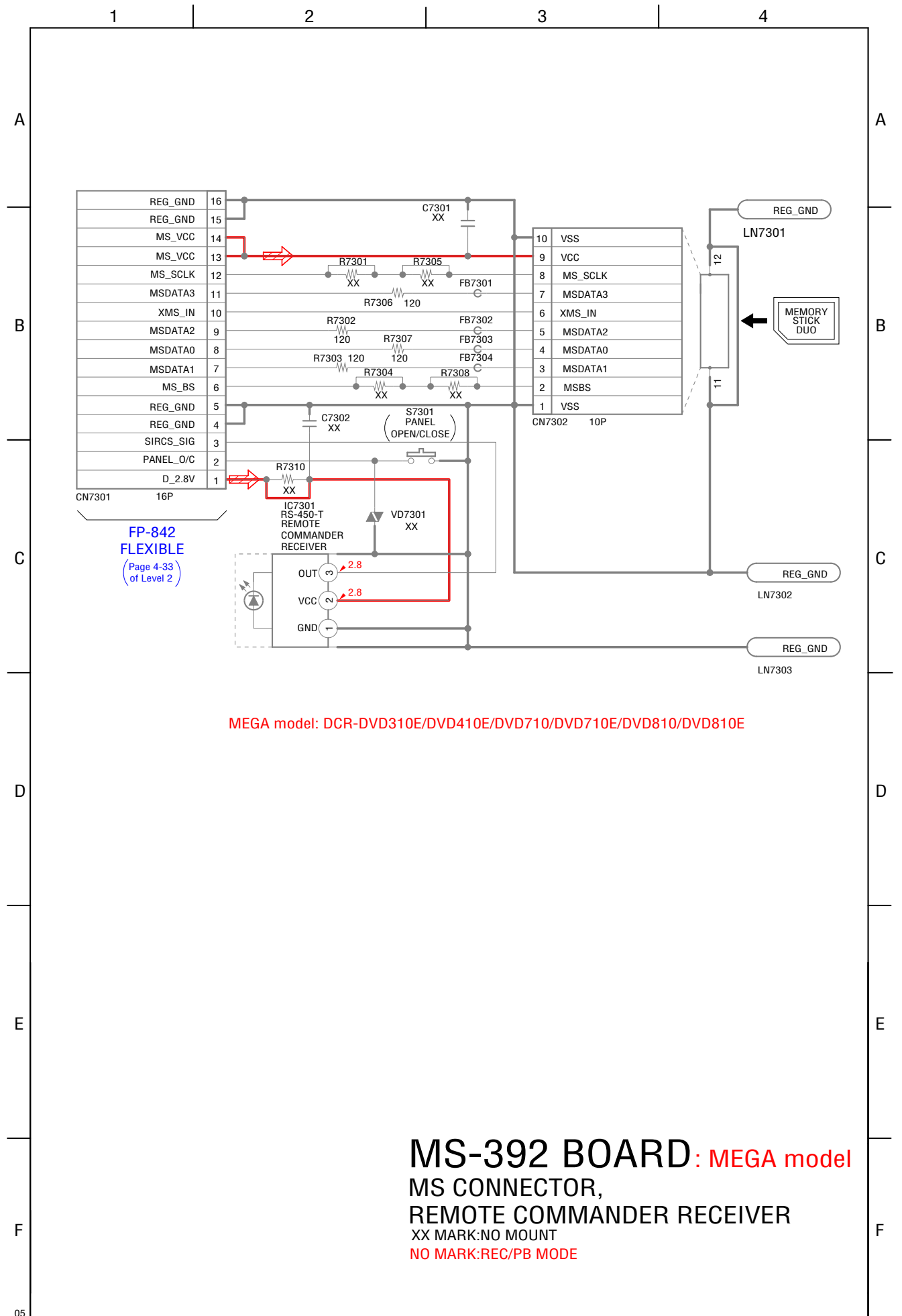


CN5801	10P	
1	REG_GND	
2	SP+	
3	SP-	
4	REG_GND	
5	KEY_AD3	
6	XBATT_VIEW	
7	BATT_LI_3V	
8	HI_XRESET	
9	ACCESS_LED	
10	D_2.8V	

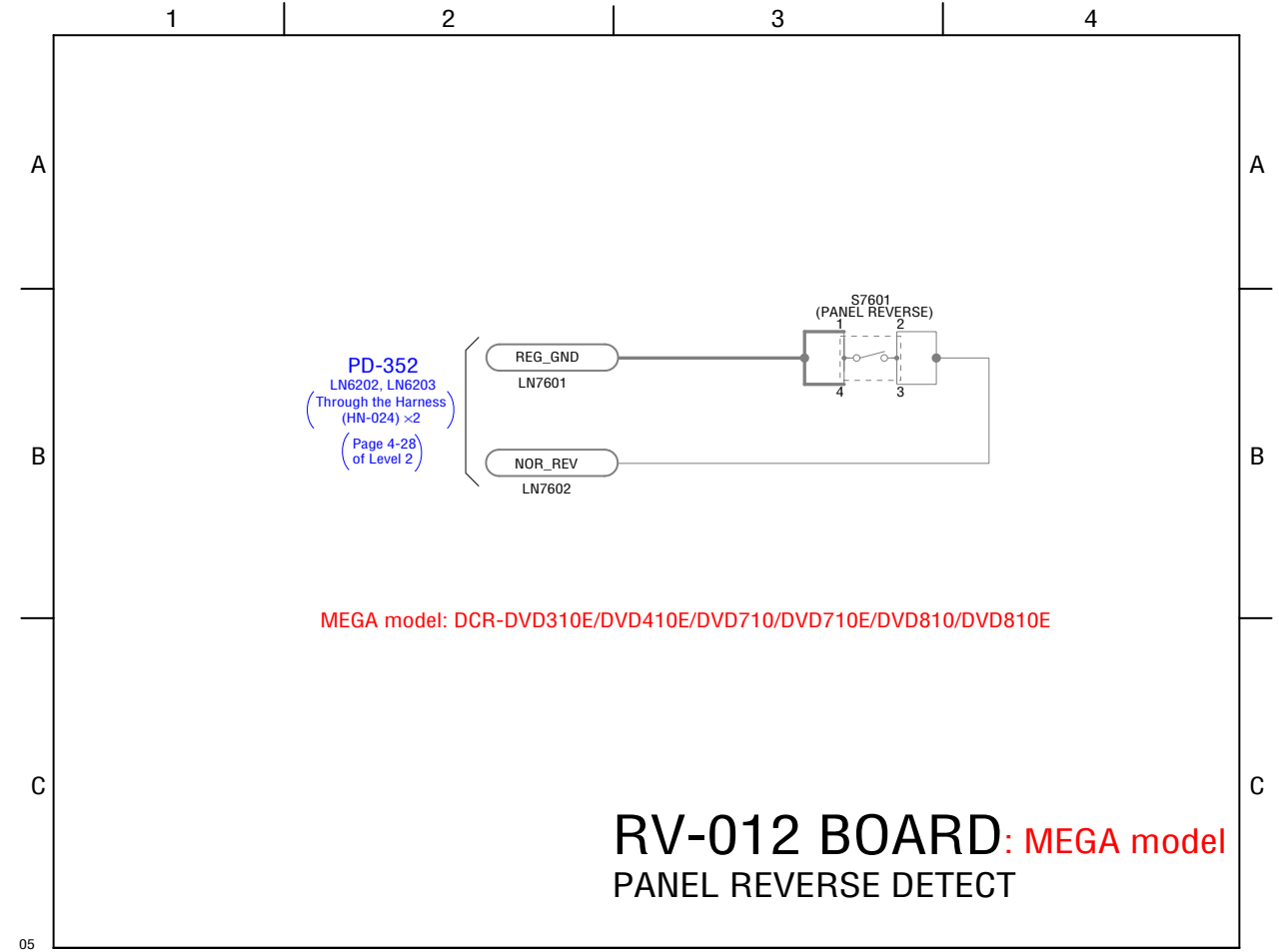
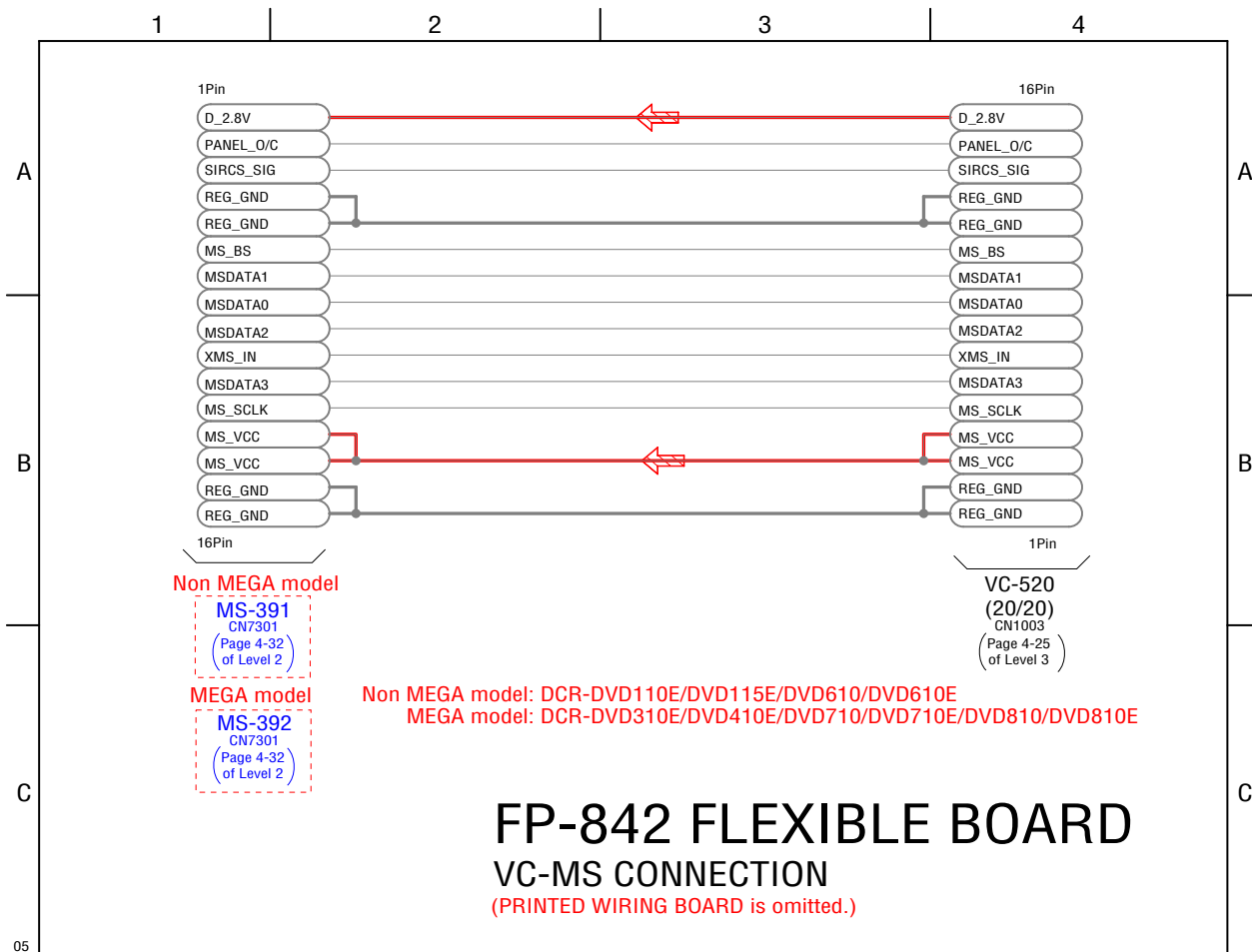
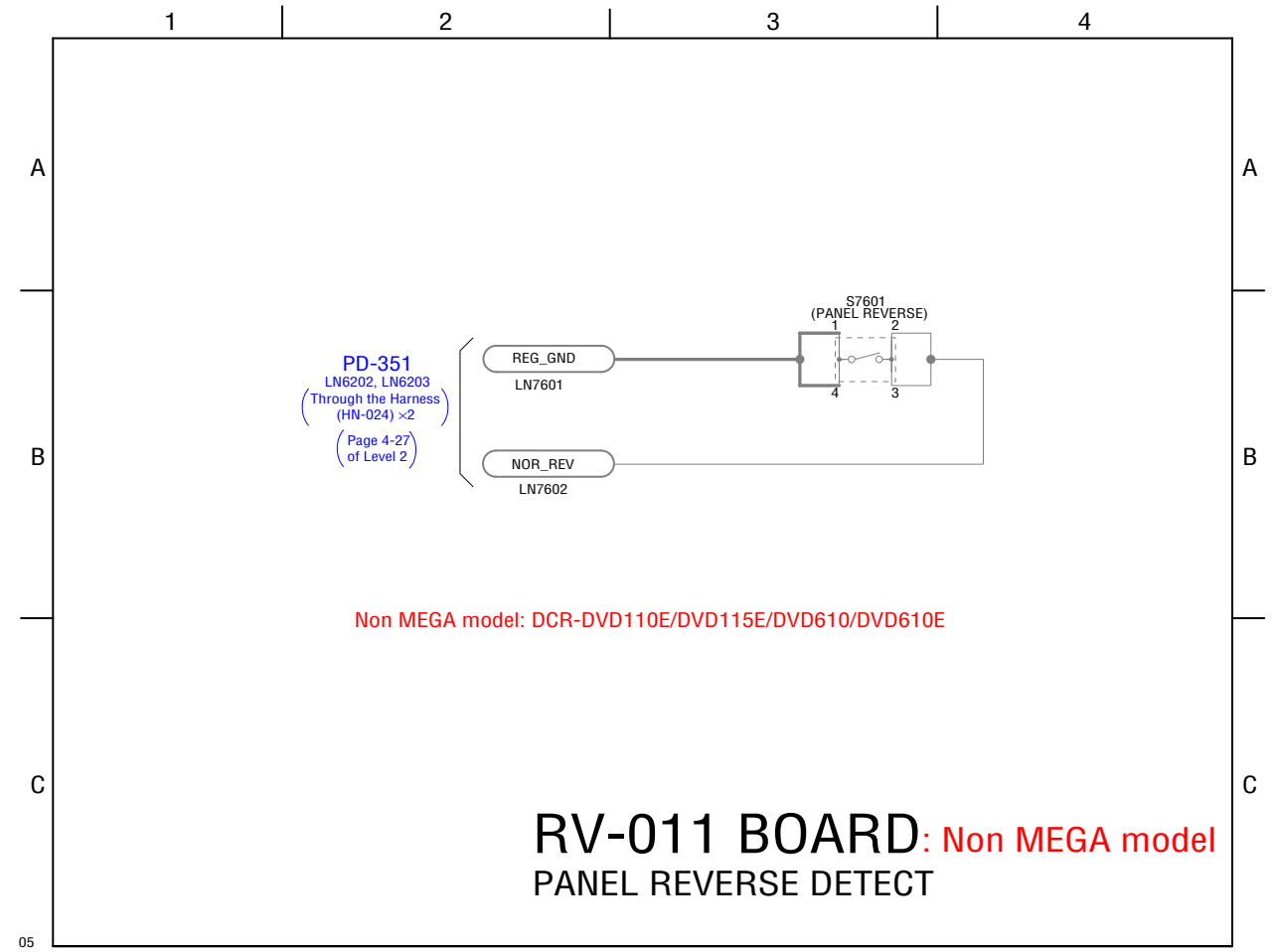
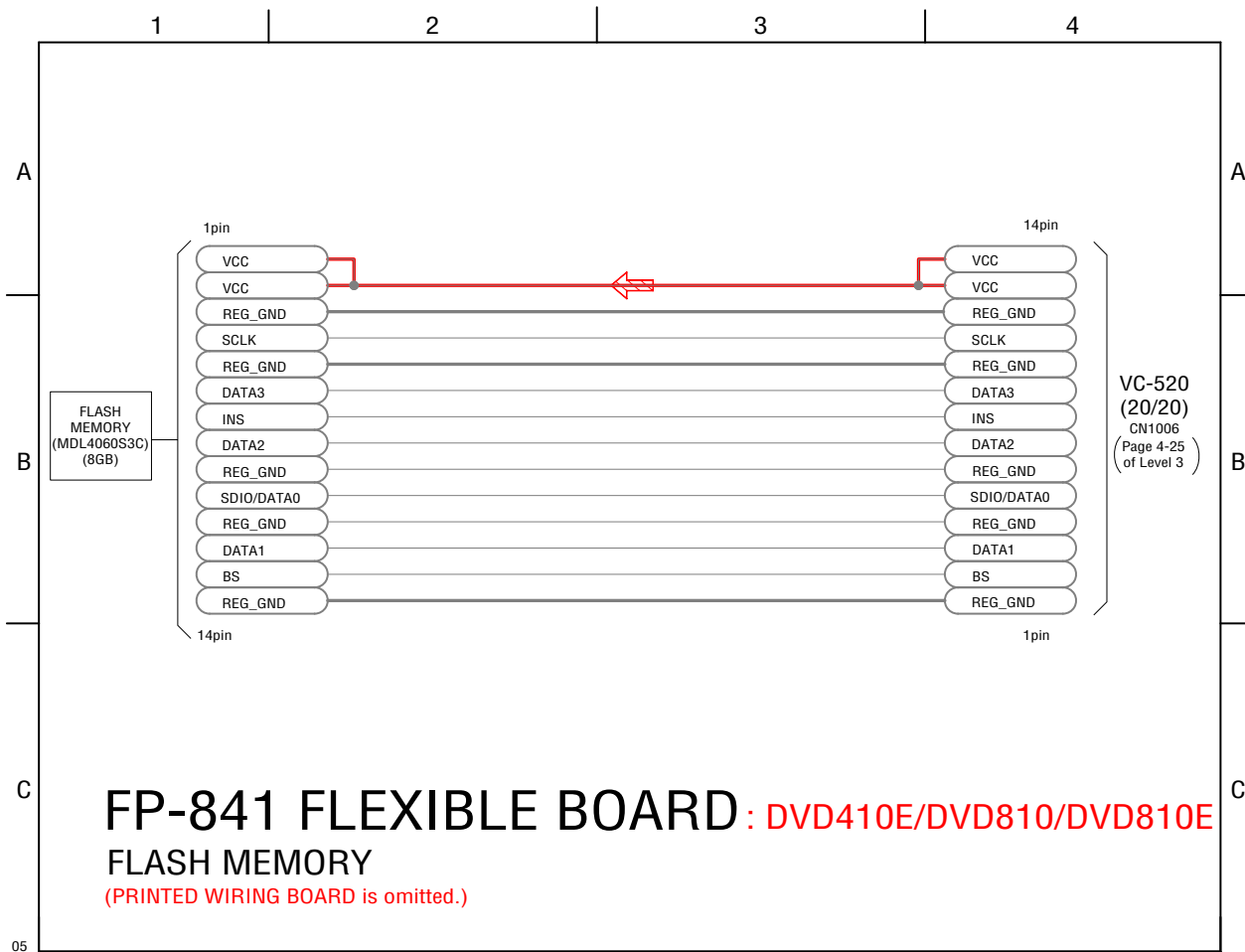
VC-520
(20/20)
CN1002
Through the
Flexible Flat Cable
(FFC-089)
(Page 4-25
of Level 3)

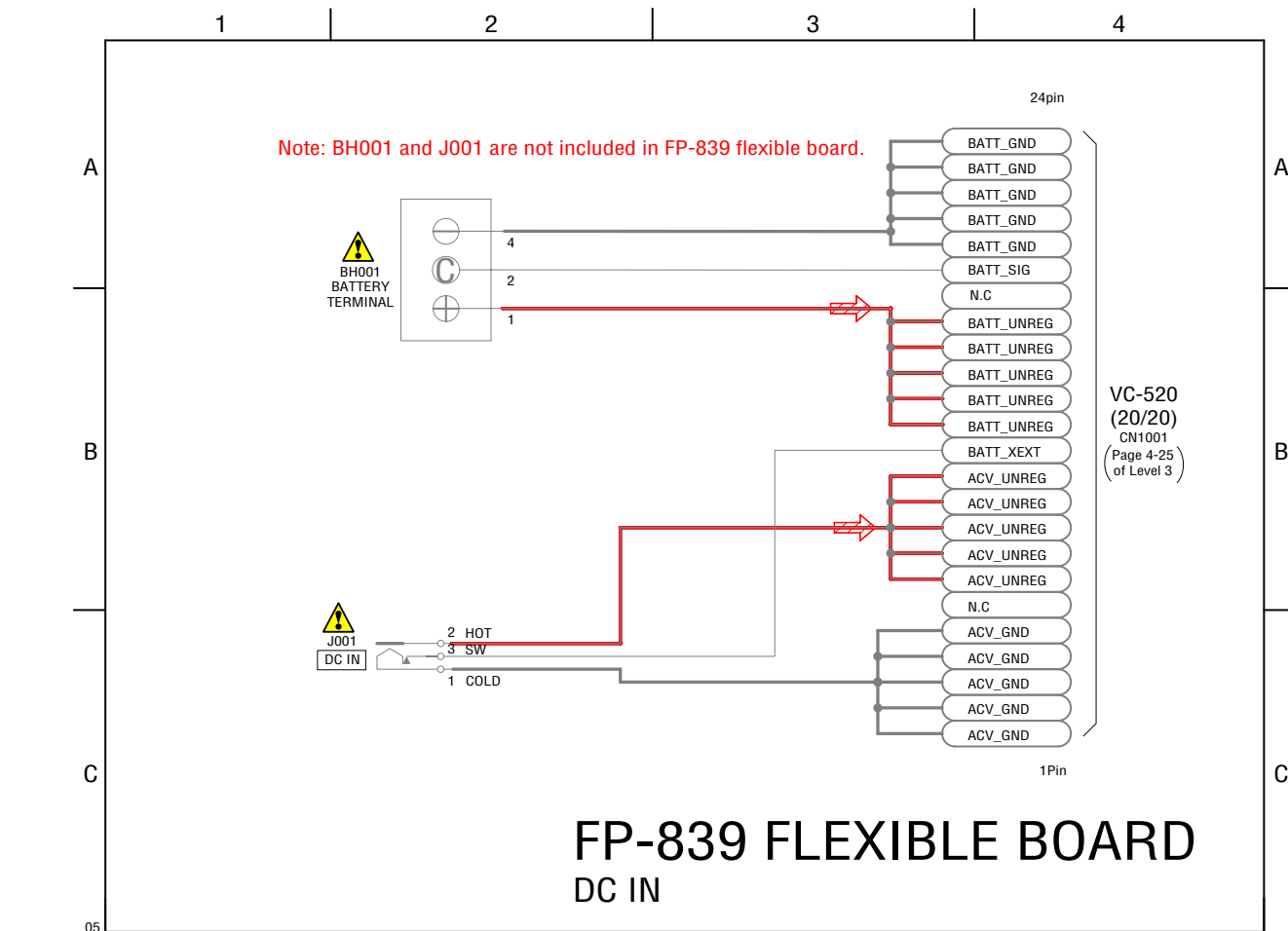
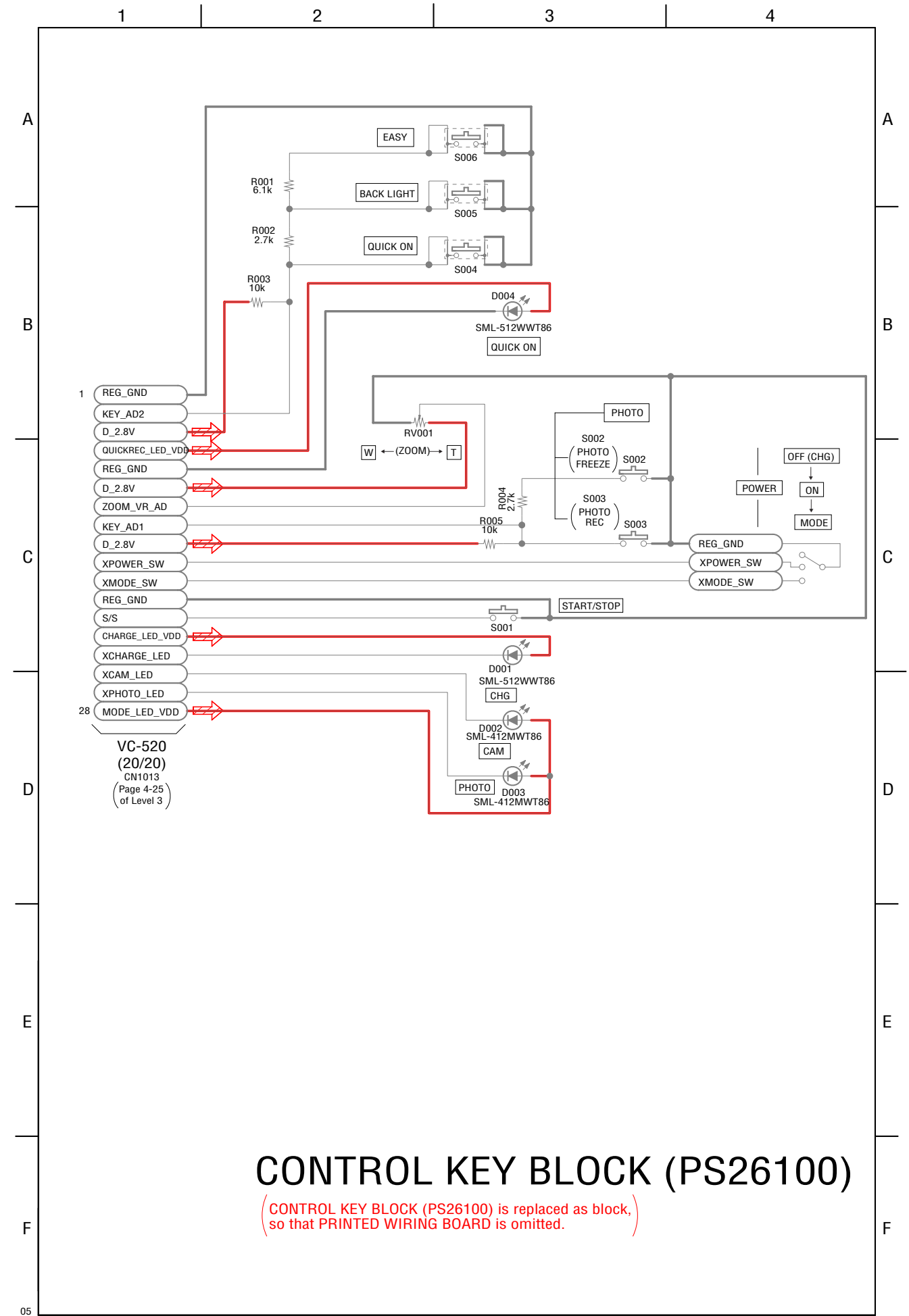
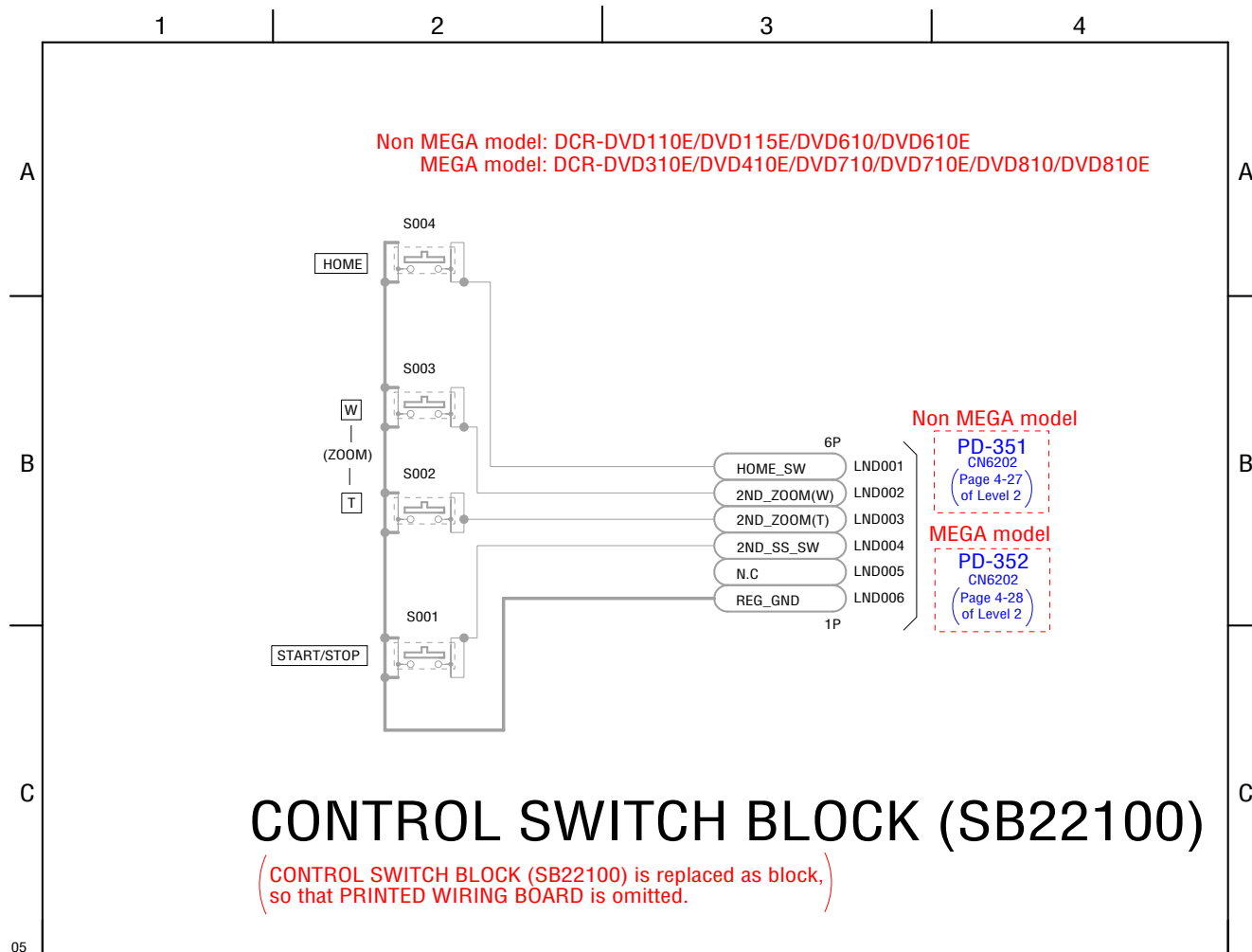


Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVD610E



MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E





4-3. PRINTED WIRING BOARDS

Link

• CD-672/CD-687 BOARD: MEGA model	• RV-012 BOARD: MEGA model
• CD-731 BOARD: Non MEGA model	• PD-352 BOARD (SIDE A): MEGA model
• FP-569 FLEXIBLE BOARD	• PD-352 BOARD (SIDE B): MEGA model
• BL-021 BOARD: Non MEGA model	• CK-191 BOARD: Non MEGA model
• BL-022 BOARD: MEGA model	• CK-192 BOARD: MEGA model
• RV-011 BOARD: Non MEGA model	• MS-391 BOARD: Non MEGA model
• PD-351 BOARD (SIDE A): Non MEGA model	• MS-392 BOARD: MEGA model
• PD-351 BOARD (SIDE B): Non MEGA model	• FP-839 FLEXIBLE BOARD

• COMMON NOTE FOR PRINTED WIRING BOARDS

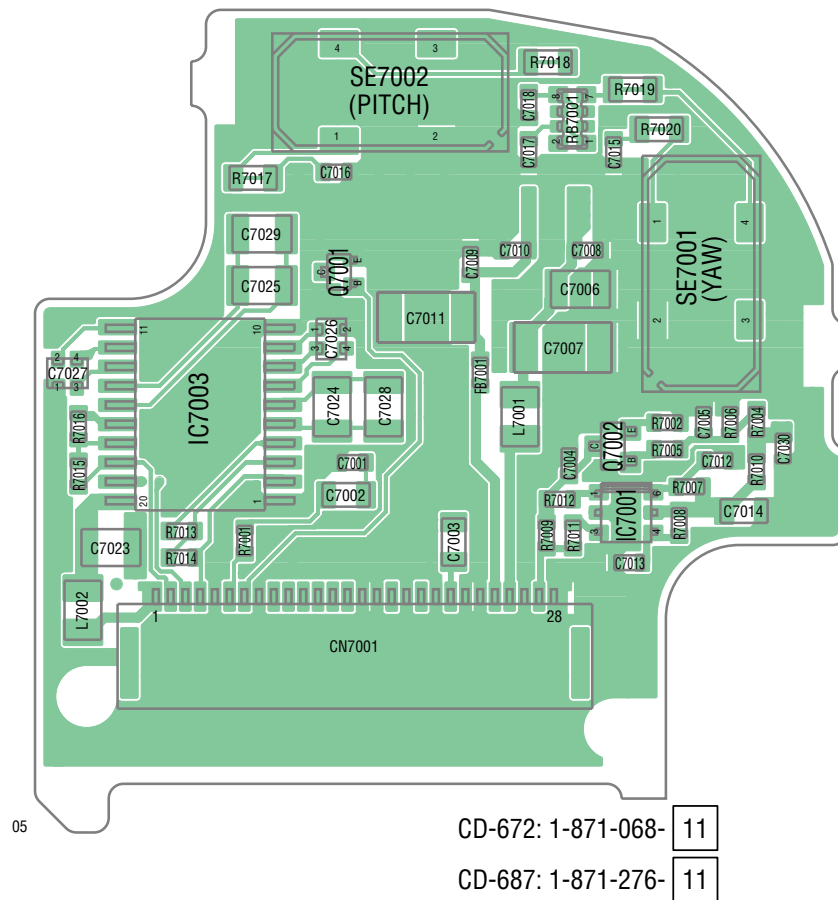
Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVE610E

MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E

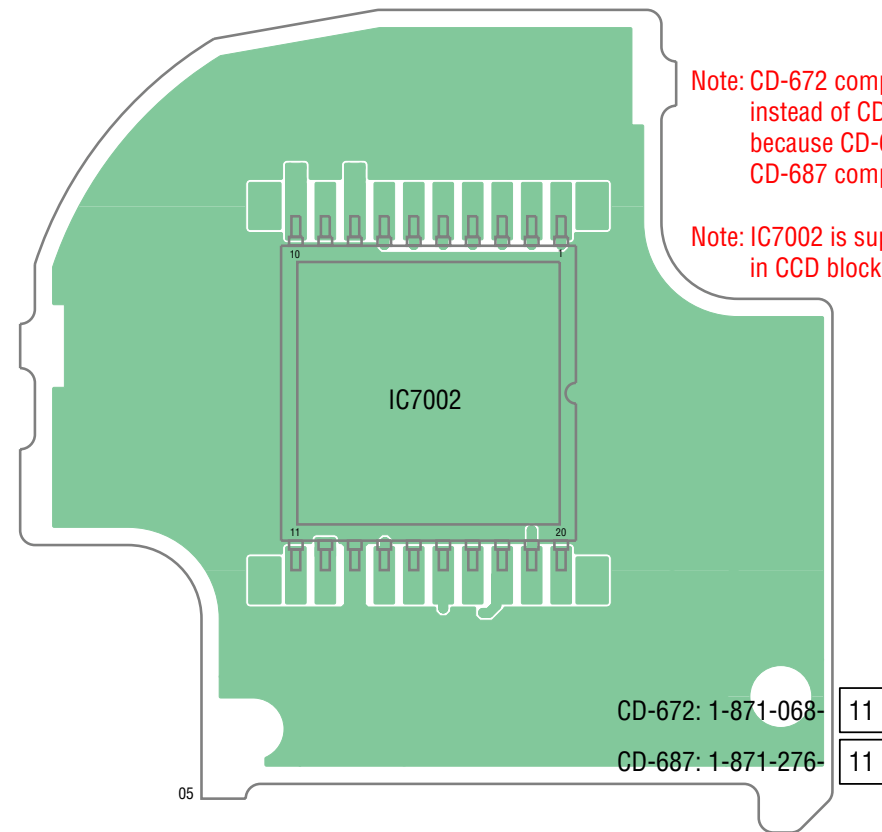
 : Uses unleaded solder.

MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E, Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVD610E

CD-672/CD-687 BOARD (SIDE A) (MEGA model)



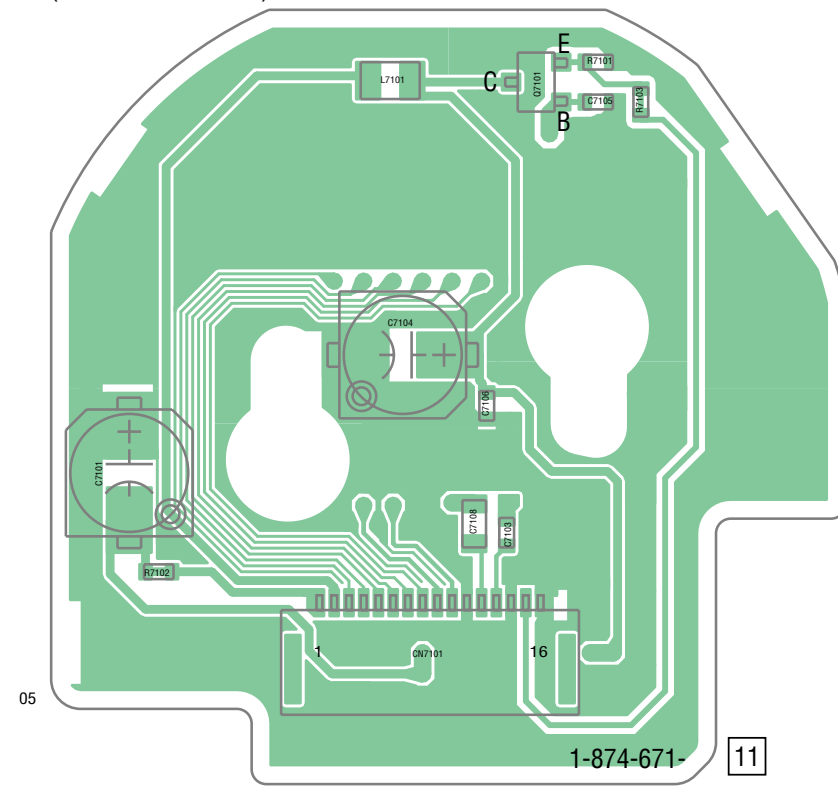
CD-672/CD-687 BOARD (SIDE B) (MEGA model)



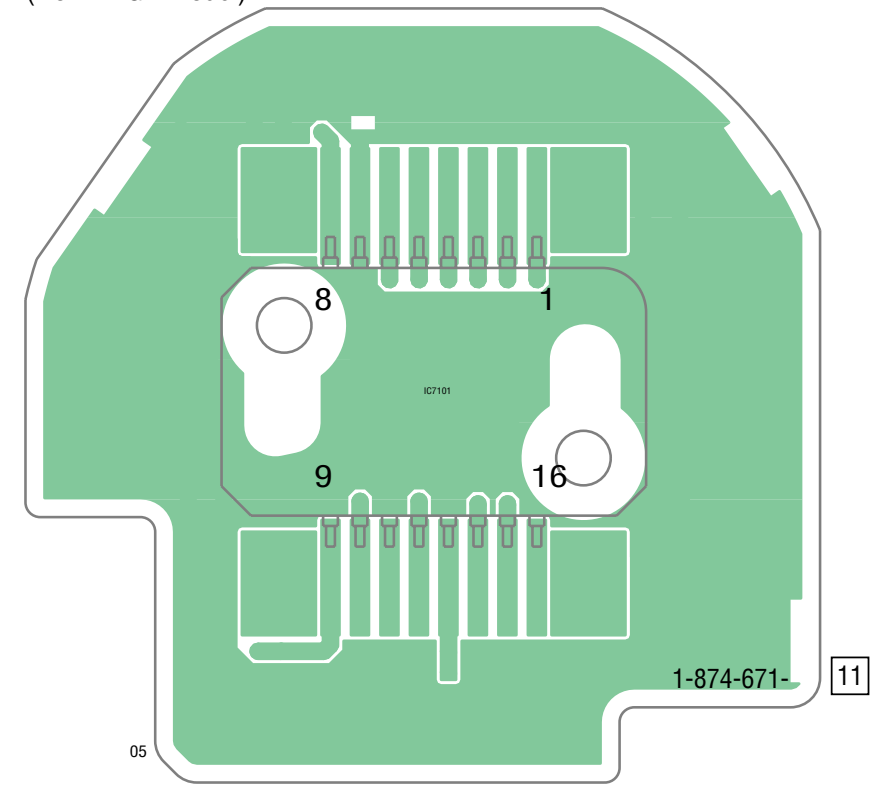
Note: CD-672 complete board is supplied instead of CD-687 complete board, because CD-672 complete board and CD-687 complete board are compatible.

Note: IC7002 is supplied including in CCD block assy.

CD-731 BOARD (SIDE A) (Non MEGA model)



CD-731 BOARD (SIDE B) (Non MEGA model)



Note: IC7101 is not included in CD-731 complete board.

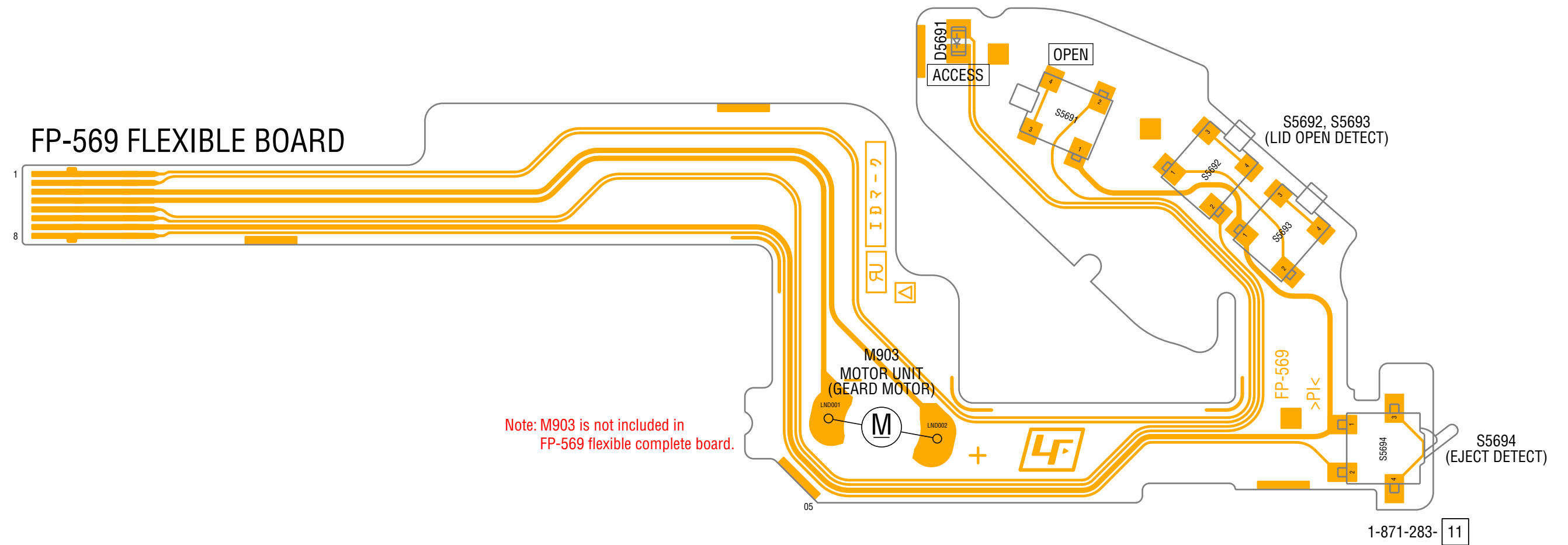
Printed wiring boards of the VC-520 boards are not shown.
Pages from 4-37 to 4-38 are not shown.

FP-569 (1 layer), BL-021 (2 layers): Non MEGA model, BL-022 (2 layers): MEGA model

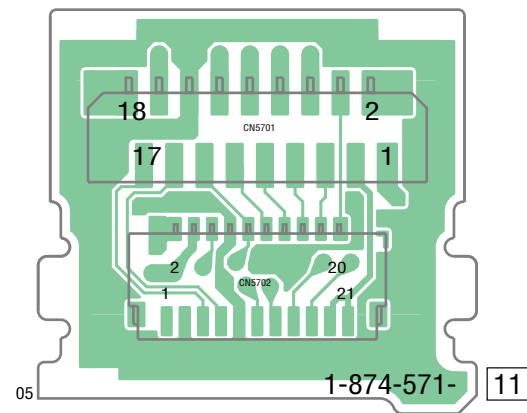
 : Uses unleaded solder.

Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVD610E

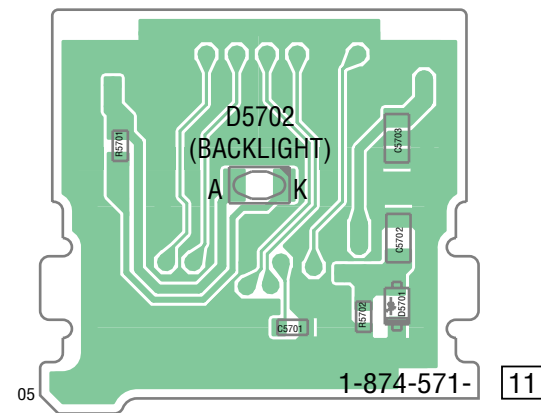
MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E



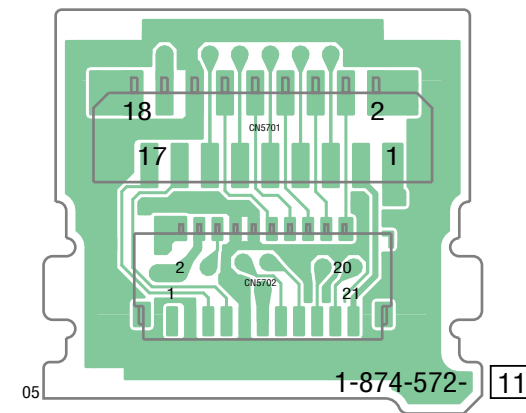
BL-021 BOARD (SIDE A)
(Non MEGA model)



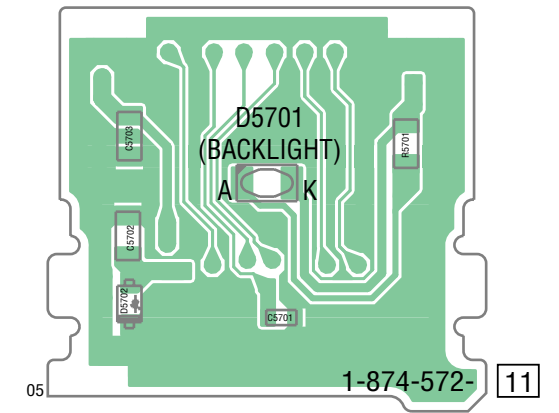
BL-021 BOARD (SIDE B)
(Non MEGA model)



BL-022 BOARD (SIDE A)
(MEGA model)



BL-022 BOARD (SIDE B)
(MEGA model)

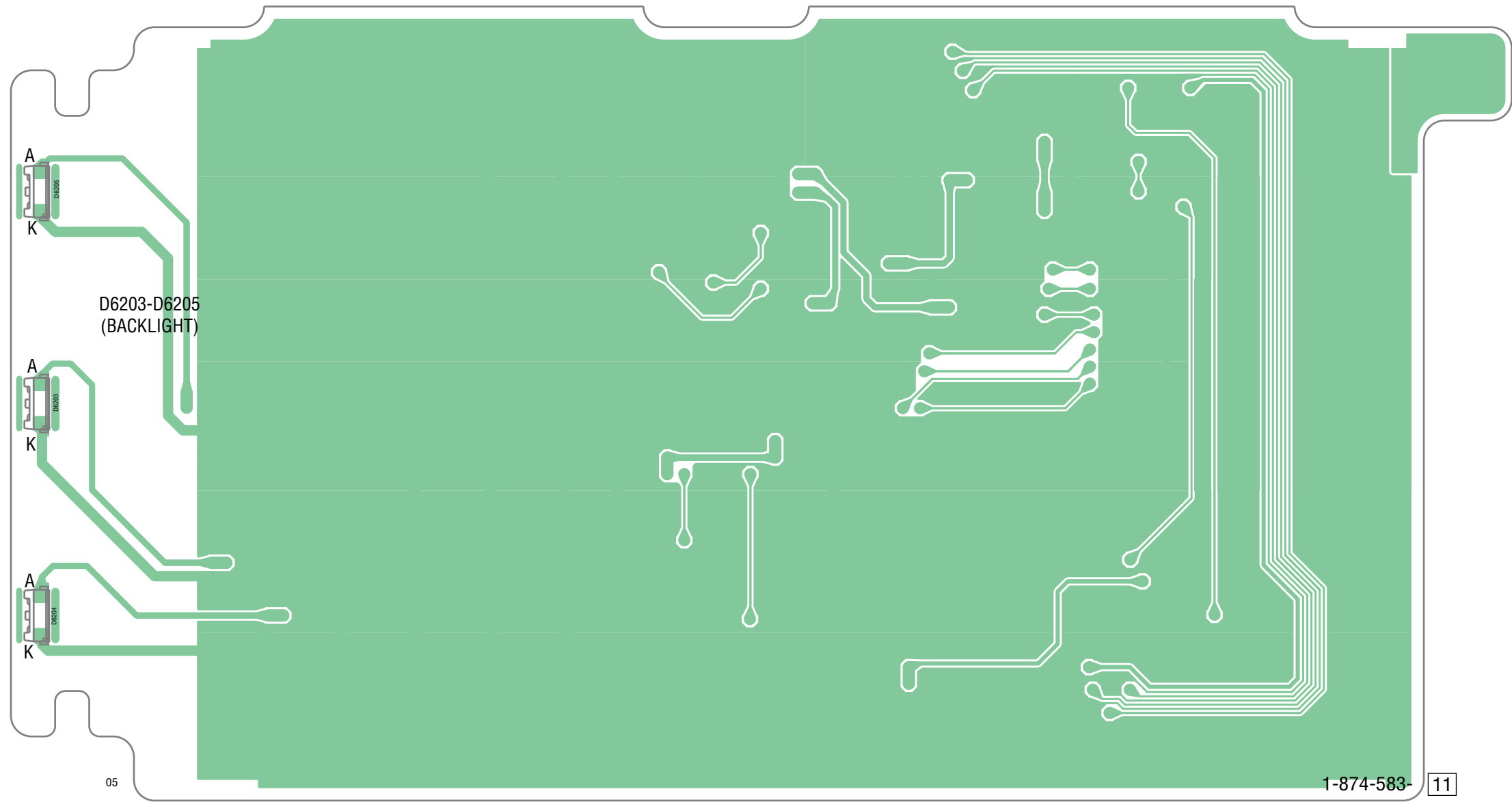


PD-351 (2 layers): Non MEGA model

 : Uses unleaded solder.

Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVD610E

PD-351 BOARD (SIDE B) (Non MEGA model)

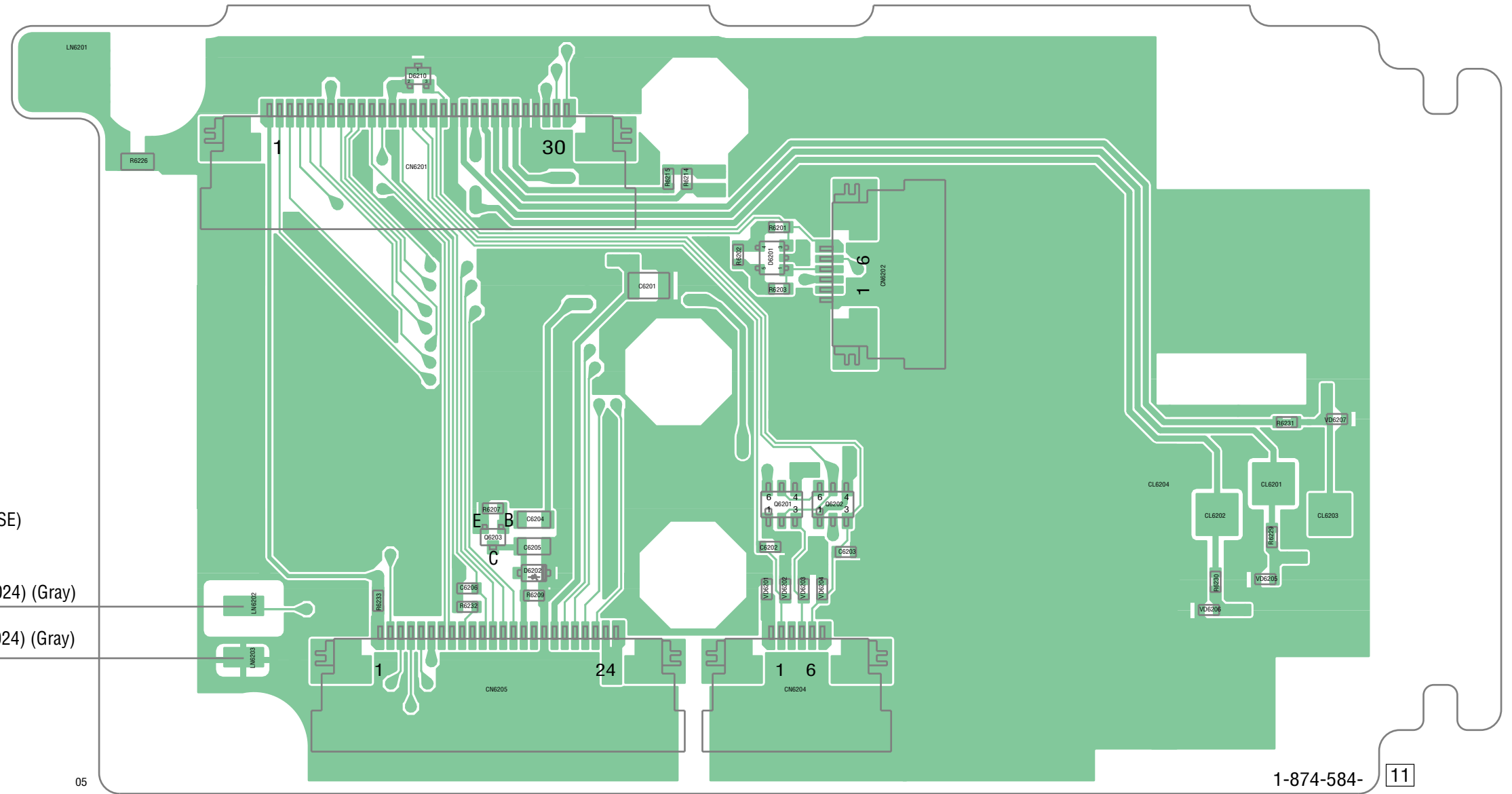
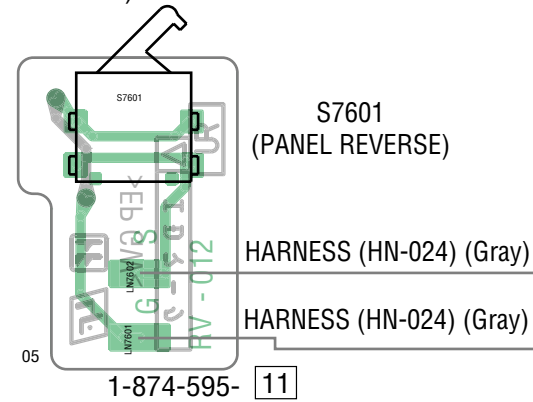


 : Uses unleaded solder.

MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E

PD-352 BOARD (SIDE A) (MEGA model)

RV-012 BOARD (MEGA model)

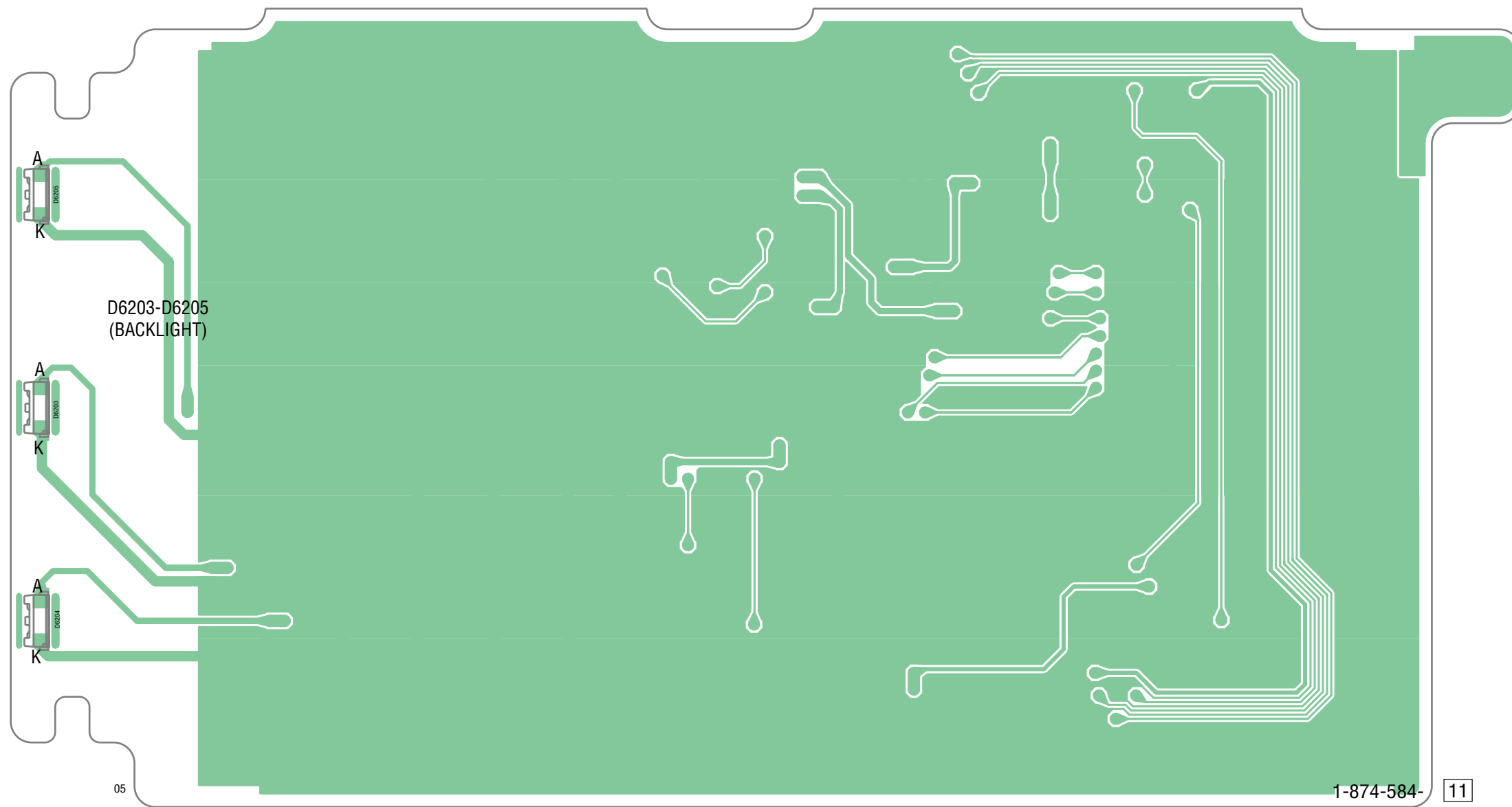


PD-352 (2 layers): MEGA model

 : Uses unleaded solder.

MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E

PD-352 BOARD (SIDE B) (MEGA model)

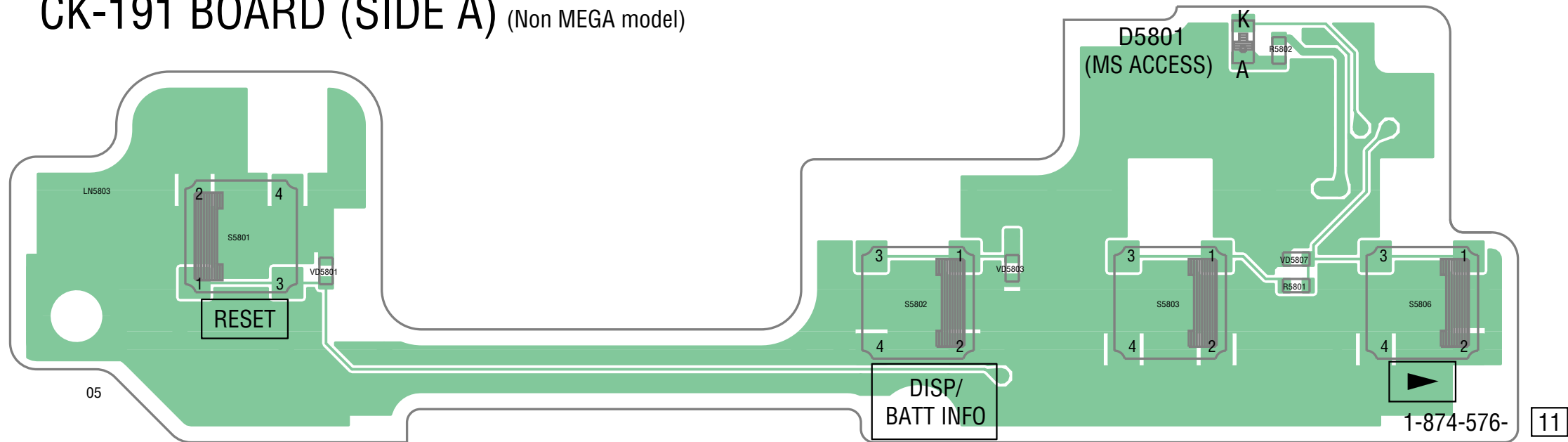


CK-191 (2 layers): Non MEGA model

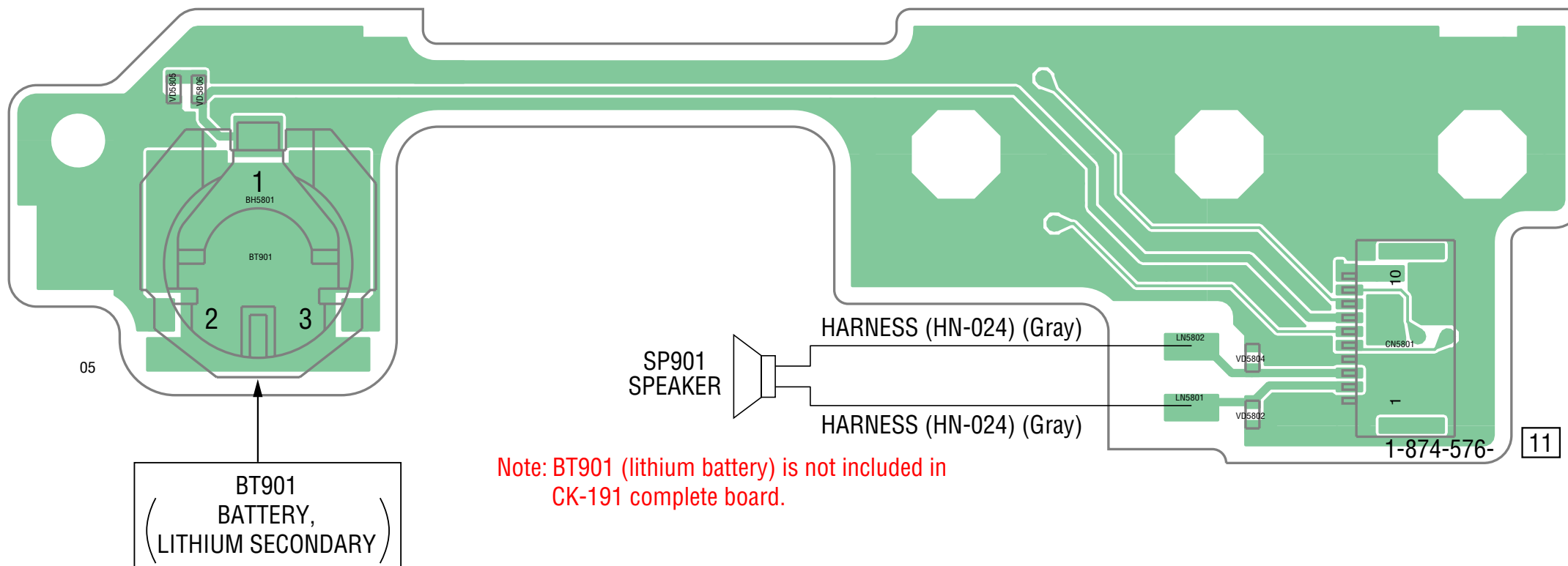
 : Uses unleaded solder.

Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVD610E

CK-191 BOARD (SIDE A) (Non MEGA model)



CK-191 BOARD (SIDE B) (Non MEGA model)



Note: BT901 (lithium battery) is not included in CK-191 complete board.

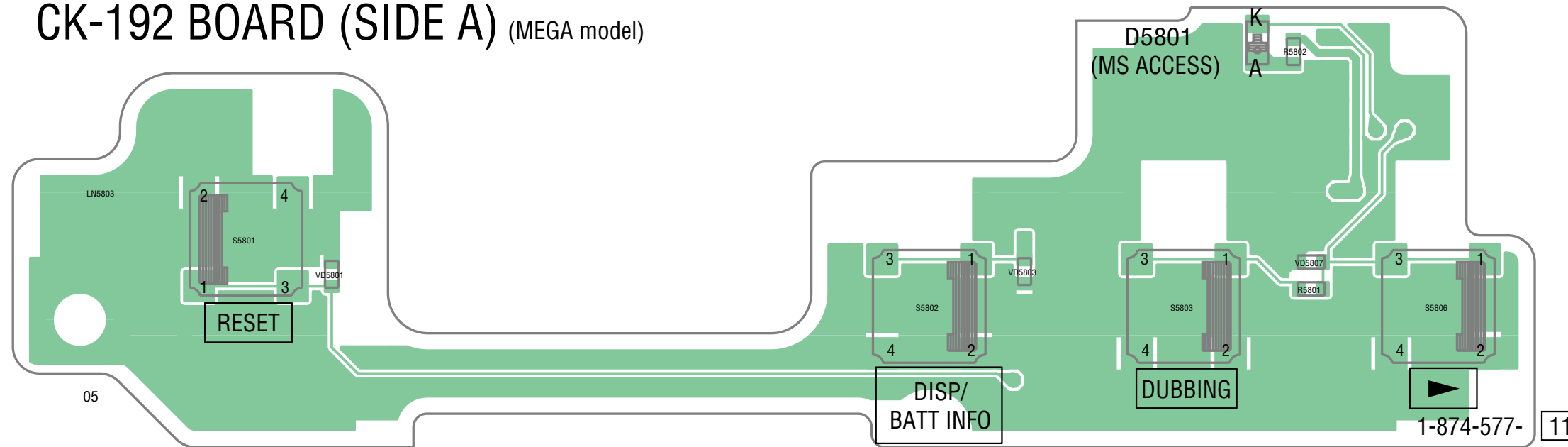
CAUTION
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

注意
電池の交換は、正しく行わないと破裂する恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。

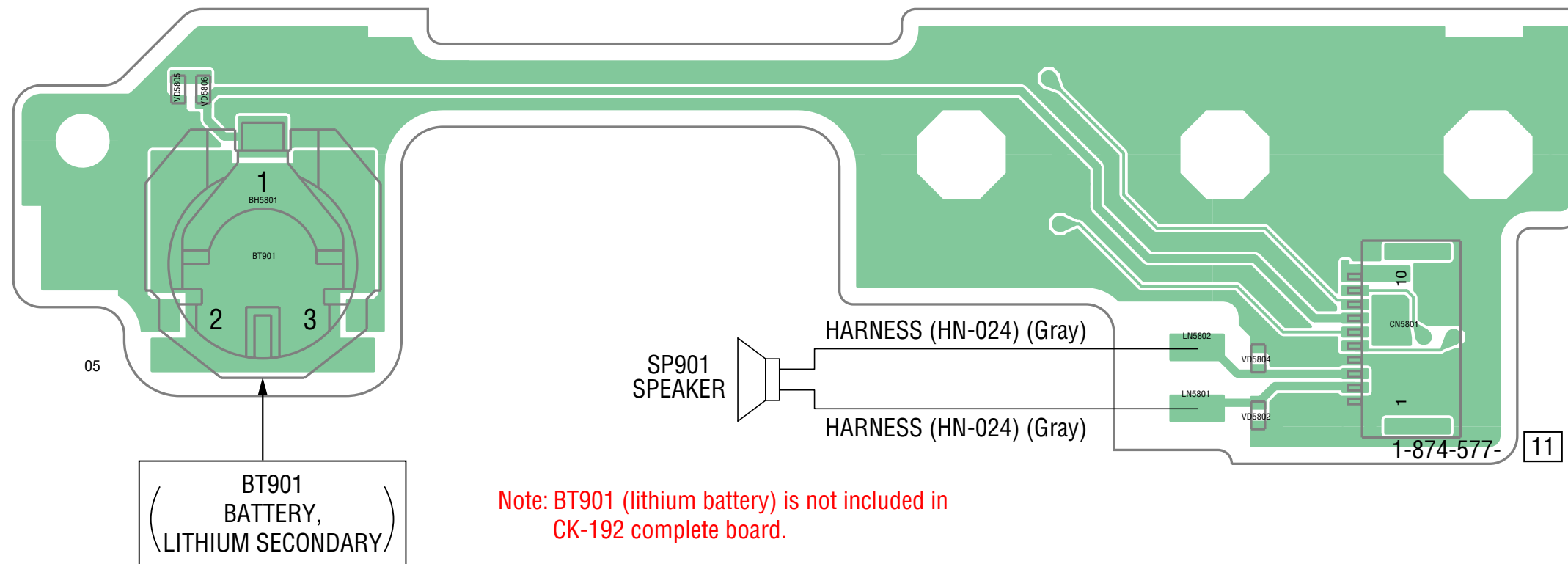
Note: Replace the battery holder (BH5801) together when replacing the lithium battery (BT901) on the CK-191 board. (The battery holder removed once cannot be used again.)
When mounting these parts, mount new battery holder first and attach new lithium battery next.

ノート: CK-191基板のリチウム電池 (BT901) を交換する場合はバッテリーホルダ (BH5801) も同時に新品に交換して下さい。(一度使用したバッテリーホルダは再使用できません。)
部品取り付けの際は、先にバッテリーホルダを取り付けてからリチウム電池を装着してください。

CK-192 BOARD (SIDE A) (MEGA model)



CK-192 BOARD (SIDE B) (MEGA model)




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恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。

Note: Replace the battery holder (BH5801) together when replacing the lithium battery (BT901) on the CK-192 board. (The battery holder removed once cannot be used again.)
When mounting these parts, mount new battery holder first and attach new lithium battery next.

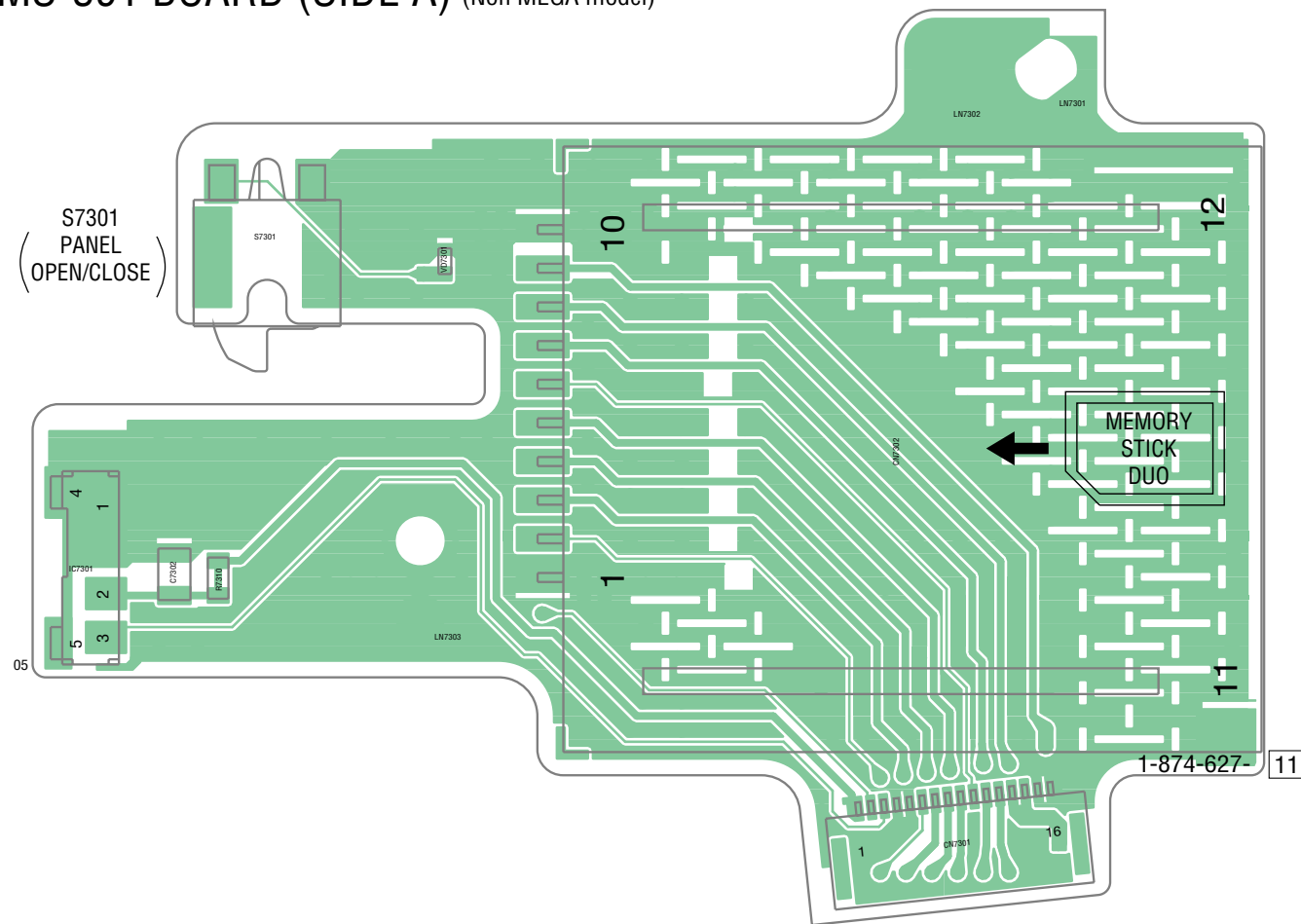
ノート: CK-192基板のリチウム電池 (BT901) を交換する場合はバッテリーホルダ (BH5801) も同時に新品に交換して下さい。(一度使用したバッテリーホルダは再使用できません。)
部品取り付けの際は、先にバッテリーホルダを取り付けてからリチウム電池を装着してください。

MS-391 (2 layers): Non MEGA model

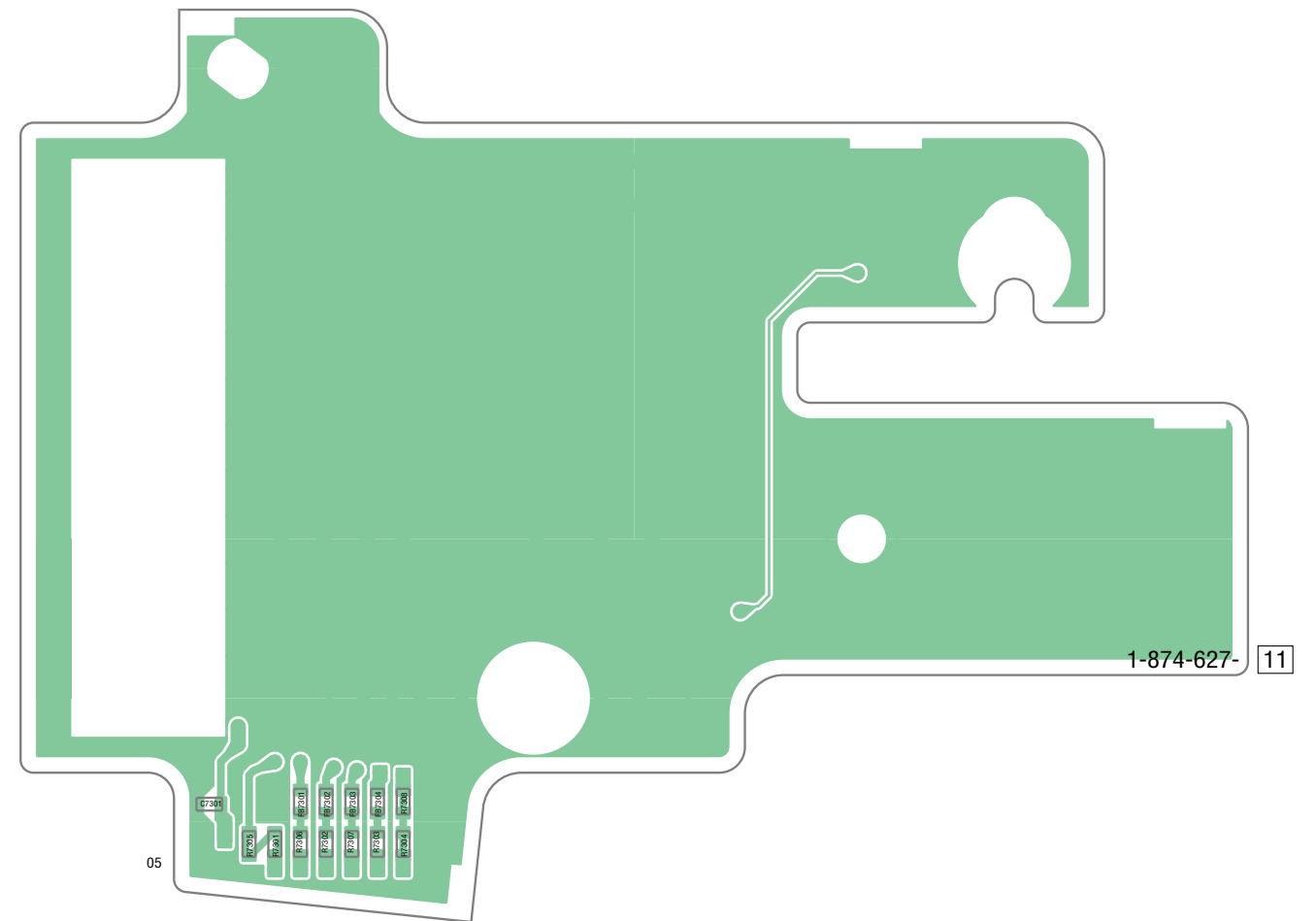
 : Uses unleaded solder.

Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVD610E

MS-391 BOARD (SIDE A) (Non MEGA model)



MS-391 BOARD (SIDE B) (Non MEGA model)

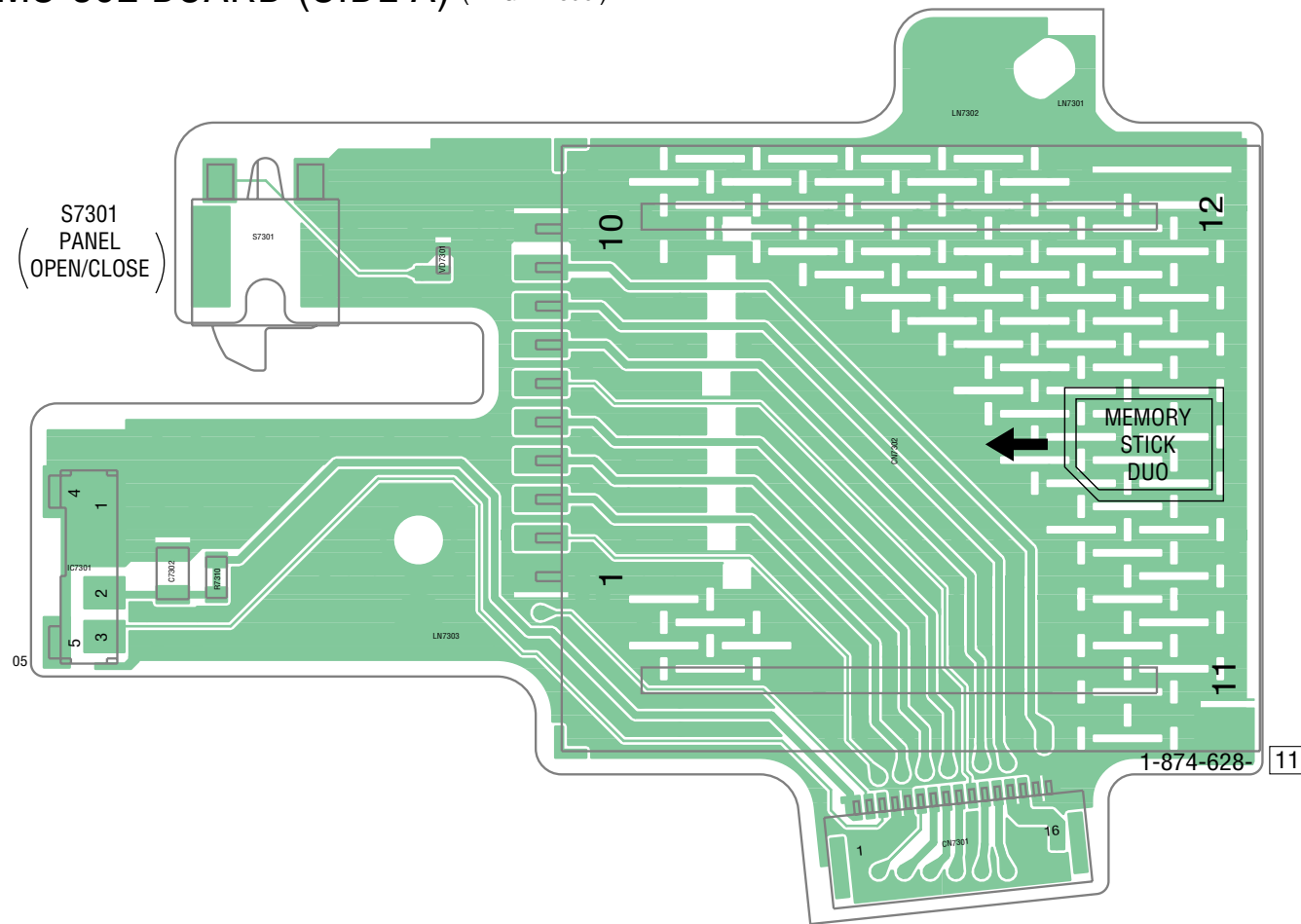


MS-392 (2 layers): MEGA model

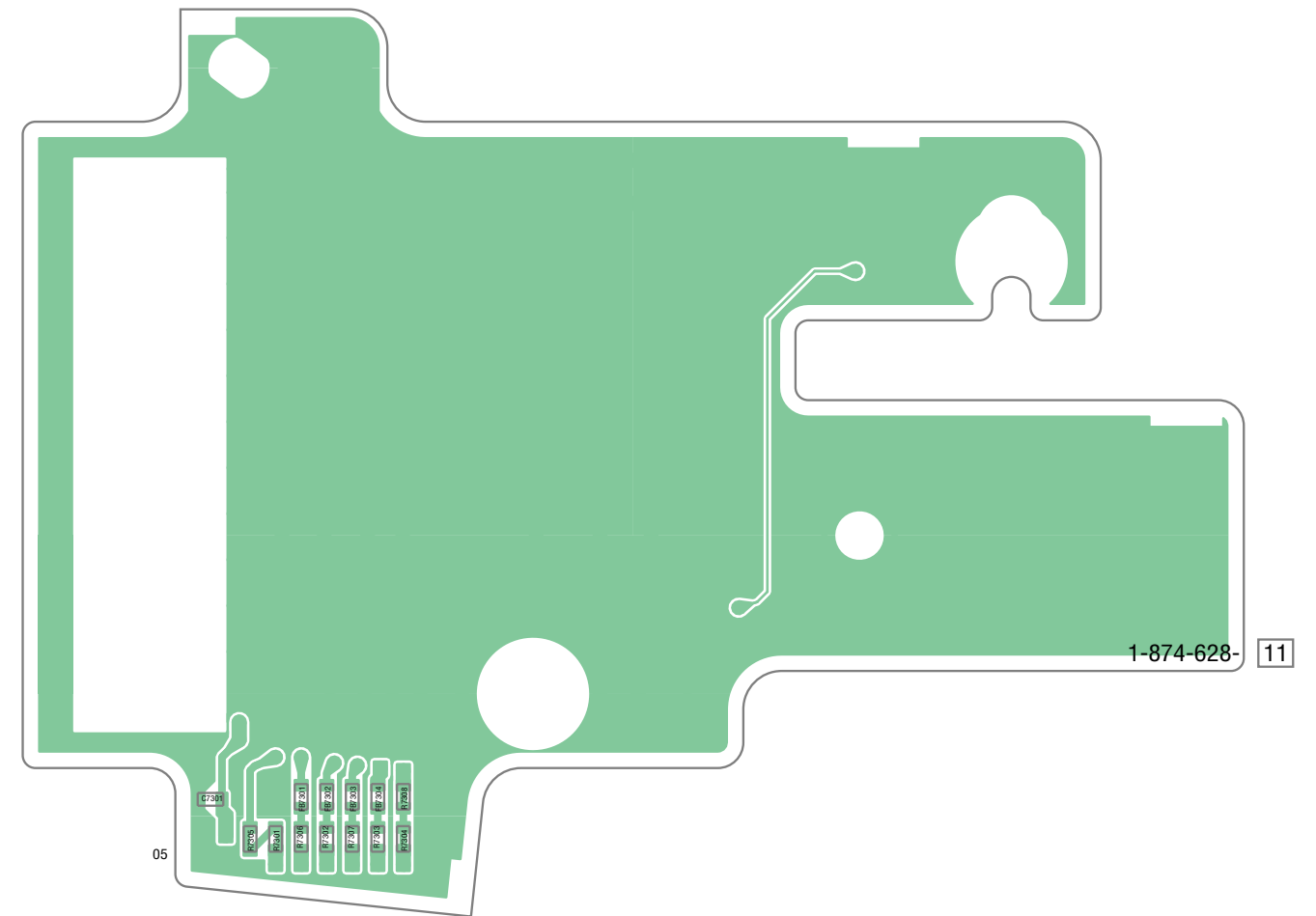
 : Uses unleaded solder.

MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E

MS-392 BOARD (SIDE A) (MEGA model)



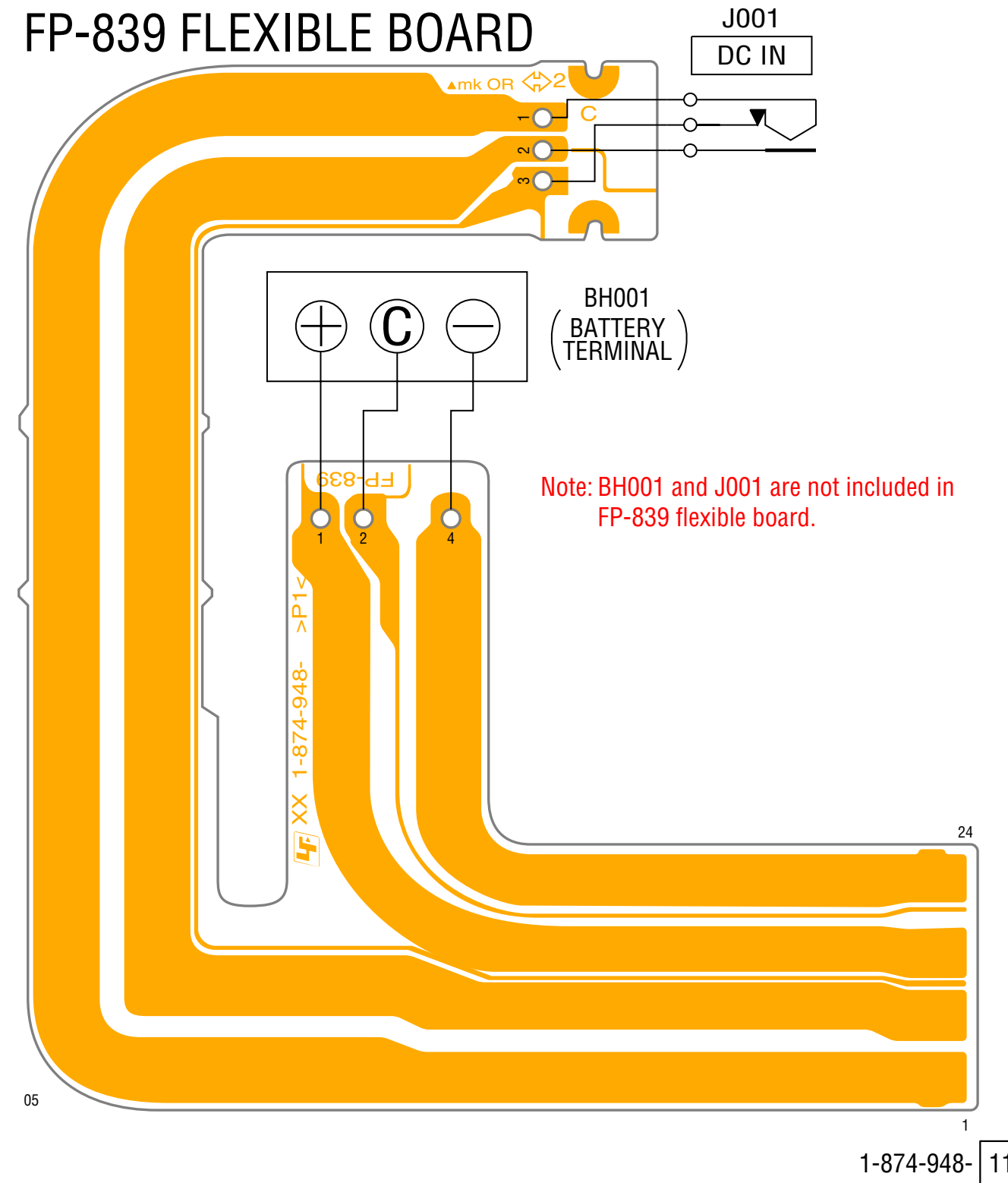
MS-392 BOARD (SIDE B) (MEGA model)



FP-839 (1 layer)

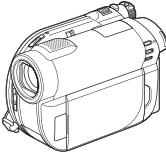
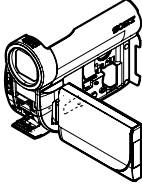
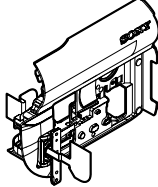
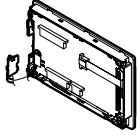
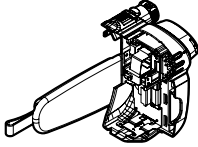
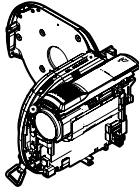
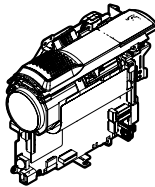
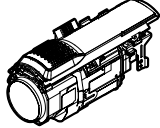
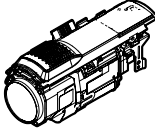
 : Uses unleaded solder.

FP-839 FLEXIBLE BOARD



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
OVERALL SECTION	CABINET R SECTION-1	CABINET R SECTION-2	LCD SECTION
			
E	F	G	H
BT/EVF SECTION	CABINET L SECTION	MD SECTION	LENS SECTION (DVD110E/ DVD115E/DVD610/DVD610E)
			
I			
LENS SECTION (DVD310E/DVD410E/ DVD710/DVD710E/DVD810/DVD810E)			

Link	ELECTRICAL PARTS LIST		ACCESSORIES		
• BL-021 BOARD	E	• CK-191 BOARD	C	• MS-392 BOARD	B
• BL-022 BOARD	E	• CK-192 BOARD	C	• PD-351 BOARD	D
• CD-672 BOARD	I	• FP-569 FLEXIBLE BOARD	F	• PD-352 BOARD	D
• CD-687 BOARD	I	• FP-839 FLEXIBLE BOARD	E	• RV-011 BOARD	D
• CD-731 BOARD	H	• MS-391 BOARD	B	• RV-012 BOARD	D

5. REPAIR PARTS LIST

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】

- ここに記載されている部品は、補修用部品であるため、回路図及びセットに付いている部品と異なる場合があります。
- -XX, -Xは標準化部品のため、セットに付いている部品と異なる場合があります。
- *印の部品は常備在庫しておりません。
- コンデンサの単位でuFは μ Fを示します。
- 抵抗の単位 Ω は省略してあります。
金 被：金属被膜抵抗。
サンキン：酸化金属被膜抵抗。
- インダクタの単位でuHは μ Hを示します。
- 半導体の名称でuA..., uPA..., uPB..., uPC..., uPD...等はそれぞれ μ A..., μ PA..., μ PB..., μ PC..., μ PD...を示します。

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

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

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

- Color Indication of Appearance Parts
Example:
(SILVER) : Cabinet's Color
(Silver) : Parts Color

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。

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

- 外装部品色表示
例：
(SILVER):セットの色を表す。
(Silver) : 部品の色を表す。

- Abbreviation
AR : Argentine model
AUS : Australian model
BR : Brazilian model
CH : Chinese model
CND : Canadian model
EE : East European model
HK : Hong Kong model
J : Japanese model
JE : Tourist model
KR : Korea model
NE : North European model

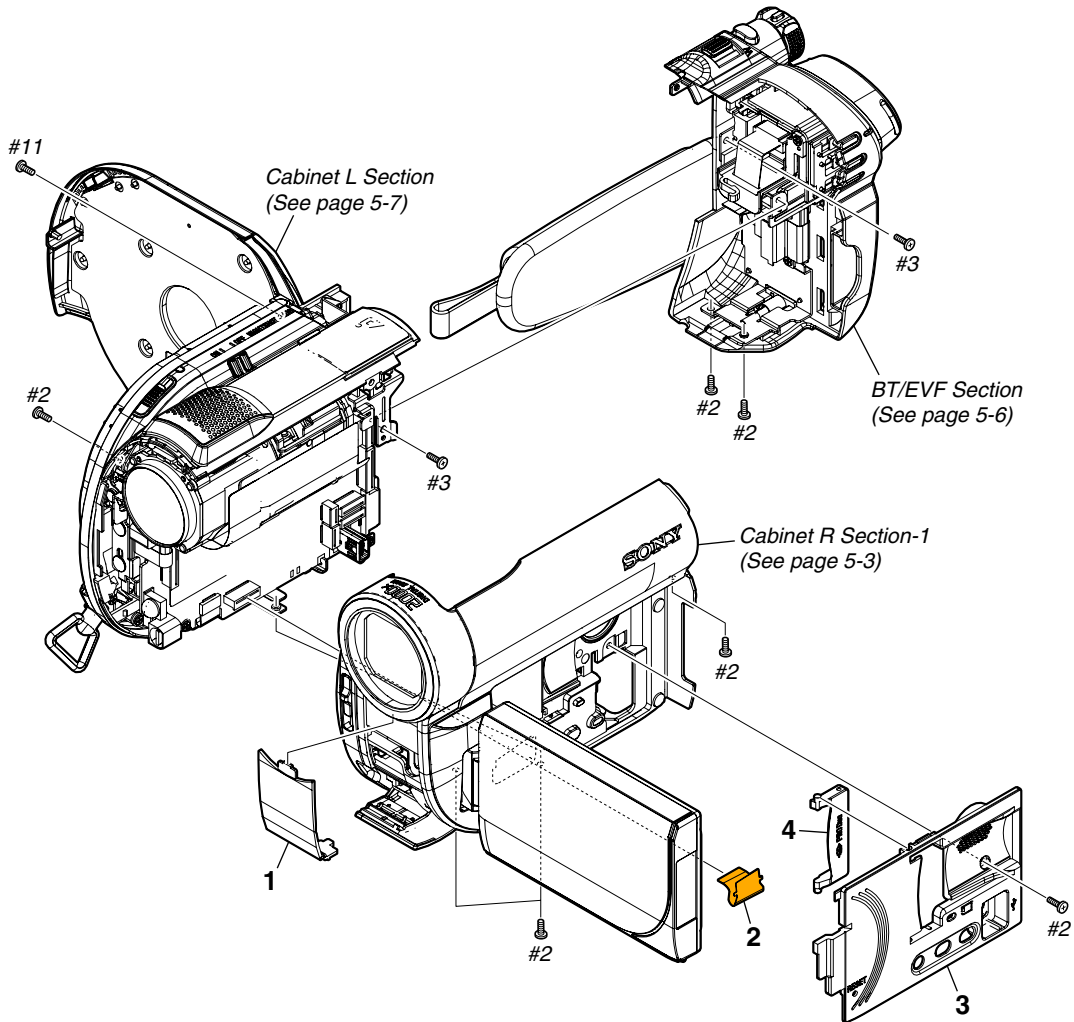
5. REPAIR PARTS LIST

DISASSEMBLY

HARDWARE LIST

5-1. EXPLODED VIEWS

5-1-1. OVERALL SECTION



Ref. No.	Part No.	Description
1	3-281-796-01	WINDOW, REMOTE CONTROL
2	1-874-951-11	FP-842 FLEXIBLE BOARD
3	3-281-791-01	COVER, R (DVD110E/DVD115E/DVD610/DVD610E)
3	3-281-791-11	COVER, R (DVD310E/DVD710/DVD710E)
3	3-281-791-21	COVER, R (DVD410E/DVD810/DVD810E)

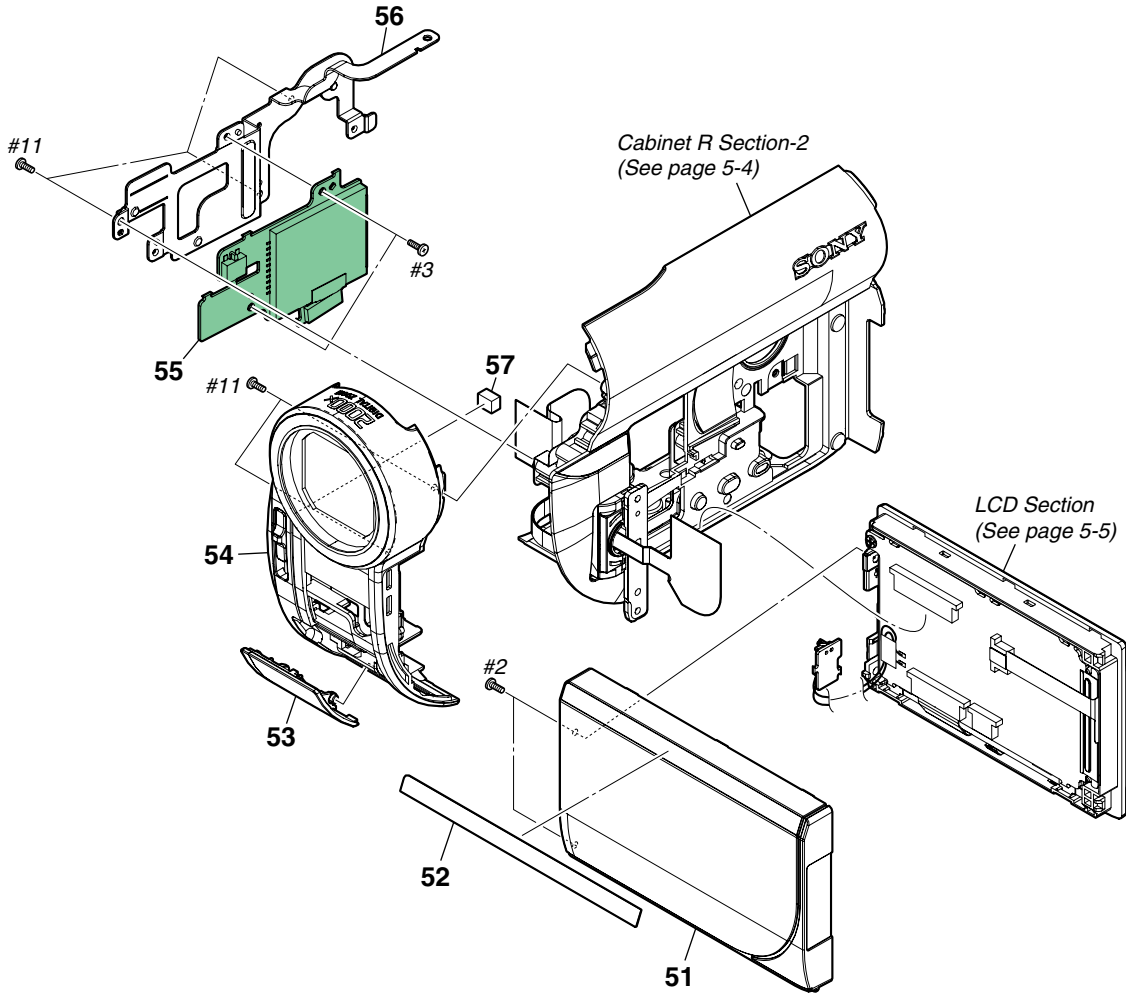
Ref. No.	Part No.	Description
4	3-281-795-01	LID, MS
#2	2-635-562-31	SCREW (M1.7) (Black)
#3	2-660-401-01	SCREW (M1.7), NEW TRU-STAR, P2 (Red)
#11	3-078-890-11	SCREW, TAPPING (Silver)

5. REPAIR PARTS LIST

DISASSEMBLY

HARDWARE LIST

5-1-2. CABINET R SECTION-1



Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
51	3-281-848-01	CABINET (C), P (261) (DVD110E/DVD115E/DVD610/DVD610E)	54	A-1436-155-A	PANEL ASSY (261), F (DVD110E/DVD115E/DVD610/DVD610E)
51	3-281-848-11	CABINET (C), P (261) (DVD310E/DVD710/DVD710E)	54	A-1436-156-A	PANEL ASSY (262), F (DVD310E/DVD410E/ DVD710/DVD710E/DVD810/DVD810E)
51	3-281-848-21	CABINET (C), P (261) (DVD410E/DVD810/DVD810E)	55	A-1439-631-A	MS-391 BOARD, COMPLETE (DVD110E/DVD115E/DVD610/DVD610E)
52	3-281-849-01	BELT, (P) CABINET (C) (DVD110E)	55	A-1439-645-A	MS-392 BOARD, COMPLETE (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
52	3-281-849-11	BELT, (P) CABINET (C) (DVD115E)	* 56	3-281-850-01	FRAME, MS
52	3-281-849-21	BELT, (P) CABINET (C) (DVD610/DVD610E)	* 57	3-291-848-01	GASKET (TO)
52	3-281-849-31	BELT, (P) CABINET (C) (DVD310E)	#2	2-635-562-31	SCREW (M1.7) (Black)
52	3-281-849-41	BELT, (P) CABINET (C) (DVD710/DVD710E)	#3	2-660-401-01	SCREW (M1.7), NEW TRU-STAR, P2 (Red)
52	3-281-849-51	BELT, (P) CABINET (C) (DVD410E)	#11	3-078-890-11	SCREW, TAPPING (Silver)
52	3-281-849-61	BELT, (P) CABINET (C) (DVD810/DVD810E)			
53	A-1438-687-A	COVER ASSY (261), JACK (DVD110E/DVD115E/DVD610/DVD610E)			
53	A-1438-690-A	COVER ASSY (262), JACK (DVD310E/DVD410E/ DVD710/DVD710E/DVD810/DVD810E)			

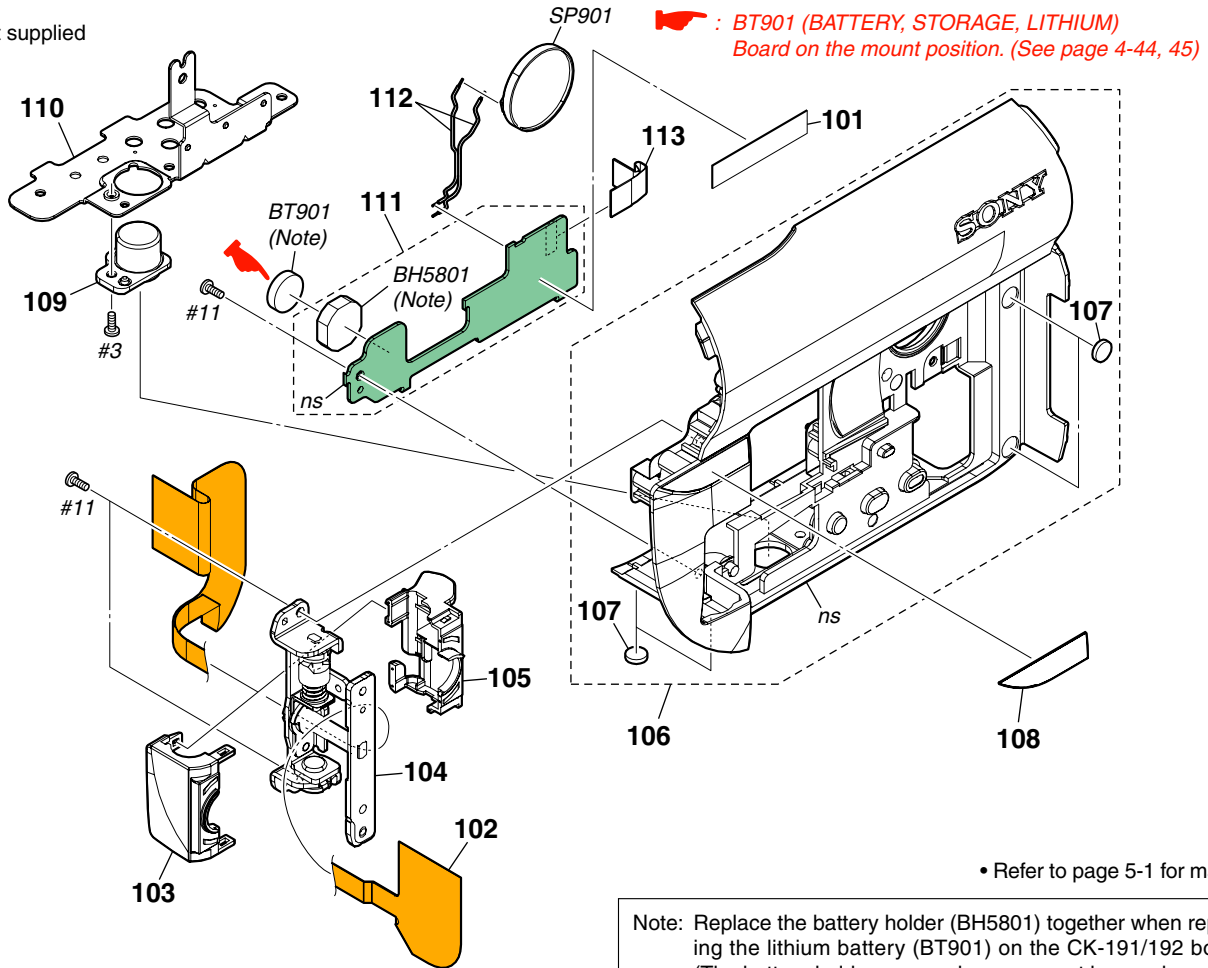
5. REPAIR PARTS LIST

DISASSEMBLY

HARDWARE LIST

5-1-3. CABINET R SECTION-2

ns: not supplied



• Refer to page 5-1 for mark △.

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恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。

Note: Replace the battery holder (BH5801) together when replacing the lithium battery (BT901) on the CK-191/192 board. (The battery holder removed once cannot be used again.) When mounting these parts, mount new battery holder first and attach new lithium battery next.

Note: CK-191/192基板のリチウム電池 (BT901) を交換する場合はバッテリーホルダ (BH5801) も同時に新品に交換して下さい。(一度使用したバッテリーホルダは再使用できません。) 部品取り付けの際は、先にバッテリーホルダを取り付けてからリチウム電池を装着してください。

Ref. No.	Part No.	Description
* 101	3-290-774-01	SHEET (261), MUFFLE
102	1-871-287-11	FP-573 FLEXIBLE BOARD
103	3-281-846-01	COVER (C), HINGE (DVD110E/DVD115E/DVD610/DVD610E)
103	3-281-846-11	COVER (C), HINGE (DVD310E/DVD710/DVD710E)
103	3-281-846-21	COVER (C), HINGE (DVD410E/DVD810/DVD810E)
104	X-2187-937-1	HINGE ASSY (281M)
105	3-281-847-01	COVER (M), HINGE
106	A-1519-609-A	CABINET (R) ASSY (261) (SERVICE) (DVD110E/DVD115E/DVD610/DVD610E)
106	A-1519-610-A	CABINET (R) ASSY (262) (SERVICE) (DVD310E/DVD710/DVD710E)
106	A-1519-611-A	CABINET (R) ASSY (263) (SERVICE) (DVD410E/DVD810/DVD810E)
107	2-589-376-01	FOOT (395), RUBBER
108	3-281-841-01	CABINET (R), ORNAMENTAL BELT

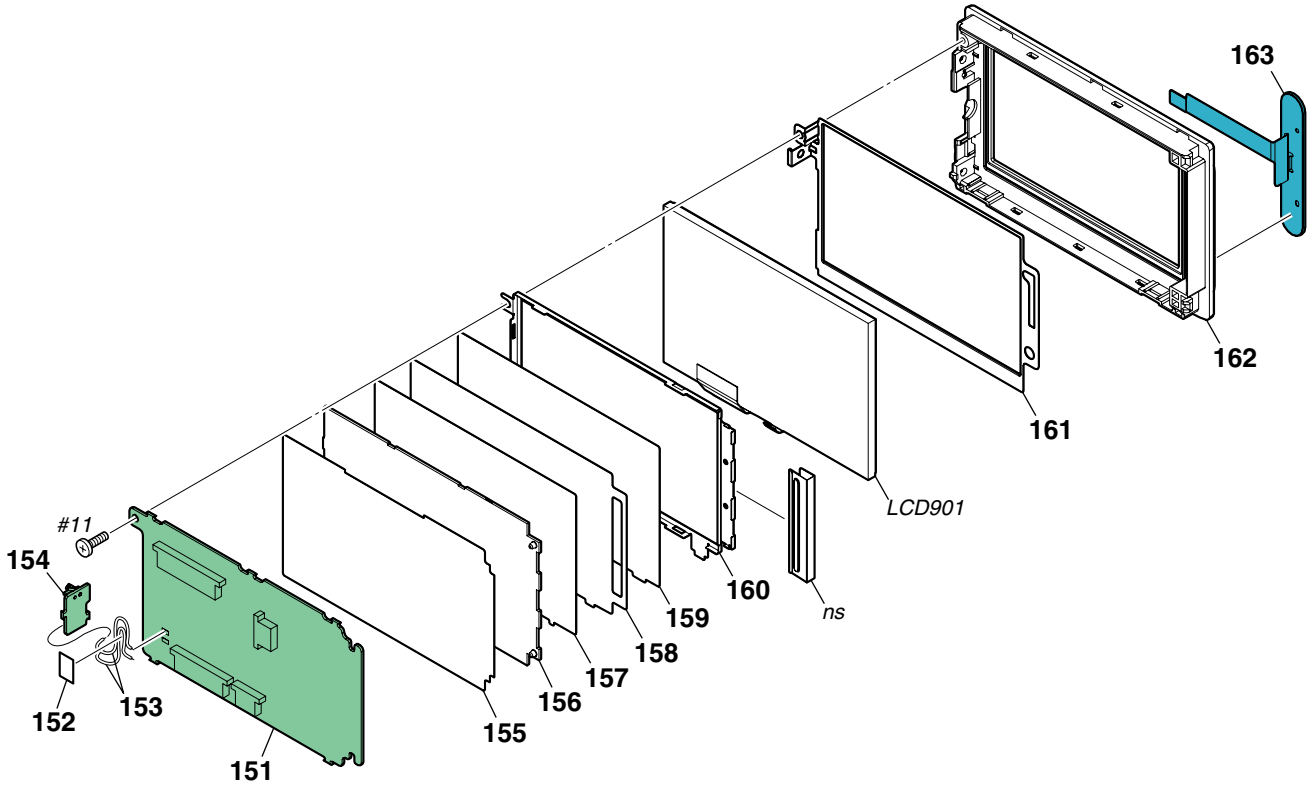
Ref. No.	Part No.	Description
109	3-283-643-01	SCREW, TRIPOD
* 110	3-281-851-01	FRAME, BOTTOM
111	A-1439-630-A	CK-191 BOARD, COMPLETE (DVD110E/DVD115E/DVD610/DVD610E)
111	A-1439-643-A	CK-192 BOARD, COMPLETE (DVD310E/DVD710/DVD710E)
111	A-1439-644-A	CK-192 BOARD, COMPLETE (DVD410E/DVD810/DVD810E)
112	1-964-966-11	HARNESS (HN-024)
113	1-833-210-11	CABLE, FLEXIBLE FLAT (FFC-089)
△*BH5801	1-756-615-51	HOLDER, BATTERY (Note)
△ BT901	1-756-134-12	BATTERY, STORAGE, LITHIUM (Note)
SP901	1-825-260-41	LOUD SPEAKER (1.6CM)
#3	2-660-401-01	SCREW (M1.7), NEW TRU-STAR, P2 (Red)
#11	3-078-890-11	SCREW, TAPPING (Silver)

5. REPAIR PARTS LIST

HARDWARE LIST

5-1-4. LCD SECTION

ns: not supplied



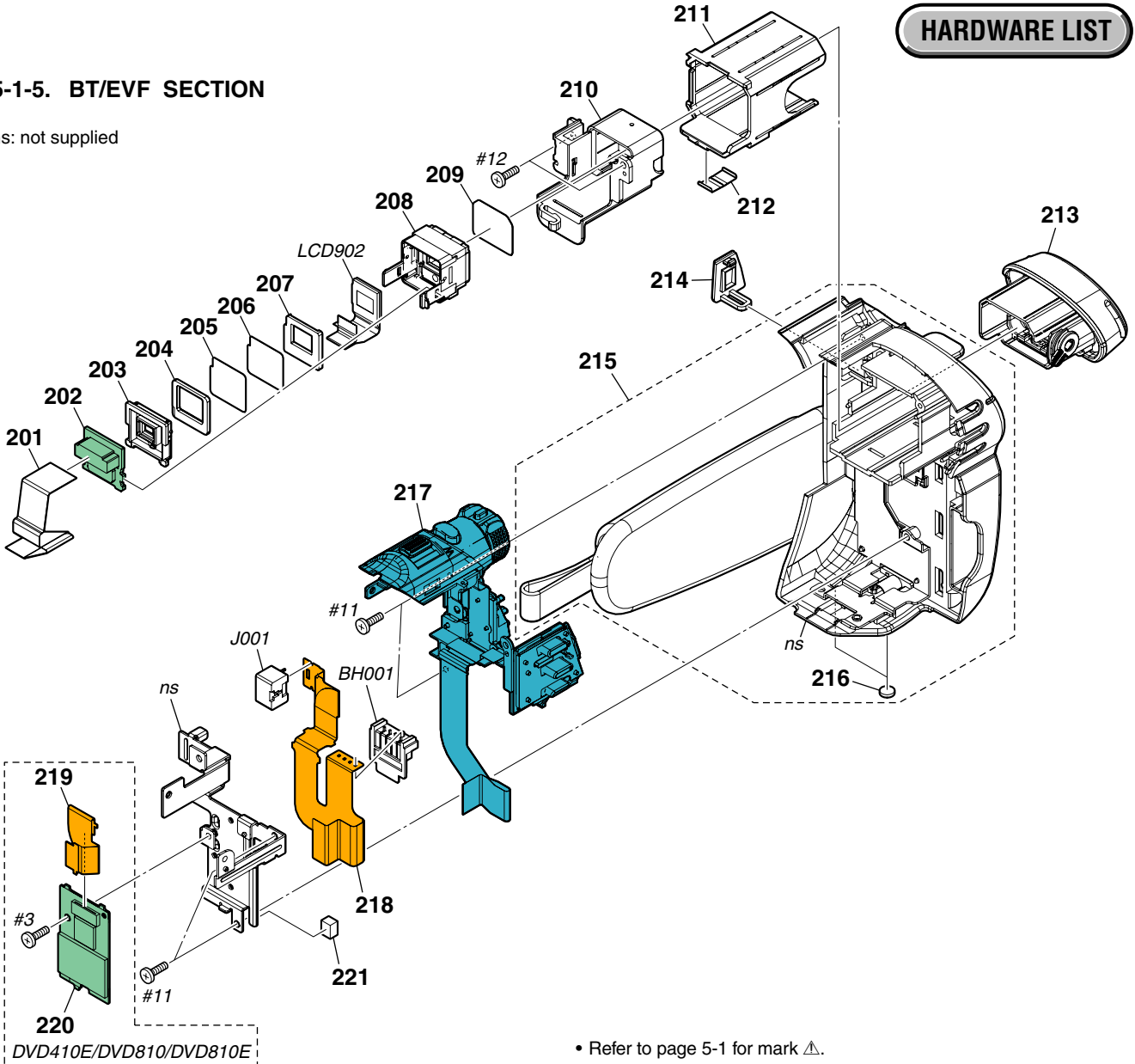
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
151	A-1439-627-A	PD-351 BOARD, COMPLETE (DVD110E/DVD115E/DVD610/DVD610E)	157	2-694-514-01	DIFFUSION SHEET (2.7)
151	A-1439-640-A	PD-352 BOARD, COMPLETE (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	158	2-694-513-01	PRISM SHEET H (2.7)
* 152	3-083-393-01	TAPE (P)	159	2-694-512-01	PRISM SHEET V (2.7)
153	1-964-966-11	HARNESS (HN-024)	160	2-694-516-01	FRONT FRAME (2.7)
154	A-1439-628-A	RV-011 BOARD, COMPLETE (DVD110E/DVD115E/DVD610/DVD610E)	* 161	3-281-839-01	PLATE (261), LCD GROUND
154	A-1439-641-A	RV-012 BOARD, COMPLETE (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	162	3-281-838-01	CABINET (M), P (261)
155	2-694-515-01	REFLECTION SHEET (2.7)	163	1-479-926-11	SWITCH BLOCK, CONTROL (SB22100)
156	2-666-801-11	LIGHT GUIDE (2.7)	LCD901	A-1363-616-A	TP BLOCK ASSY (27STMG08H) (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
			LCD901	A-1363-617-A	TP BLOCK ASSY (27STMG08T) (DVD110E/DVD115E/DVD610/DVD610E)
			#11	3-078-890-11	SCREW, TAPPING (Silver)

5. REPAIR PARTS LIST

HARDWARE LIST

5-1-5. BT/EVF SECTION

ns: not supplied



Ref. No.	Part No.	Description
201	1-834-868-11	CABLE, FLEXIBLE FLAT (FFC-140)
202	A-1439-629-A	BL-021 BOARD, COMPLETE (DVD110E/DVD115E/DVD610/DVD610E)
202	A-1439-642-A	BL-022 BOARD, COMPLETE (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
* 203	2-638-820-02	GUIDE, LAMP
* 204	2-638-819-01	CUSHION, LCD
* 205	2-638-818-01	ILLUMINATOR
* 206	2-638-816-01	PLATE (TFT), DEFLECTION
* 207	2-638-815-01	SPACER, LCD
208	2-899-658-01	CAP (212), INNER (DVD110E/DVD115E/DVD610/DVD610E)
208	2-899-659-01	CAP (215), INNER (DVD310E/DVD410E/ DVD710/DVD710E/DVD810/DVD810E)
209	2-899-660-01	PANEL (CF), POLARIZATION
210	3-281-818-01	CABINET, INNER
211	3-281-825-01	CABINET, VF
212	2-664-667-01	SPRING, VF SLIDE
213	X-2187-715-1	EYE CUP ASSY
214	2-699-246-01	COVER, DC (IN)

• Refer to page 5-1 for mark △.

Ref. No.	Part No.	Description
215	A-1519-607-A	PANEL ASSY (261) (SERVICE), BT
216	2-589-376-01	FOOT (395), RUBBER
217	1-480-495-11	KEY BLOCK, CONTROL (PS26100)
218	1-874-948-11	FP-839 FLEXIBLE BOARD
219	1-874-950-11	FP-841 FLEXIBLE BOARD (DVD410E/DVD810/DVD810E)
220	A-1538-642-A	MDL4060S3C COMPLETE ASSY (SERVICE) (FLASH MEMORY) (DVD410E/DVD810/DVD810E)
* 221	3-096-097-01	CUSHION (P), EMC
△ BH001	1-780-064-21	BATTERY TERMINAL BOARD
△ J001	1-815-792-11	CONNECTOR, DC-IN (7.2V) (DC IN)
LCD902	8-753-241-14	LCX076AKE-1 (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
LCD902	8-753-245-09	LCX059CCK-1 (DVD110E/DVD115E/DVD610/DVD610E)
#3	2-660-401-01	SCREW (M1.7), NEW TRU-STAR, P2 (Red) (DVD410E/DVD810/DVD810E)
#11	3-078-890-11	SCREW, TAPPING (Silver)
#12	3-080-204-21	SCREW, TAPPING, P2 (Black)

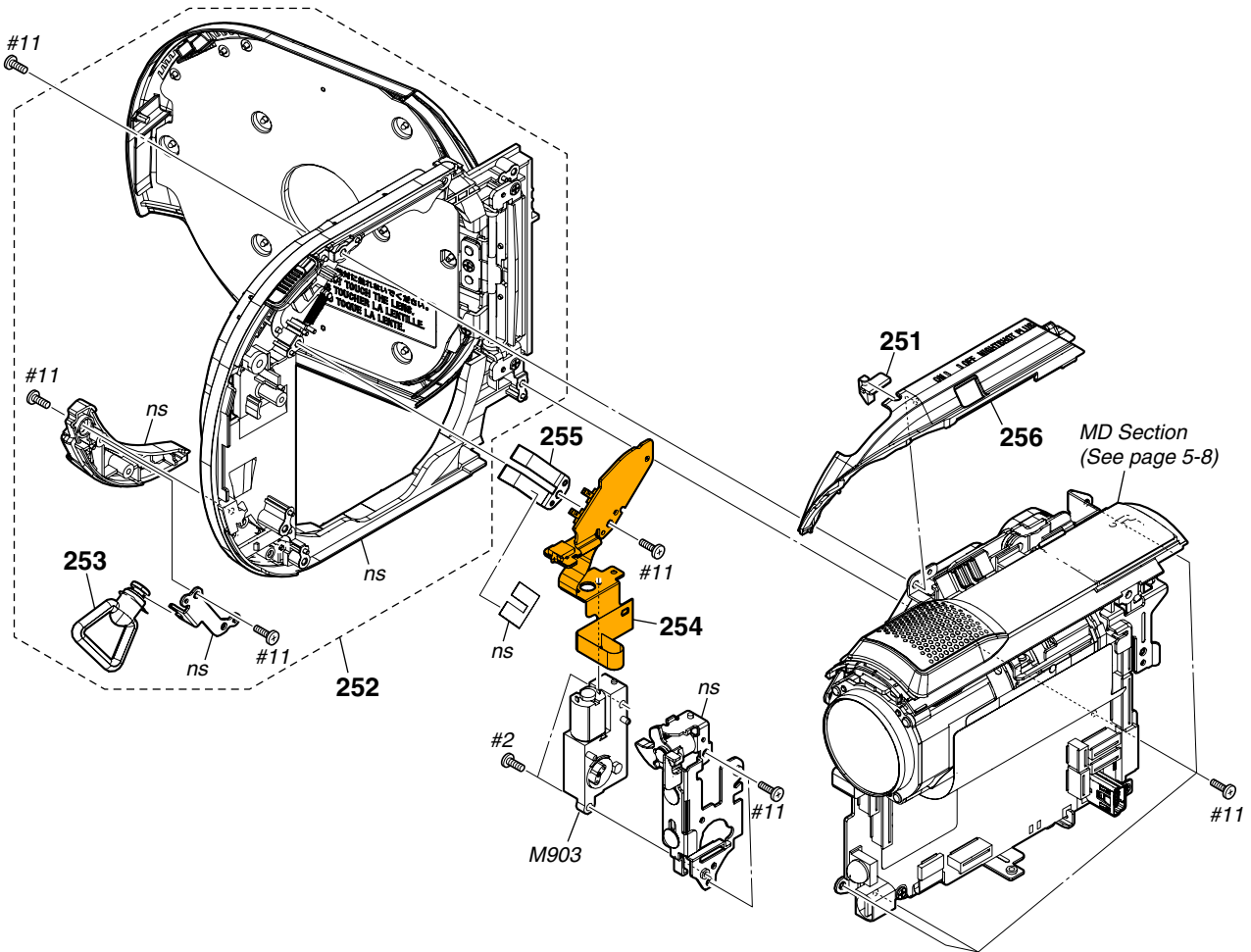
5. REPAIR PARTS LIST

DISASSEMBLY

HARDWARE LIST

5-1-6. CABINET L SECTION

ns: not supplied



Ref. No.	Part No.	Description
251	2-699-266-01	LIGHT, ACCESS GUIDE,
252	A-1519-608-A	CABINET (L) ASSY (261) (SERVICE)
253	3-090-616-01	SHAFT (F), STRAP
254	A-1228-528-A	FP-569 FLEXIBLE BOARD, COMPLETE
* 255	2-699-262-01	SHEET METAL, LID

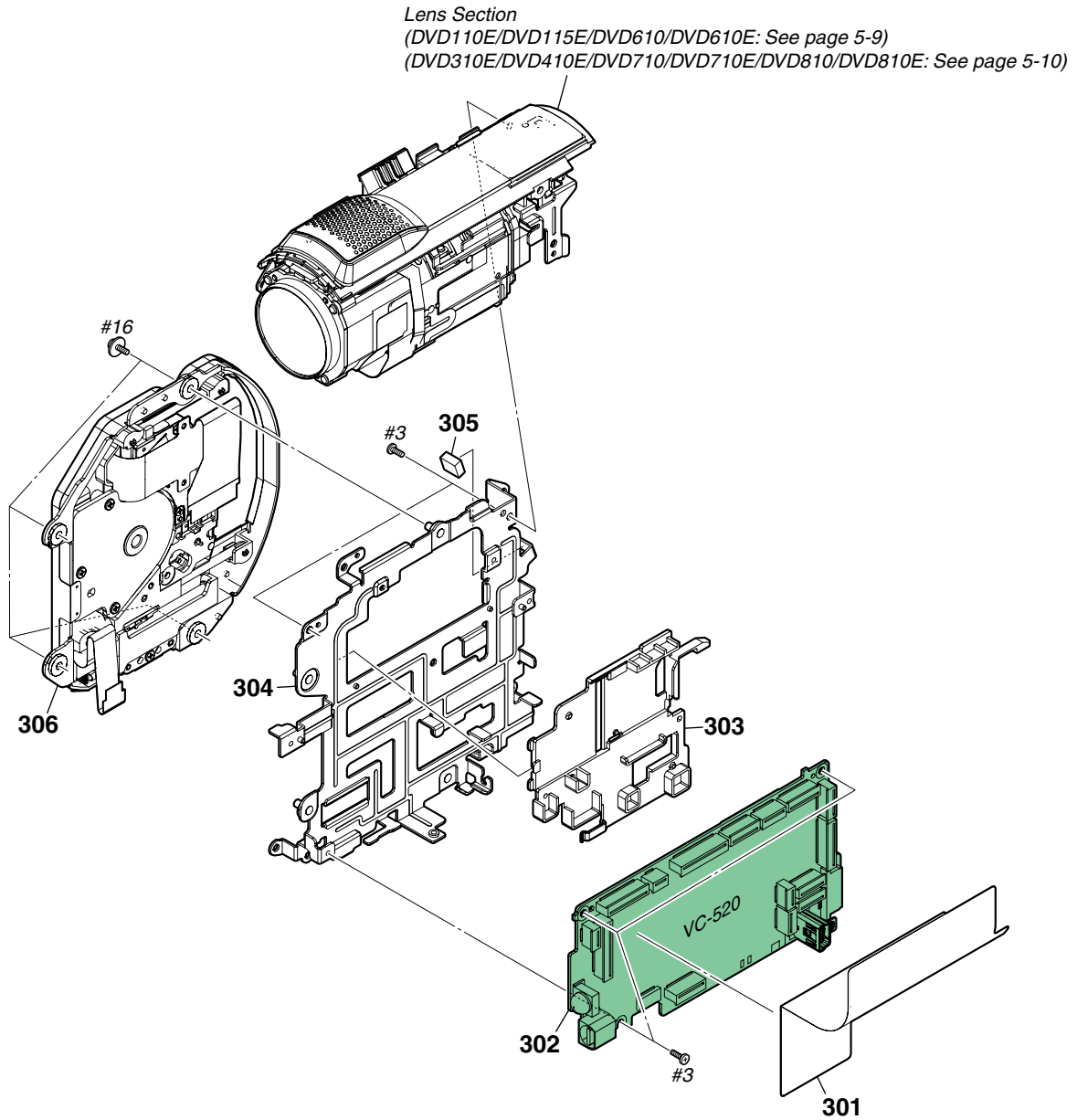
Ref. No.	Part No.	Description
256	3-281-794-01	CABINET (L UPPER))
M903	1-787-237-11	MOTOR UNIT (GEARD MOTOR)
#2	2-635-562-31	SCREW (M1.7) (Black)
#11	3-078-890-11	SCREW, TAPPING (Silver)

5. REPAIR PARTS LIST

DISASSEMBLY

HARDWARE LIST

5-1-7. MD SECTION



• Refer to page 5-1 for mark \triangle .

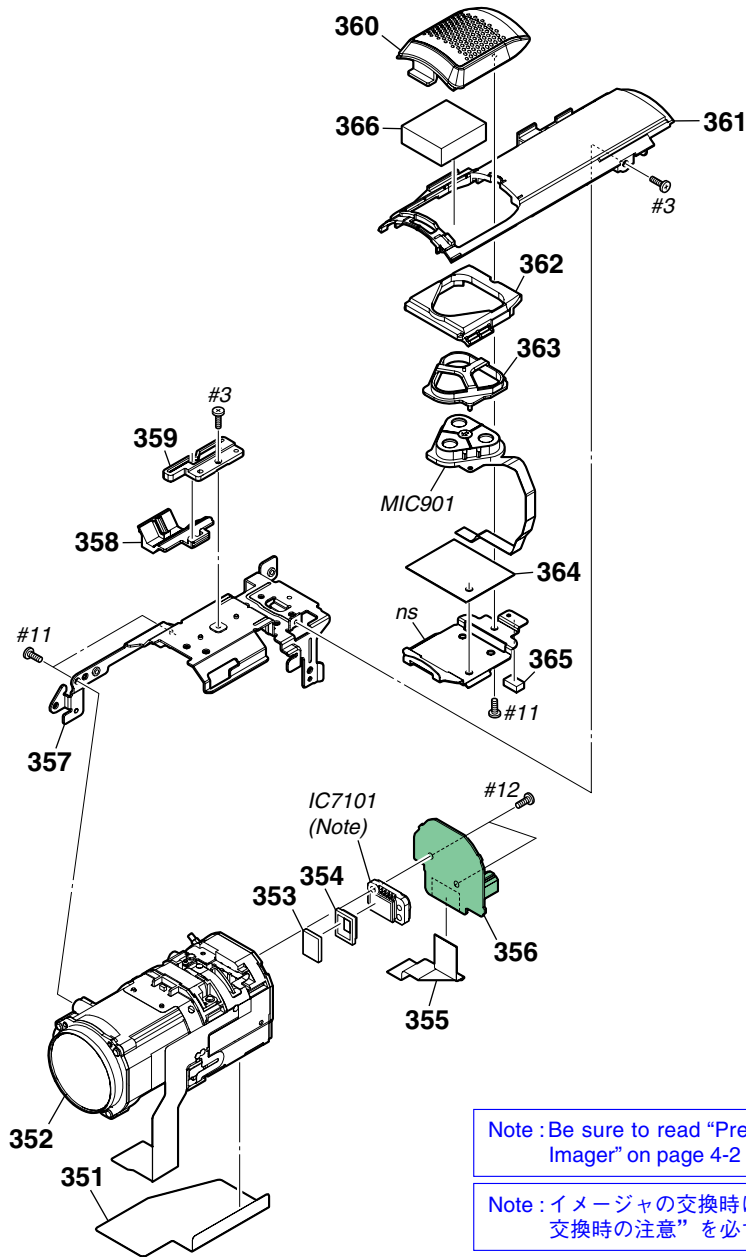
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
* 301	3-281-793-01	LABEL, REPLACEMENT CAUTION	302	A-1439-744-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD410E)
302	A-1439-718-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD110E)	302	A-1439-745-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD810)
302	A-1439-719-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD115E)	302	A-1439-746-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD810E)
302	A-1439-720-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD610/DVD610E)	* 303	3-281-792-01	GUARD, OP FLEXIBLE
302	A-1439-739-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD310E)	304	X-2187-713-1	FRAME ASSY, MD
302	A-1439-741-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD710)	* 305	2-596-924-11	GASKET (MD)
302	A-1439-742-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD710E)	\triangle 306	A-1212-602-A	SERVICE (DDX-C2000) BLOCK ASSY
			#3	2-660-401-01	SCREW (M1.7), NEW TRU-STAR, P2 (Red)
			#16	2-586-337-01	SCREW, MD (Silver)

5. REPAIR PARTS LIST

HARDWARE LIST

5-1-8. LENS SECTION (DVD110E/DVD115E/DVD610/DVD610E)

ns: not supplied



Note : Be sure to read "Precautions for Replacement of Imager" on page 4-2 when changing the imager.

Note : イメージャの交換時は4 - 3 ページの "イメージャ交換時の注意" を必ずお読みください。

Ref. No.	Part No.	Description
* 351	3-281-814-01	SHEET, LENS TERMINAL PROTECTION
352	8-848-839-01	DEVICE, LENS LSV-1171A
353	1-788-706-11	OPTICAL FILTER BLOCK (OFB-08-02)
354	3-271-382-01	SEAL RUBBER 1171
355	1-834-363-11	CABLE, FLEXIBLE FLAT (FFC-133)
356	A-1439-626-A	CD-731 BOARD, COMPLETE
* 357	3-281-802-01	FRAME, LENS
358	3-281-803-01	KNOB (261), NS
* 359	2-699-280-01	PLATE, NS CLICK
360	3-281-805-01	GRILLE, MICROPHONE (261) (DVD110E/DVD610/DVD610E)
360	3-281-806-01	GRILLE, MICROPHONE (262) (DVD115E)
361	3-281-812-01	CABINET, TOP (261) (DVD110E/DVD610/DVD610E)
361	3-281-812-11	CABINET, TOP (261) (DVD115E)

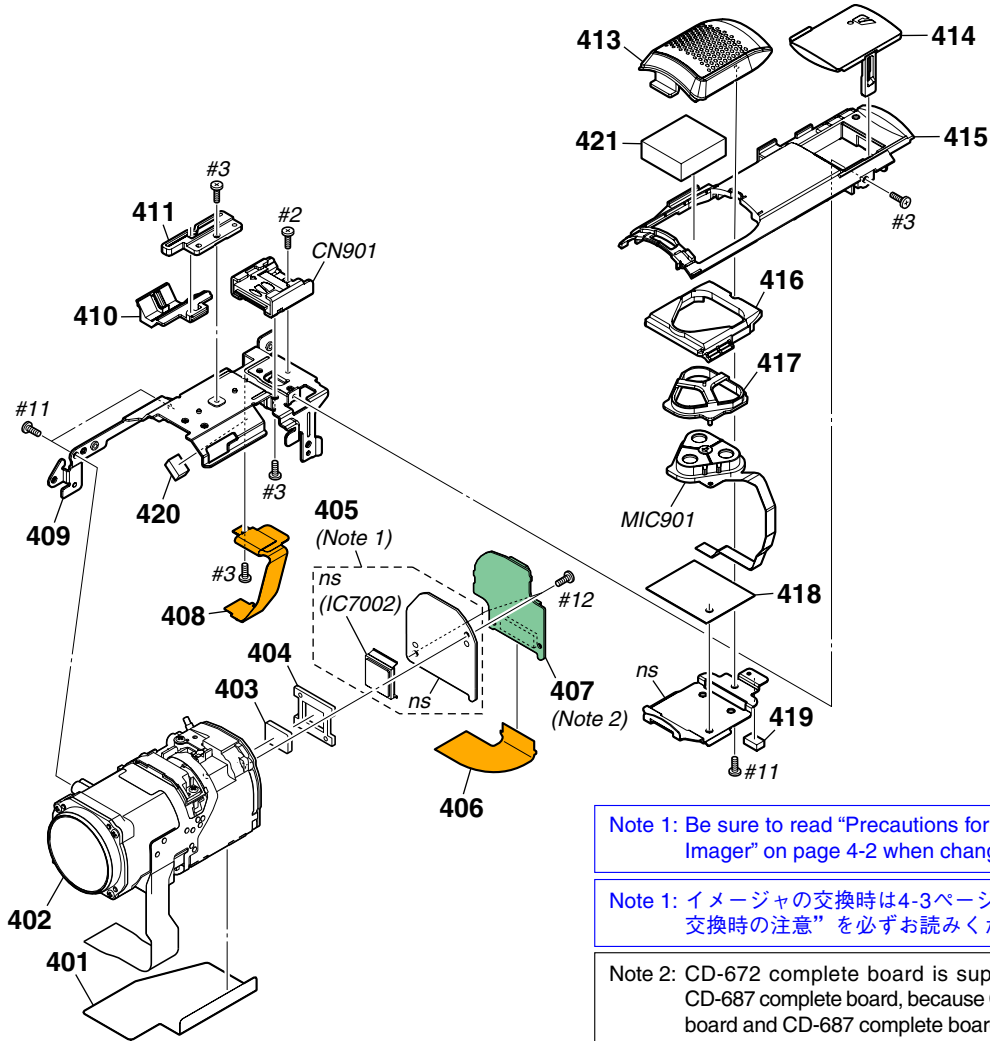
Ref. No.	Part No.	Description
* 362	3-281-810-01	INSULATOR
* 363	3-281-808-01	HOLDER, MICROPHONE
* 364	3-281-811-01	CUSHION, MICROPHONE
* 365	2-898-042-01	GASKET (MIC)
366	3-281-807-01	SCREEN, WIND
IC7101	8-753-289-10	ICX651NKF-H (CCD IMAGER) (DVD110E/DVD115E/DVD610E) (Note)
IC7101	8-753-288-68	ICX650NKF-H (CCD IMAGER) (DVD610) (Note)
MIC901	1-542-723-31	MICROPHONE UNIT (DVD115E)
MIC901	1-542-723-41	MICROPHONE UNIT (DVD110E/DVD610/DVD610E)
#3	2-660-401-01	SCREW (M1.7), NEW TRU-STAR, P2 (Red)
#11	3-078-890-11	SCREW, TAPPING (Silver)
#12	3-080-204-21	SCREW, TAPPING, P2 (Black)

5. REPAIR PARTS LIST

HARDWARE LIST

5-1-9. LENS SECTION (DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)

ns: not supplied



Note 1: Be sure to read "Precautions for Replacement of Imager" on page 4-2 when changing the imager.

Note 1: イメージャの交換時は4-3ページの“イメージャ交換時の注意”を必ずお読みください。

Note 2: CD-672 complete board is supplied instead of CD-687 complete board, because CD-672 complete board and CD-687 complete board are compatible.

Note 2: CD-687基板は供給されません。代わりにCD-672基板が供給されます。

Ref. No.	Part No.	Description
* 401	3-281-814-01	SHEET, LENS TERMINAL PROTECTION
402	A-1248-849-A	LENS (BLOCK ASSY 1180 (J1))
403	1-788-523-11	OPTICALFILTER BLOCK (OFB-06-11)
404	3-088-645-01	RUBBER (Z), SEAL
405	A-1511-867-A	CCD BLOCK ASSY (1M SSGE) (CCD IMAGER) (Note 1)
406	1-874-947-11	FP-838 FLEXIBLE BOARD
407	A-1244-919-A	CD-672 BOARD, COMPLETE (DVD710E/DVD810E)
407	A-1244-919-A	CD-687 BOARD, COMPLETE (Note 2)
408	1-874-949-11	FP-840 FLEXIBLE BOARD
* 409	3-281-802-01	FRAME, LENS
410	3-281-804-01	KNOB (262), NS
* 411	2-699-280-01	PLATE, NS CLICK
413	3-281-806-01	GRILLE, MICROPHONE (262)
414	A-1438-988-A	COVER ASSY (262), SHOE (DVD310E/DVD710/DVD710E)
414	A-1438-989-A	COVER ASSY (263), SHOE (DVD410E/DVD810/DVD810E)

Ref. No.	Part No.	Description
415	3-281-813-01	CABINET, TOP (262) (DVD310E/DVD710/DVD710E)
415	3-281-813-11	CABINET, TOP (262) (DVD410E/DVD810/DVD810E)
* 416	3-281-810-01	INSULATOR
* 417	3-281-808-01	HOLDER, MICROPHONE
* 418	3-281-811-01	CUSHION, MICROPHONE
* 419	2-898-042-01	GASKET (MIC)
* 420	3-096-097-01	CUSHION (P), EMC
421	3-281-807-01	SCREEN, WIND
CN901	1-818-890-11	CONNECTOR, EXTERNAL (HOT SHOE)
MIC901	1-542-723-31	MICROPHONE UNIT
#2	2-635-562-31	SCREW (M1.7) (Black)
#3	2-660-401-01	SCREW (M1.7), NEW TRU-STAR, P2 (Red)
#11	3-078-890-11	SCREW, TAPPING (Silver)
#12	3-080-204-21	SCREW, TAPPING, P2 (Black)

5-2. ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description
	A-1439-629-A	BL-021 BOARD, COMPLETE (DVD110E/DVD115E/DVD610/DVD610E) *****
		< CAPACITOR >
C5701	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C5702	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
		< CONNECTOR >
* CN5701	1-779-333-51	CONNECTOR, FFC/FPC 18P
* CN5702	1-817-698-81	CONNECTOR, FPC (ZIF) 21P
		< DIODE >
D5701	8-719-074-67	DIODE EDZ-TE61-5.6B
* D5702	6-501-591-01	DIODE NESW007AT-T099 (BACKLIGHT)
		< RESISTOR >
R5702	1-218-989-11	RES-CHIP 1M 5% 1/16W
	A-1439-642-A	BL-022 BOARD, COMPLETE (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E) *****
		< CAPACITOR >
C5701	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C5702	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
		< CONNECTOR >
* CN5701	1-779-333-51	CONNECTOR, FFC/FPC 18P
* CN5702	1-817-698-81	CONNECTOR, FPC (ZIF) 21P
		< DIODE >
* D5701	6-501-591-01	DIODE NESW007AT-T099 (BACKLIGHT)
D5702	8-719-074-67	DIODE EDZ-TE61-5.6B
	A-1244-919-A	CD-672 BOARD, COMPLETE (DVD710E/DVD810E)
	A-1244-919-A	CD-687 BOARD, COMPLETE (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E) (Note 1) ***** (IC7002 (CCD imager) is not included in CD-672/CD-687 complete board. Included in CCD block assy.)
		< CAPACITOR >
C7002	1-100-566-91	CERAMIC CHIP 0.1uF 10% 25V
C7003	1-100-566-91	CERAMIC CHIP 0.1uF 10% 25V
C7005	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C7006	1-100-591-91	CERAMIC CHIP 1uF 10% 25V (CD-672)
C7007	1-127-820-11	CERAMIC CHIP 4.7uF 10% 16V
C7010	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (CD-672)
C7011	1-165-875-11	CERAMIC CHIP 10uF 10% 10V

Ref. No.	Part No.	Description
C7015	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C7016	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C7017	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C7018	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C7023	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V
C7024	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C7025	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C7026	1-100-251-11	CERAMIC CHIP 0.047uF 10% 10V
C7027	1-100-251-11	CERAMIC CHIP 0.047uF 10% 10V
C7028	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C7029	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
		< CONNECTOR >
CN7001	1-820-586-51	CONNECTOR, FFC/FPC 28P < FERRITE BEAD >
FB7001	1-400-331-11	FERRITE, EMI (SMD) (1005) < IC >
IC7002	(Not supplied)	ICX617AKF-H (CCD IMAGER) (Note 2) (IC7002 is supplied including in CCD block assy.)
IC7003	8-759-489-19	IC uPC6756GR-8JG-E2 < COIL >
L7001	1-400-588-11	INDUCTOR 10uH
L7002	1-400-588-11	INDUCTOR 10uH < TRANSISTOR >
Q7001	6-550-234-01	TRANSISTOR UNR32A300LS0
Q7002	8-729-055-21	TRANSISTOR 2SC5096-O/R (TE85L) < RESISTOR >
R7002	1-218-954-11	RES-CHIP 1.2K 5% 1/16W
R7004	1-218-965-11	RES-CHIP 10K 5% 1/16W
R7005	1-218-953-11	RES-CHIP 1K 5% 1/16W
R7006	1-218-966-11	RES-CHIP 12K 5% 1/16W
R7013	1-218-965-11	RES-CHIP 10K 5% 1/16W
R7014	1-218-989-11	RES-CHIP 1M 5% 1/16W
R7015	1-218-989-11	RES-CHIP 1M 5% 1/16W
R7016	1-218-965-11	RES-CHIP 10K 5% 1/16W < COMPOSITION CIRCUIT BLOCK >
* RB7001	1-234-379-21	RES, NETWORK 22K (1005X4) < ANGULAR VELOCITY SENSOR >
* SE7001	1-479-022-61	SENSOR, ANGULAR VELOCITY (YAW)
* SE7002	1-479-022-51	SENSOR, ANGULAR VELOCITY (PITCH)

Note 1: CD-672 complete board is supplied instead of CD-687 complete board, because CD-672 complete board and CD-687 complete board are compatible.

Note 1: CD-687基板は供給されません。代わりにCD-672基板が供給されます。

Note 2: Be sure to read "Precautions for Replacement of Imager" on page 4-2 when changing the imager.

Note 2: イメージャの交換時は4-3ページの「イメージャ交換時の注意」を必ずお読みください。

Ref. No.	Part No.	Description
	A-1439-626-A	CD-731 BOARD, COMPLETE (DVD110E/DVD115E/DVD610/DVD610E) ***** (IC7101 is not included in CD-731 complete board.)
		< CAPACITOR >
C7101	1-124-779-00	ELECT CHIP 10uF 20% 16V
C7103	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V
C7104	1-124-779-00	ELECT CHIP 10uF 20% 16V
C7105	1-164-854-11	CERAMIC CHIP 15PF 5% 50V
C7108	1-100-566-91	CERAMIC CHIP 0.1uF 10% 25V
		< CONNECTOR >
* CN7101	1-816-646-51	FFC/CONNECTOR, FPC (LIF) 16P
		< IC >
IC7101	8-753-288-68	ICX650NKF-H (CCD IMAGER) (DVD610) (Note 1)
IC7101	8-753-289-10	ICX651NKF-H (CCD IMAGER) (DVD110E/DVD115E/DVD610E) (Note 1)
		< COIL >
L7101	1-400-588-11	INDUCTOR 10uH
		< TRANSISTOR >
* Q7101	6-551-873-01	TRANSISTOR 2SC3931G0LS0
		< RESISTOR >
R7101	1-218-959-11	RES-CHIP 3.3K 5% 1/16W
	A-1439-630-A	CK-191 BOARD, COMPLETE (DVD110E/DVD115E/DVD610/DVD610E) ***** (BT901 (lithium battery) is not included in CK-191 complete board.)
		< BATTERY HOLDER >
△* BH5801	1-756-615-51	HOLDER, BATTERY (Note 2)
		< BATTERY >
△ BT901	1-756-134-12	BATTERY, STORAGE, LITHIUM ION (Note 2)
		< CONNECTOR >
* CN5801	1-816-643-51	FFC/CONNECTOR, FPC (LIF) 10P
		< DIODE >
D5801	8-719-077-09	DIODE CL-196HR-CD-T (MS ACCESS)
		< RESISTOR >
R5802	1-218-945-11	RES-CHIP 220 5% 1/16W
		< SWITCH >
S5801	1-771-844-21	SWITCH, TACTILE (SMD) (RESET)
S5802	1-771-844-21	SWITCH, TACTILE (SMD) (DISP/BATT INFO)

• Refer to page 5-1 for mark △.

Ref. No.	Part No.	Description
S5806	1-771-844-21	SWITCH, TACTILE (SMD) (▶)
	A-1439-643-A	CK-192 BOARD, COMPLETE (DVD310E/DVD710/DVD710E)
	A-1439-644-A	CK-192 BOARD, COMPLETE (DVD410E/DVD810/DVD810E) ***** (BT901 (lithium battery) is not included in CK-192 complete board.)
		< BATTERY HOLDER >
△* BH5801	1-756-615-51	HOLDER, BATTERY (Note 2)
		< BATTERY >
△ BT901	1-756-134-12	BATTERY, STORAGE, LITHIUM ION (Note 2)
		< CONNECTOR >
* CN5801	1-816-643-51	FFC/CONNECTOR, FPC (LIF) 10P
		< DIODE >
D5801	8-719-077-09	DIODE CL-196HR-CD-T (MS ACCESS)
		< RESISTOR >
R5801	1-218-954-11	RES-CHIP 1.2K 5% 1/16W (DVD410E/DVD810/DVD810E)
R5802	1-218-945-11	RES-CHIP 220 5% 1/16W
		< SWITCH >
S5801	1-771-844-21	SWITCH, TACTILE (SMD) (RESET)
S5802	1-771-844-21	SWITCH, TACTILE (SMD) (DISP/BATT INFO)
S5803	1-771-844-21	SWITCH, TACTILE (SMD) (DUBBING) (DVD410E/DVD810/DVD810E)
S5806	1-771-844-21	SWITCH, TACTILE (SMD) (▶)

Note 1: Be sure to read "Precautions for Replacement of Imager" on page 4-2 when changing the imager.

Note 1: イメージャの交換時は4-3ページの「イメージャ交換時の注意」を必ずお読みください。

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恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。

Note 2: Replace the battery holder (BH5801) together when replacing the lithium battery (BT901) on the CK-191 board and CK-192 board. (The battery holder removed once cannot be used again.)
When mounting these parts, mount new battery holder first and attach new lithium battery next.

Note 2: CK-191基板およびCK-192基板のリチウム電池 (BT901) を交換する場合はバッテリーホルダ (BH5801) も同時に新品に交換して下さい。(一度使用したバッテリーホルダは再使用できません。)
部品取り付けの際は、先にバッテリーホルダを取り付けてからリチウム電池を装着してください。

Ref. No.	Part No.	Description
	A-1228-528-A	FP-569 FLEXIBLE BOARD, COMPLETE *****
		< DIODE >
D5691	6-500-817-01	DIODE SML-512UWT86 (ACCESS) < SWITCH >
S5691	1-786-148-11	SWITCH, PUSH (1 KEY) (OPEN)
S5692	1-786-148-11	SWITCH, PUSH (1 KEY) (LID OPEN DETECT)
S5693	1-786-148-11	SWITCH, PUSH (1 KEY) (LID OPEN DETECT)
S5694	1-786-179-31	SWITCH, PUSH (1 KEY) (EJECT DETECT)
	1-874-948-11	FP-839 FLEXIBLE BOARD ***** (BH001 and J001 are not included in FP-839 flexible board.) < BATTERY TERMINAL >
△ BH001	1-780-064-21	BATTERY TERMINAL BOARD < CONNECTOR >
△ J001	1-815-792-11	CONNECTOR, DC-IN (7.2V) (DC IN)
	A-1439-631-A	MS-391 BOARD, COMPLETE (DVD110E/DVD115E/DVD610/DVD610E) ***** < CONNECTOR >
* CN7301	1-816-646-51	FFC/CONNECTOR, FPC (LIF) 16P
CN7302	1-819-613-22	MEMORY STICK DUO CONNECTOR 10P < FERRITE BEAD >
FB7301	1-469-580-21	INDUCTOR, FERRITE BEAD (1005)
FB7302	1-469-580-21	INDUCTOR, FERRITE BEAD (1005)
FB7303	1-469-580-21	INDUCTOR, FERRITE BEAD (1005)
FB7304	1-469-580-21	INDUCTOR, FERRITE BEAD (1005) < RESISTOR >
R7302	1-218-942-11	RES-CHIP 120 5% 1/16W
R7303	1-218-942-11	RES-CHIP 120 5% 1/16W
R7306	1-218-942-11	RES-CHIP 120 5% 1/16W
R7307	1-218-942-11	RES-CHIP 120 5% 1/16W < SWITCH >
* S7301	1-786-545-41	SWITCH, PUSH LEVER (S) (PANEL OPEN/CLOSE)
	A-1439-645-A	MS-392 BOARD, COMPLETE (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E) ***** < CONNECTOR >
* CN7301	1-816-646-51	FFC/CONNECTOR, FPC (LIF) 16P
CN7302	1-819-613-22	MEMORY STICK DUO CONNECTOR 10P

Ref. No.	Part No.	Description
		< FERRITE BEAD >
FB7301	1-469-580-21	INDUCTOR, FERRITE BEAD (1005)
FB7302	1-469-580-21	INDUCTOR, FERRITE BEAD (1005)
FB7303	1-469-580-21	INDUCTOR, FERRITE BEAD (1005)
FB7304	1-469-580-21	INDUCTOR, FERRITE BEAD (1005) < IC >
* IC7301	6-600-563-01	IC RS-450-T < RESISTOR >
R7302	1-218-942-11	RES-CHIP 120 5% 1/16W
R7303	1-218-942-11	RES-CHIP 120 5% 1/16W
R7306	1-218-942-11	RES-CHIP 120 5% 1/16W
R7307	1-218-942-11	RES-CHIP 120 5% 1/16W < SWITCH >
* S7301	1-786-545-41	SWITCH, PUSH LEVER (S) (PANEL OPEN/CLOSE)
	A-1439-627-A	PD-351 BOARD, COMPLETE (DVD110E/DVD115E/DVD610/DVD610E) ***** < CAPACITOR >
C6202	1-100-581-81	CERAMIC CHIP 0.0047uF 10% 50V
C6203	1-100-581-81	CERAMIC CHIP 0.0047uF 10% 50V
C6205	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
C6206	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V < CONNECTOR >
* CN6201	1-818-072-61	CONNECTOR, FFC/FPC (ZIF) 30P
* CN6202	1-818-069-61	CONNECTOR, FFC/FPC (ZIF) 6P
* CN6204	1-818-069-61	CONNECTOR, FFC/FPC (ZIF) 6P
CN6205	1-815-031-51	FFC/CONNECTOR, FPC (ZIF) 24P < DIODE >
D6202	8-719-074-67	DIODE EDZ-TE61-5.6B
* D6203	6-501-476-01	DIODE NSSW008CT-T071 (BACKLIGHT)
* D6204	6-501-476-01	DIODE NSSW008CT-T071 (BACKLIGHT)
* D6205	6-501-476-01	DIODE NSSW008CT-T071 (BACKLIGHT) < TRANSISTOR >
Q6201	8-729-427-67	TRANSISTOR XP421F-TXE
Q6202	8-729-427-37	TRANSISTOR XP411F-TXE < RESISTOR >
R6201	1-218-954-11	RES-CHIP 1.2K 5% 1/16W
R6202	1-218-955-11	RES-CHIP 1.5K 5% 1/16W
R6203	1-218-957-11	RES-CHIP 2.2K 5% 1/16W
R6209	1-218-989-11	RES-CHIP 1M 5% 1/16W

• Refer to page 5-1 for mark △.

Ref. No. Part No. Description
 A-1439-640-A PD-352 BOARD, COMPLETE
 (DVD310E/DVD410E/DVD710/DVD710E/
 DVD810/DVD810E)

< CAPACITOR >

C6202	1-100-581-81	CERAMIC CHIP	0.0047uF	10%	50V
C6203	1-100-581-81	CERAMIC CHIP	0.0047uF	10%	50V
C6204	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C6205	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C6206	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V

< CONNECTOR >

* CN6201	1-818-072-61	CONNECTOR, FFC/FPC (ZIF) 30P
* CN6202	1-818-069-61	CONNECTOR, FFC/FPC (ZIF) 6P
* CN6204	1-818-069-61	CONNECTOR, FFC/FPC (ZIF) 6P
CN6205	1-815-031-51	FFC/CONNECTOR, FPC (ZIF) 24P

< DIODE >

D6202	8-719-074-67	DIODE EDZ-TE61-5.6B
* D6203	6-501-476-01	DIODE NSSW008CT-T071 (BACKLIGHT)
* D6204	6-501-476-01	DIODE NSSW008CT-T071 (BACKLIGHT)
* D6205	6-501-476-01	DIODE NSSW008CT-T071 (BACKLIGHT)

< TRANSISTOR >

Q6201	8-729-427-67	TRANSISTOR XP421F-TXE
Q6202	8-729-427-37	TRANSISTOR XP411F-TXE
* Q6203	6-551-836-01	TRANSISTOR 2SA2078G0LS0

< RESISTOR >

R6201	1-218-954-11	RES-CHIP	1.2K	5%	1/16W
R6202	1-218-955-11	RES-CHIP	1.5K	5%	1/16W
R6203	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R6207	1-218-978-11	RES-CHIP	120K	5%	1/16W
R6209	1-218-989-11	RES-CHIP	1M	5%	1/16W

A-1439-628-A RV-011 BOARD, COMPLETE
 (DVD110E/DVD115E/DVD610/DVD610E)

< SWITCH >

S7601	1-786-707-11	SWITCH, DETECTION (SMD) (PANEL REVERSE)
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A-1439-641-A RV-012 BOARD, COMPLETE
 (DVD310E/DVD410E/DVD710/DVD710E/
 DVD810/DVD810E)

< SWITCH >

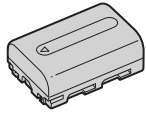
S7601	1-786-707-11	SWITCH, DETECTION (SMD) (PANEL REVERSE)
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Electrical parts list of the VC-520 board is not shown.
 Pages 5-15 to 5-24 are not shown.

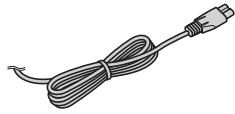
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Checking supplied accessories.

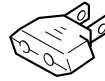
to **J MODEL**



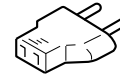
Rechargeable Battery Pack
NP-FH40
△ A-1201-658-A (US, CND)
△ A-1201-659-B
(EXCEPT US, CND, CH)
△ A-1201-660-A (CH)



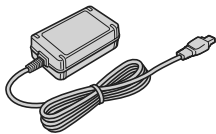
Power Cord
△ 1-555-074-91 (AUS)
△ 1-783-952-61 (AR)
△ 1-790-107-61 (US, CND)
△ 1-792-549-41 (JE)
△ 1-824-910-71 (AEP, EE, NE,
E: PAL, E: NTSC (Latin America))
△ 1-832-169-31 (UK, HK)
△ 1-832-121-31 (CH)
△ 1-833-892-21 (KR)
△ 1-834-852-11 (E: NTSC (Except
Latin America))



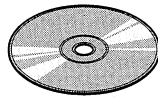
Conversion (2P) Adaptor
△ 1-569-008-12
(E: NTSC (Latin America))



Conversion (2P) Adaptor
△ 1-569-007-12
(E: NTSC (Except Latin
America))



AC Adaptor
(AC-L200/L200B)
△ 1-479-285-21

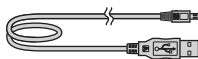


CD-ROM
"Handycam Application Software"
3-286-118-01



Operating Guide

- 3-285-366-11 (ENGLISH) (DVD610: US, CND, E/
DVD710: US, CND, E/DVD810: US, CND, E, JE)
- 3-285-366-21 (FRENCH) (DVD610: CND/DVD710: CND/
DVD810: CND)
- 3-285-366-31 (SPANISH) (DVD610: E, AR/DVD710: E, AR/
DVD810: E, AR, JE)
- 3-285-366-41 (PORTUGUESE) (DVD810: JE)
- 3-285-366-51 (TRADITIONAL CHINESE) (DVD610: E/
DVD710: E/DVD810: E)
- 3-285-366-61 (KOREAN) (DVD810: KR, JE)
- 3-285-367-11 (ENGLISH) (DVD110E/DVD115E/DVD310E/
DVD410E/DVD610E: E, HK, AUS/DVD710E: E/
DVD810E: E, HK, AUS, JE)
- 3-285-367-21 (FRENCH) (DVD110E: AEP/DVD115E: AEP/
DVD310E: AEP/DVD410E: AEP)
- 3-285-367-31 (GERMAN, DUTCH) (DVD110E: AEP/
DVD115E: AEP/DVD310E: AEP/DVD410E: AEP)
- 3-285-367-41 (SPANISH, PORTUGUESE) (DVD110E: AEP/
DVD115E: AEP/DVD310E: AEP/DVD410E: AEP)
- 3-285-367-51 (ITALIAN, GREEK) (DVD110E: AEP/
DVD115E: AEP/DVD310E: AEP/DVD410E: AEP)
- 3-285-367-61 (RUSSIAN, SWEDISH) (DVD110E: NE/
DVD115E: NE/DVD310E: NE/DVD410E: NE/
DVD610E: NE/DVD810E: NE, JE)
- 3-285-367-71 (DANISH, FINNISH) (DVD110E: NE/
DVD115E: NE/DVD310E: NE/DVD410E: NE/
DVD610E: NE/DVD810E: NE)
- 3-285-367-81 (UKRAINIAN) (DVD110E: NE/DVD115E: NE/
DVD310E: NE/DVD410E: NE/DVD610E: NE/
DVD810E: NE)
- 3-285-367-91 (POLISH, CZECH) (DVD110E: EE/
DVD115E: EE/DVD310E: EE/DVD410E: EE)
- 3-285-368-11 (HUNGARIAN, SLOVAK) (DVD110E: EE/
DVD115E: EE/DVD310E: EE/DVD410E: EE)
- 3-285-368-21 (TURKISH) (DVD110E: EE/DVD115E: EE/
DVD310E: EE/DVD410E: EE)
- 3-285-368-31 (SIMPLIFIED CHINESE) (DVD610E: E, CH/
DVD710E: E, CH/DVD810E: E, JE)
- 3-285-368-41 (TRADITIONAL CHINESE)
(DVD610E: HK/DVD810E: HK)
- 3-285-368-51 (ARABIC, PERSIAN)
(DVD610E: E/DVD710E: E/DVD810E: E)



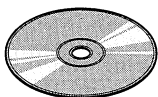
USB Cable
1-829-868-31



A/V Connecting Cable
1-831-553-11



Wireless Remote Commander
RMT-835
1-479-275-41
(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)



DVD-ROM
"ENJOY HANDYCAM"
3-282-264-01 (KR)
ENGLISH/KOREAN/JAPANESE
3-282-264-11 (US, CND, E, AR)
ENGLISH/FRENCH/SPANISH/PORTUGUESE
3-282-264-21 (AEP, EE, NE, UK)
ENGLISH/RUSSIAN/GERMAN
3-282-264-31 (AEP)
ENGLISH/SPANISH/PORTUGUESE/ITALIAN
3-282-264-41 (AEP)
ENGLISH/FRENCH/PORTUGUESE/DUTCH
3-282-264-61 (E, HK, AUS, CH)
ENGLISH/FRENCH/SIMPLIFIED CHINESE for CHINA/
TRADITIONAL CHINESE for HONG KONG
3-282-264-71 (E)
ENGLISH/TRADITIONAL CHINESE for TAIWAN/
SPANISH/PORTUGUESE

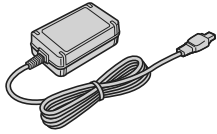
• Refer to page 5-1 for mark △.

Ver. 1.1 2008.03

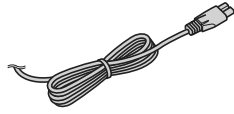
Ver. 1.0からの変更部分は
青色で記載されています。

● J MODEL

付属品



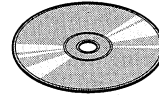
AC アダプター
(AC-L200/L200B)
△ 1-479-285-41



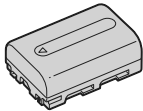
電源コード
△ 1-792-549-41



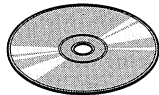
ワイヤレスリモコン
RMT-835
1-479-275-41



DVD-ROM
「エンジョイハンディーカム」
3-282-264-01
英語/韓国語/日本語



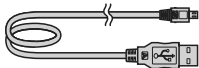
リチャージブルバッテリー
パック
NP-FH40
△ A-1201-657-A



CD-ROM
「Handycam Application
Software」
3-286-118-01



取扱説明書
3-285-366-01 (日本語)



USB ケーブル
1-829-868-31

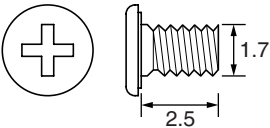


A/V 接続ケーブル
1-831-553-11

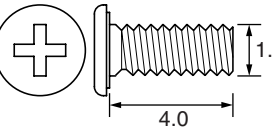
● △マークについては、5-1ページを参照してください。

HARDWARE LIST (1/6)

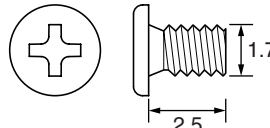
#1: M1.7 X 2.5
(Black)
2-635-562-11



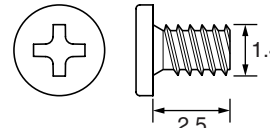
#2: M1.7 X 4.0
(Black)
2-635-562-31



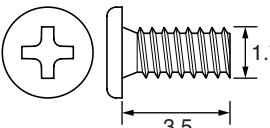
#3: M1.7 X 2.5
(Red)
2-660-401-01



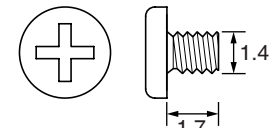
#4: M1.4 X 2.5 (Tapping)
(Dark Silver)
3-348-998-81



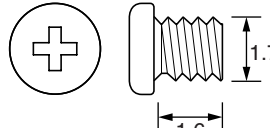
#5: M1.7 X 3.5 (Tapping)
(Black)
3-080-204-01



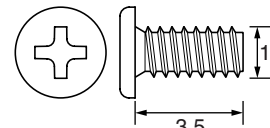
#6: M1.4 X 1.7
(Silver)
2-598-474-01



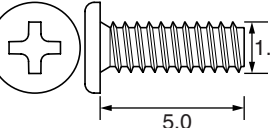
#7: M1.7 X 1.6
(Black)
7-627-552-18



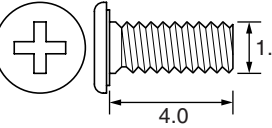
#8: M1.7 X 3.5 (Tapping)
(Silver)
3-078-890-01



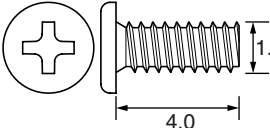
#9: M1.7 X 5.0 (Tapping)
(Silver)
3-078-890-21



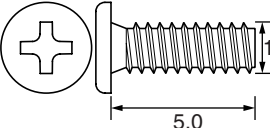
#10: M1.7 X 4.0
(Silver)
2-599-475-31



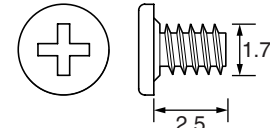
#11: M1.7 X 4.0 (Tapping)
(Silver)
3-078-890-11



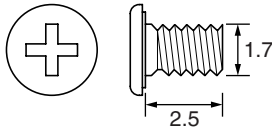
#12: M1.7 X 5.0 (Tapping)
(Black)
3-080-204-21



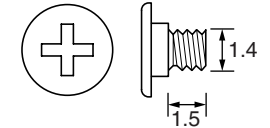
#13: M1.7 X 2.5 (Tapping)
(Silver)
3-085-397-01



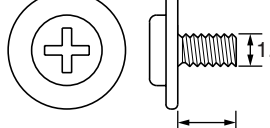
#14: M1.7 X 2.5
(Silver)
2-599-475-11



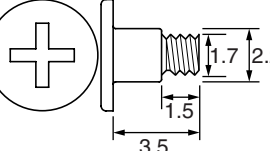
#15: M1.4 X 1.5
(Silver)
3-062-214-01



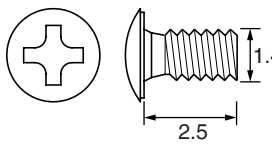
#16: M1.4 X 2.5
(Silver)
2-586-337-01



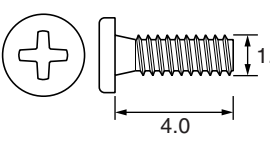
#17: M1.7 X 1.5
(Silver)
2-586-389-01



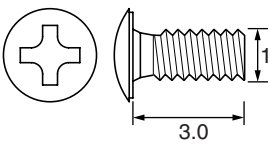
#18: M1.4 X 2.5
(Silver)
2-635-591-21



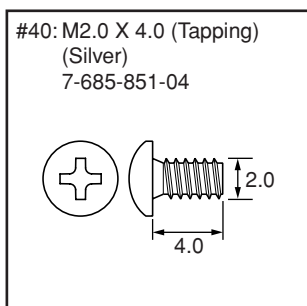
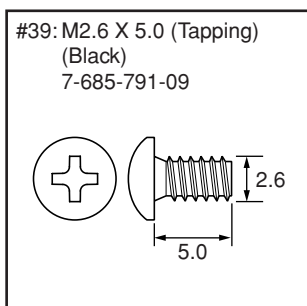
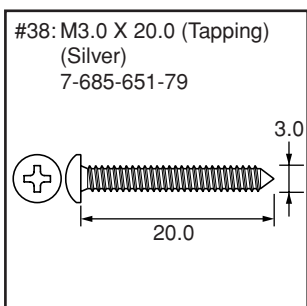
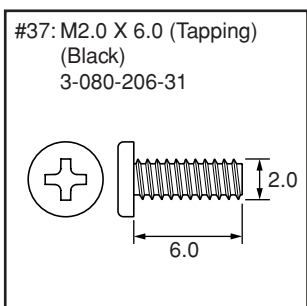
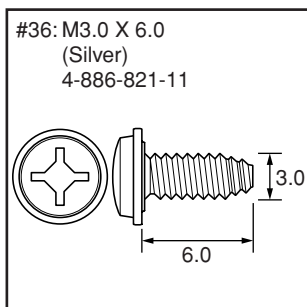
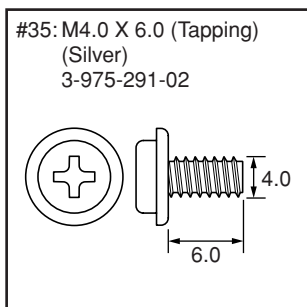
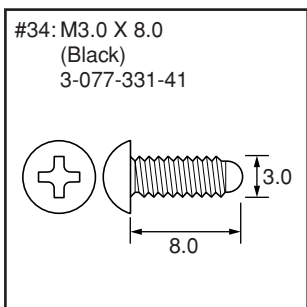
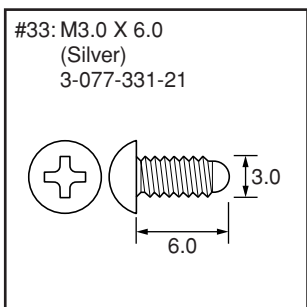
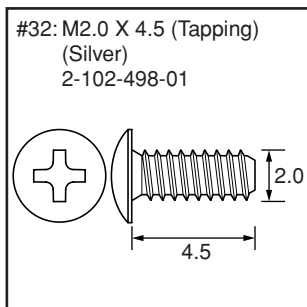
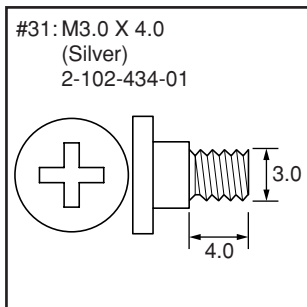
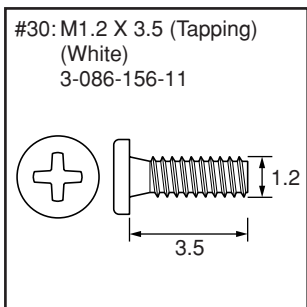
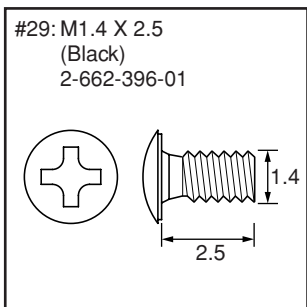
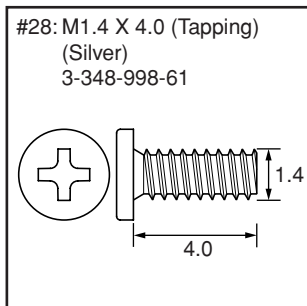
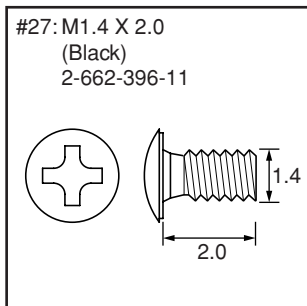
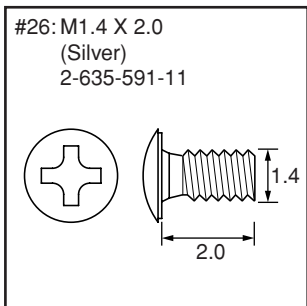
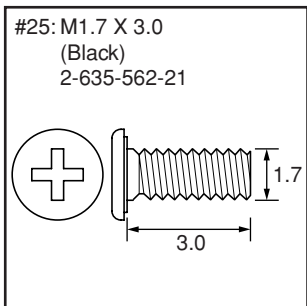
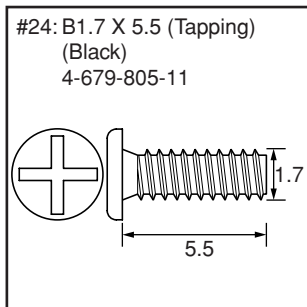
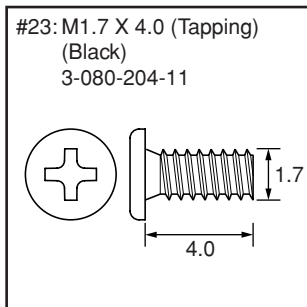
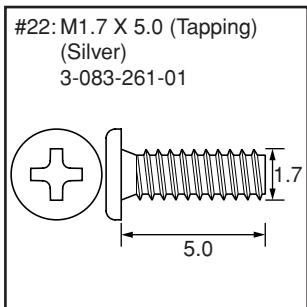
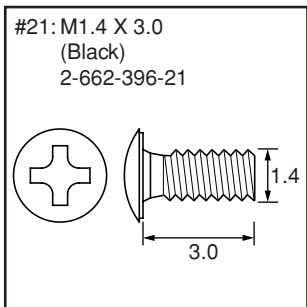
#19: M1.2 X 4.0 (Tapping)
(Red)
3-086-156-21



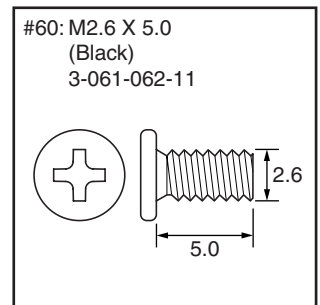
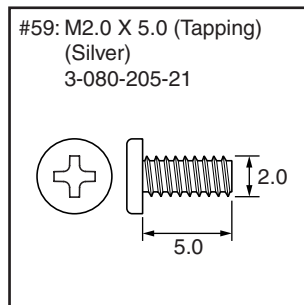
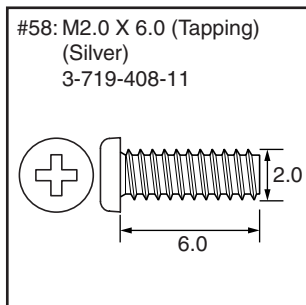
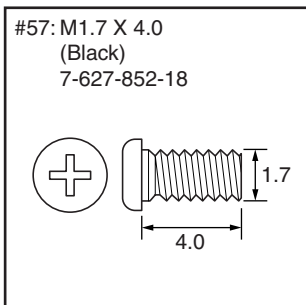
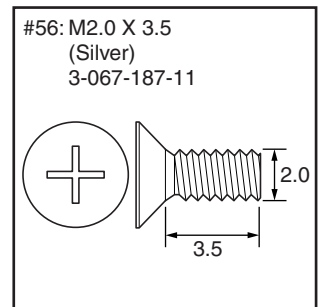
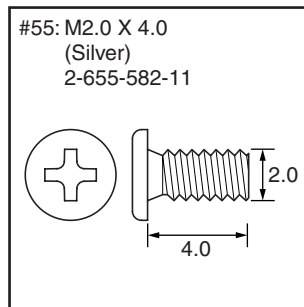
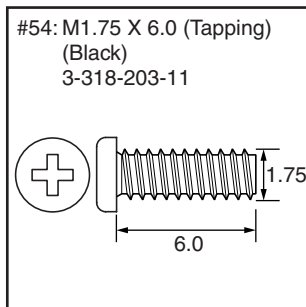
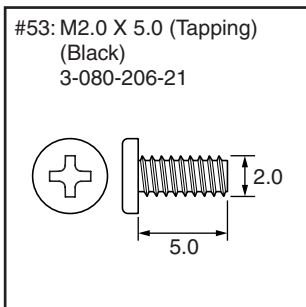
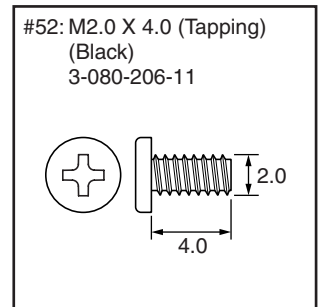
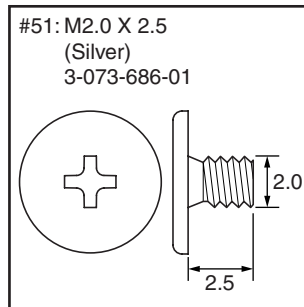
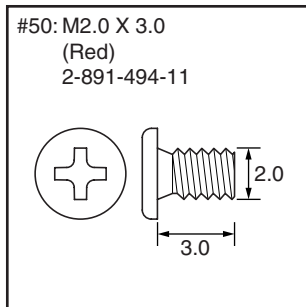
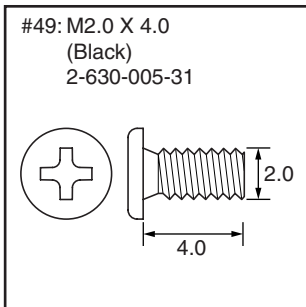
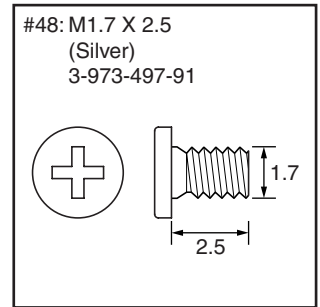
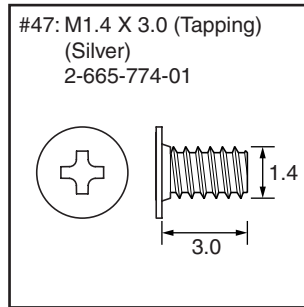
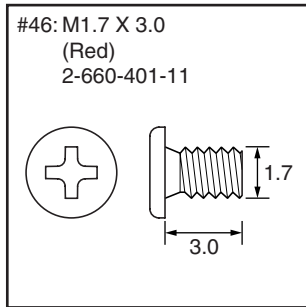
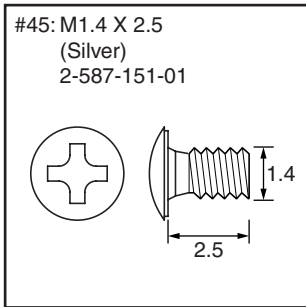
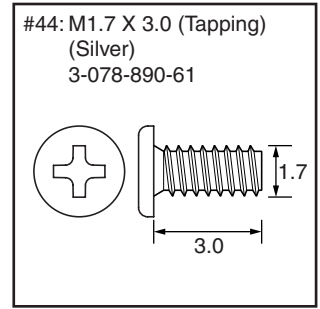
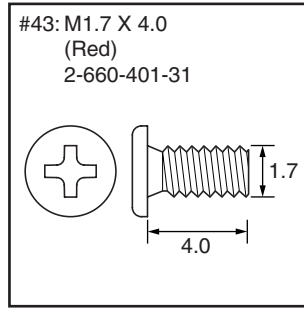
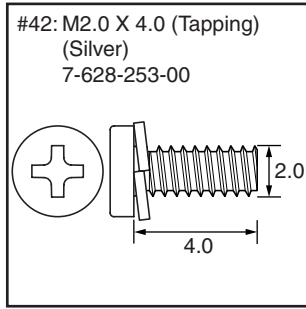
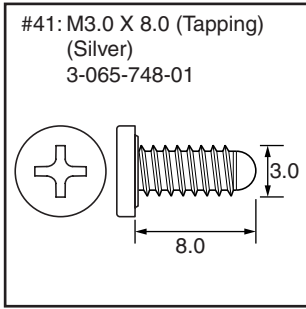
#20: M1.4 X 3.0
(Silver)
2-635-591-31



HARDWARE LIST (2/6)



HARDWARE LIST (3/6)



HARDWARE LIST (4/6)

#61: M3.0 X 10.0
(Black)
7-682-549-09

#62: M2.0 X 3.0
(Silver)
3-080-202-21

#63: M5.0 X 12.5
(Black)
3-060-811-21

#64: M1.7 X 5.0 (Tapping)
(Silver)
2-666-551-21

#65: M1.4 X 3.5
(Silver)
2-635-591-01

#66: M1.4 X 1.4
(Silver)
2-635-591-41

#67: M1.4 X 2.0
(Silver)
3-389-523-16

#68: M1.7 X 4.0
(Silver)
2-655-581-01

#69: M1.7 X 3.0
(Silver)
2-599-475-21

#70: M1.7 X 5.0
(Silver)
2-599-475-41

#71: M1.4 X 2.0
(Red)
3-208-537-01

#72: M1.4 X 2.0
(Silver)
4-663-621-41

#73: M1.2 X 4.0 (Tapping)
(Black)
3-086-156-61

#74: M1.7 X 6.0 (Tapping)
(Silver)
2-666-551-31

#75: M1.7 X 3.5 (Tapping)
(Silver)
2-666-551-01

#76: M1.7 X 4.0 (Tapping)
(Silver)
2-666-551-11

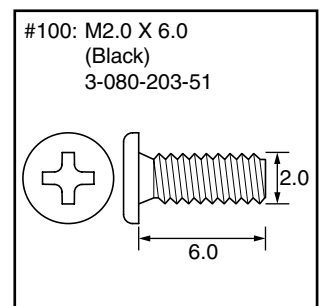
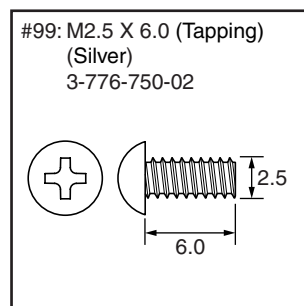
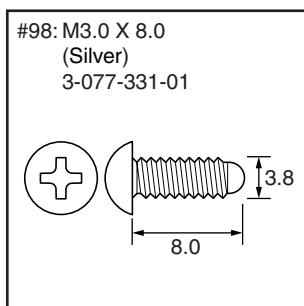
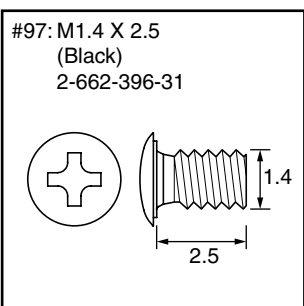
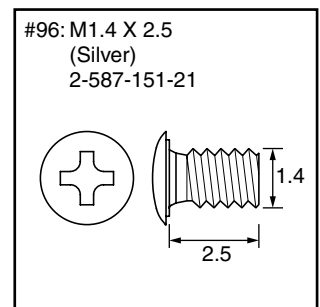
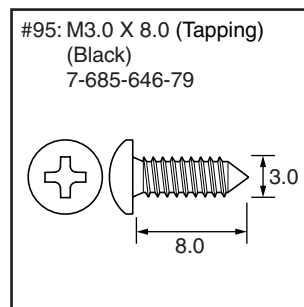
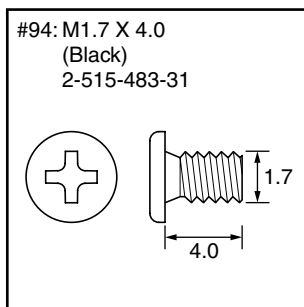
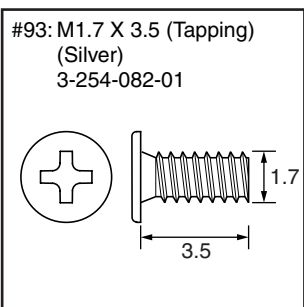
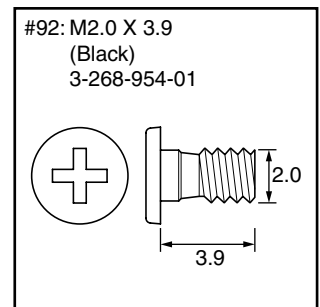
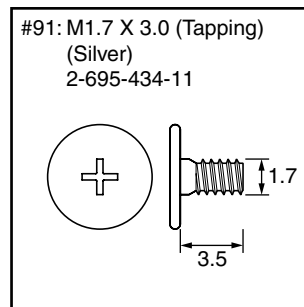
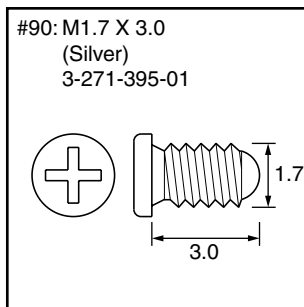
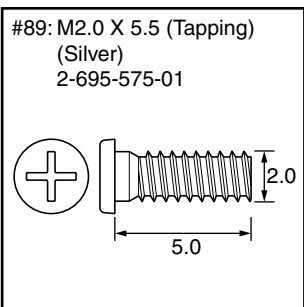
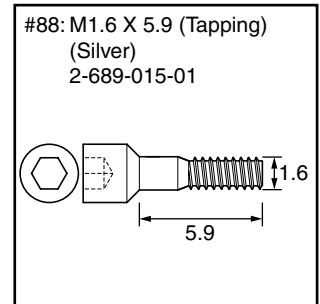
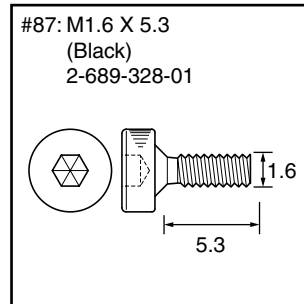
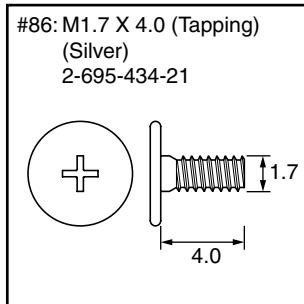
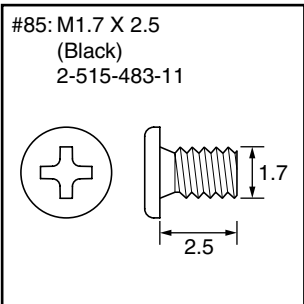
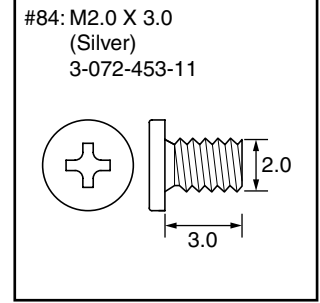
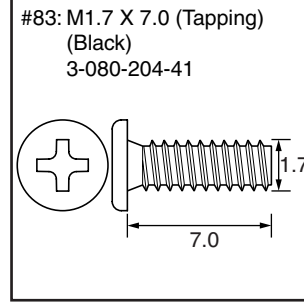
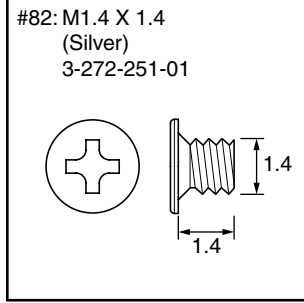
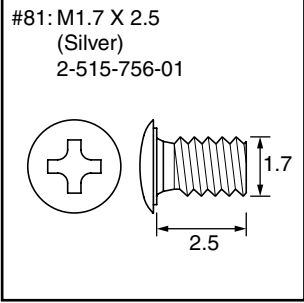
#77: M1.2 X 5.0 (Tapping)
(Silver)
3-086-156-31

#78: M1.4 X 3.5
(Red)
3-208-537-11

#79: M1.4 X 2.0
(Silver)
2-587-151-11

#80: M1.4 X 2.0
(Black)
3-279-411-01

HARDWARE LIST (5/6)



HARDWARE LIST (6/6)

#101: M2.0 X 5.0
(Silver)
7-621-555-39

#102: M2.6 X 8.0
(Black)
7-621-284-30

#103: M2.6 X 10.0
(Silver)
7-685-794-09

#104: M3.0 X 8.0
(Black)
7-682-548-09

#105: M2.0 X 4.0
(Red)
2-891-494-31

#106: M2.0 X 6.0
(Black)
3-713-786-11

#107: M2.0 X 5.0
(Silver)
3-032-750-01

#108: M1.7 X 3.0 (Tapping)
(Black)
2-695-430-01

#109: M1.7 X 3.0
(Black)
2-515-483-21

#110: M2.0 X 3.0
(Black)
2-630-005-21

#111: M1.7 X 4.0 (Tapping)
(Black)
2-887-124-01

#112: M1.4 X 5.0
(Black)
2-178-410-11

#113: M1.7 X 5.0
(Black)
2-635-562-41

#114: M2.0 X 5.5 (Tapping)
(Silver)
2-698-464-01

#115: M1.4 X 3.5 (Tapping)
(Silver)
3-348-998-51

#116: M2.0 X 3.5 (Tapping)
(Silver)
2-695-435-01

#117: M1.7 X 4.5 (Tapping)
(Silver)
2-695-429-31

#118: M1.4 X 2.0
(Black)
2-655-580-01

DCR-DVD110E/DVD115E/DVD310E/DVD410E/DVD610/ DVD610E/DVD710/DVD710E/DVD810/DVD810E RMT-835

SERVICE MANUAL

LEVEL 3

Ver. 1.1 2008.01

Revision History

Revised-1

Replace the previously issued
SERVICE MANUAL 9-852-249-11
with this manual.



Photo: DCR-DVD810

US Model
Canadian Model
AEP Model
UK Model
East European Model
North European Model
E Model
Australian Model
Hong Kong Model
Chinese Model
Korea Model
Argentine Model
Brazilian Model
Tourist Model
Japanese Model

Link

• MODEL INFORMATION TABLE

• PRINTED WIRING BOARDS

• REPAIR PARTS LIST

• SCHEMATIC DIAGRAMS

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

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



DIGITAL VIDEO CAMERA RECORDER

SONY®

Model information table

Non MEGA model

Model	DCR-DVD110E	DCR-DVD115E	DCR-DVD610	DCR-DVD610E
Destination	AEP, UK, EE, NE	AEP, UK, EE, NE	US, CND, E, AR, BR	AEP, E, AUS, HK, CH
Color system	PAL	PAL	NTSC	PAL
5.1ch recording	×	○	×	×
Data copy	CAM → PC	○	○	○
	PC → CAM	×	×	○
Remote commander	×	×	×	×
Active Interface Shoe	×	×	×	×
Internal flash memory	×	×	×	×
BL board	BL-021	BL-021	BL-021	BL-021
CD board	CD-731	CD-731	CD-731	CD-731
CK board	CK-191	CK-191	CK-191	CK-191
MS board	MS-391	MS-391	MS-391	MS-391
PD board	PD-351	PD-351	PD-351	PD-351
RV board	RV-011	RV-011	RV-011	RV-011

MEGA model

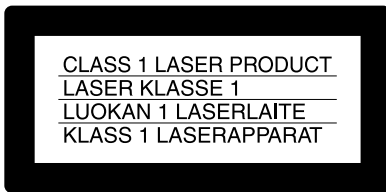
Model	DCR-DVD310E	DCR-DVD410E	DCR-DVD710	DCR-DVD710E	DCR-DVD810	DCR-DVD810E
Destination	AEP, UK, EE, NE	AEP, UK, EE, NE	US, CND, E, AR	AEP, E, CH	US, CND, E, KR, AR, JE, J	AEP, E, AUS, HK, JE
Color system	PAL	PAL	NTSC	PAL	NTSC	PAL
5.1ch recording	○	○	○	○	○	○
Data copy	CAM → PC	○	○	○	○	○
	PC → CAM	×	×	○	○	○
Remote commander	○	○	○	○	○	○
Active Interface Shoe	○	○	○	○	○	○
Internal flash memory	×	○	×	×	○	○
BL board	BL-022	BL-022	BL-022	BL-022	BL-022	BL-022
CD board	CD-687	CD-687	CD-687	CD-672/CD-687	CD-687	CD-672/CD-687
CK board	CK-192	CK-192	CK-192	CK-192	CK-192	CK-192
MS board	MS-392	MS-392	MS-392	MS-392	MS-392	MS-392
PD board	PD-352	PD-352	PD-352	PD-352	PD-352	PD-352
RV board	RV-012	RV-012	RV-012	RV-012	RV-012	RV-012

- Abbreviation

- AR : Argentine model
- AUS : Australian model
- BR : Brazilian model
- CH : Chinese model
- CND : Canadian model
- EE : East European model
- HK : Hong Kong model
- J : Japanese model
- JE : Tourist model
- KR : Korea model
- MX : Mexican model
- NE : North European model

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.

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:

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.

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.

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.

注意

電池の交換は、正しく行わないと破裂する恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。

サービス、点検時には次のことにご注意下さい。

1. 注意事項をお守りください。
サービスのとき特に注意を要する箇所については、キャビネット、シャーシ、部品などにラベルや捺印で注意事項を表示しています。これらの注意書き及び取扱説明書等の注意事項を必ずお守り下さい。
2. 指定部品のご使用を
セットの部品は難燃性や耐電圧など安全上の特性を持ったものとなっています。従って交換部品は、使用されていたものと同じ特性の部品を使用して下さい。特に回路図、部品表に△印で指定されている安全上重要な部品は必ず指定のものをご使用下さい。
3. 部品の取付けや配線の引きまわしはもとどおり
安全上、チューブやテープなどの絶縁材料を使用したり、プリント基板から浮かして取付けた部品があります。また内部配線は引きまわしやクランパによって発熱部品や高圧部品に接近しないよう配慮されていますので、これらは必ずもとどおりして下さい。
4. サービス後は安全点検を
サービスのために取外したネジ、部品、配線がもとどおりになっているか、またサービスした箇所の周辺を劣化させてしまったところがないかなどを点検し、安全性が確保されていることを確認して下さい。
5. チップ部品交換時の注意
 - 取外した部品は再使用しないで下さい。
 - タンタルコンデンサのマイナス側は熱に弱いため交換時は注意して下さい。
6. フレキシブルプリント基板の取扱いについて
 - 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。
7. 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。

4-2. SCHEMATIC DIAGRAMS

Link

• VC-520 BOARD (1/20) (A/D CONVERTER, TIMING GENERATOR)	• VC-520 BOARD (11/20) (RF PROCESS)
• VC-520 BOARD (2/20) (LENS DRIVE, EVR)	• VC-520 BOARD (12/20) (DVD MECHA DRIVE)
• VC-520 BOARD (3/20): Non MEGA model (LENS DRIVE)	• VC-520 BOARD (13/20) (D/A CONVERTER)
• VC-520 BOARD (4/20) (LENS DRIVE)	• VC-520 BOARD (14/20): DVD110E/DVD610/ DVD610E (VIDEO OUT, AUDIO I/O)
• VC-520 BOARD (5/20) (CPU (SIGNAL PROCESS 1))	• VC-520 BOARD (15/20): DVD115E/DVD310E/DVD410E/ DVD710/DVD710E/DVD810/DVD810E (VIDEO, AUDIO I/O)
• VC-520 BOARD (6/20) (CPU (SIGNAL PROCESS 2))	• VC-520 BOARD (16/20) (LCD/EVF DRIVE)
• VC-520 BOARD (7/20) (CPU (POWER SUPPLY))	• VC-520 BOARD (17/20) (HI CONTROL)
• VC-520 BOARD (8/20) (SDRAM, OneNAND FLASH)	• VC-520 BOARD (18/20) (DC IN, CHARGE)
• VC-520 BOARD (9/20) (DVD DSP, DVD DRIVE CONTROL)	• VC-520 BOARD (19/20) (DC/DC CONVERTER)
• VC-520 BOARD (10/20) (SDRAM, FLASH)	• VC-520 BOARD (20/20) (CONNECTOR)

• COMMON NOTE FOR SCHEMATIC DIAGRAMS

Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVE610E

4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS








4-2. SCHEMATIC DIAGRAMS
(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.

Example	C541	L452
	22U	10UH
	TA A	2520
	Case size	External dimensions (mm)
	Kinds of capacitor	External dimensions (mm)

- 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.

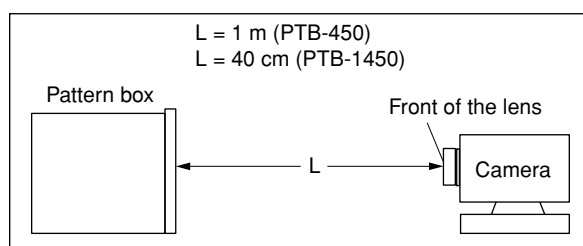
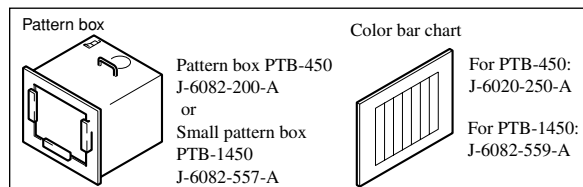
(Measuring conditions voltage and waveform)

- 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 $\text{M}\Omega$ input impedance is used)
- Voltage values change depending upon input impedance of VOM used.)

Precautions for Replacement of Imager

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

1. Connection



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

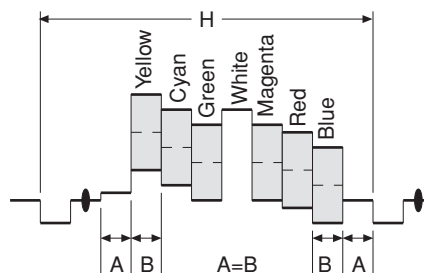


Fig. a (Video output terminal output waveform)

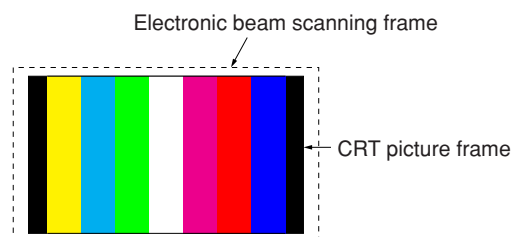


Fig.b (Picture on monitor TV)

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

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)

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ので注意してください。

- ・チップ部品には下記のように表示したものがああります。

例	C 541	L 452
	22U	10UH
	TA A	2520
	↑ ↑	↑
	種類 ケースサイズ	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。

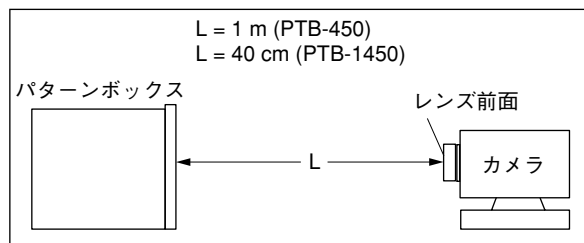
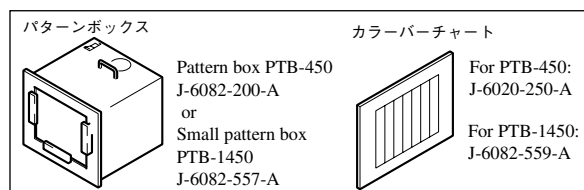
【電圧・波形測定条件ノート】

- ・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対アース間の参考値。
(デジタルマルチメータ; 入力インピーダンス DC10M Ω 使用)
- ・使用テスタの入力インピーダンスにより電圧値が多少異なります。

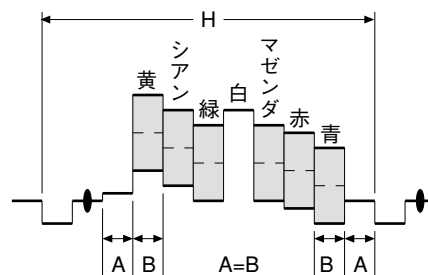
イメージ交換時の注意

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

1. 接続図

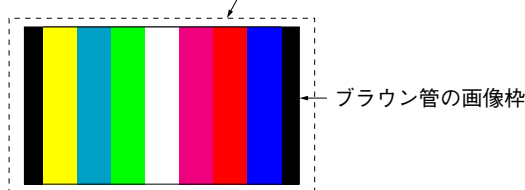


- 2. 図a及び図bの波形が得られるように画枠調整して下さい。



図a (映像入出力端子出力波形)

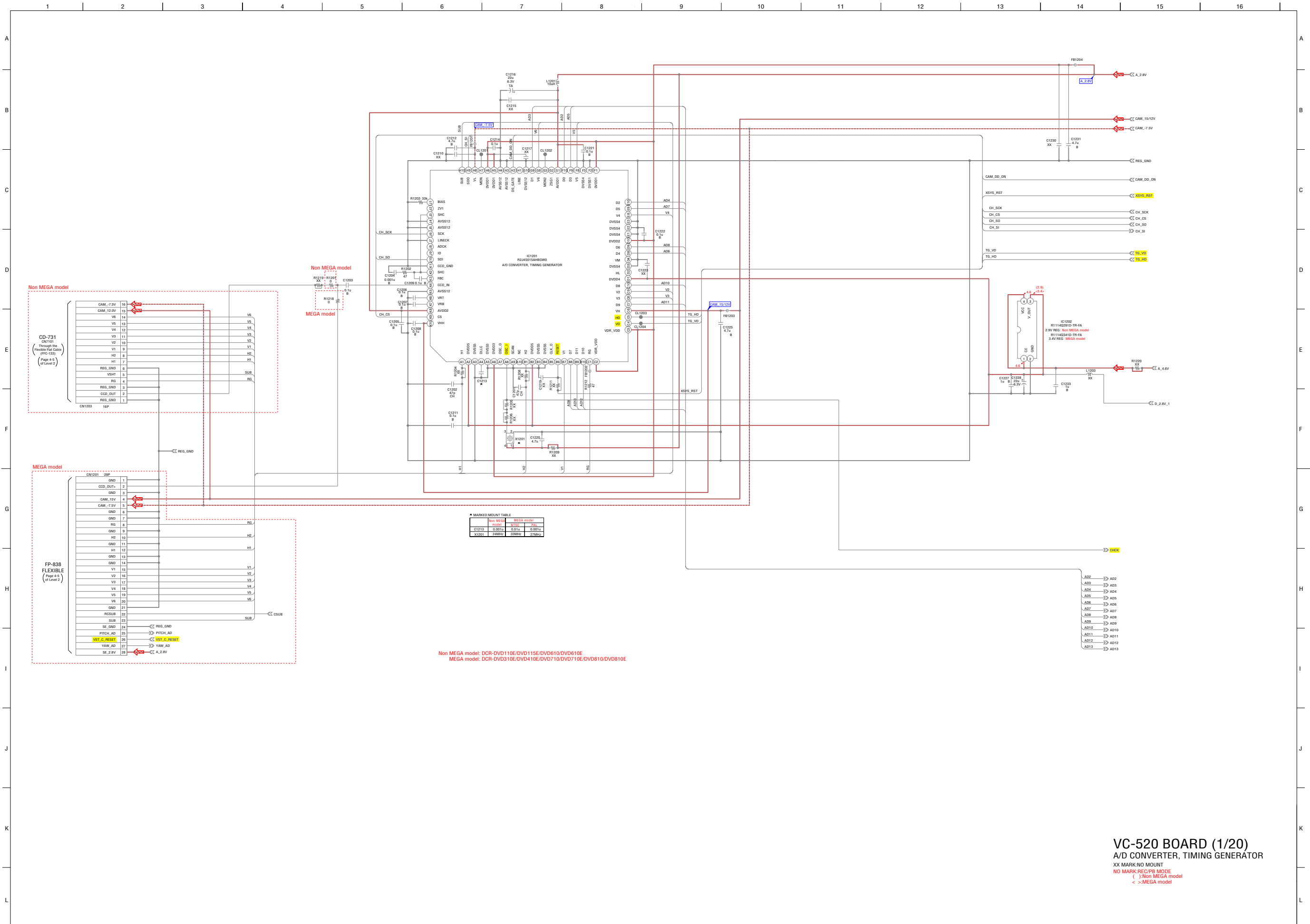
電子ビーム走査線



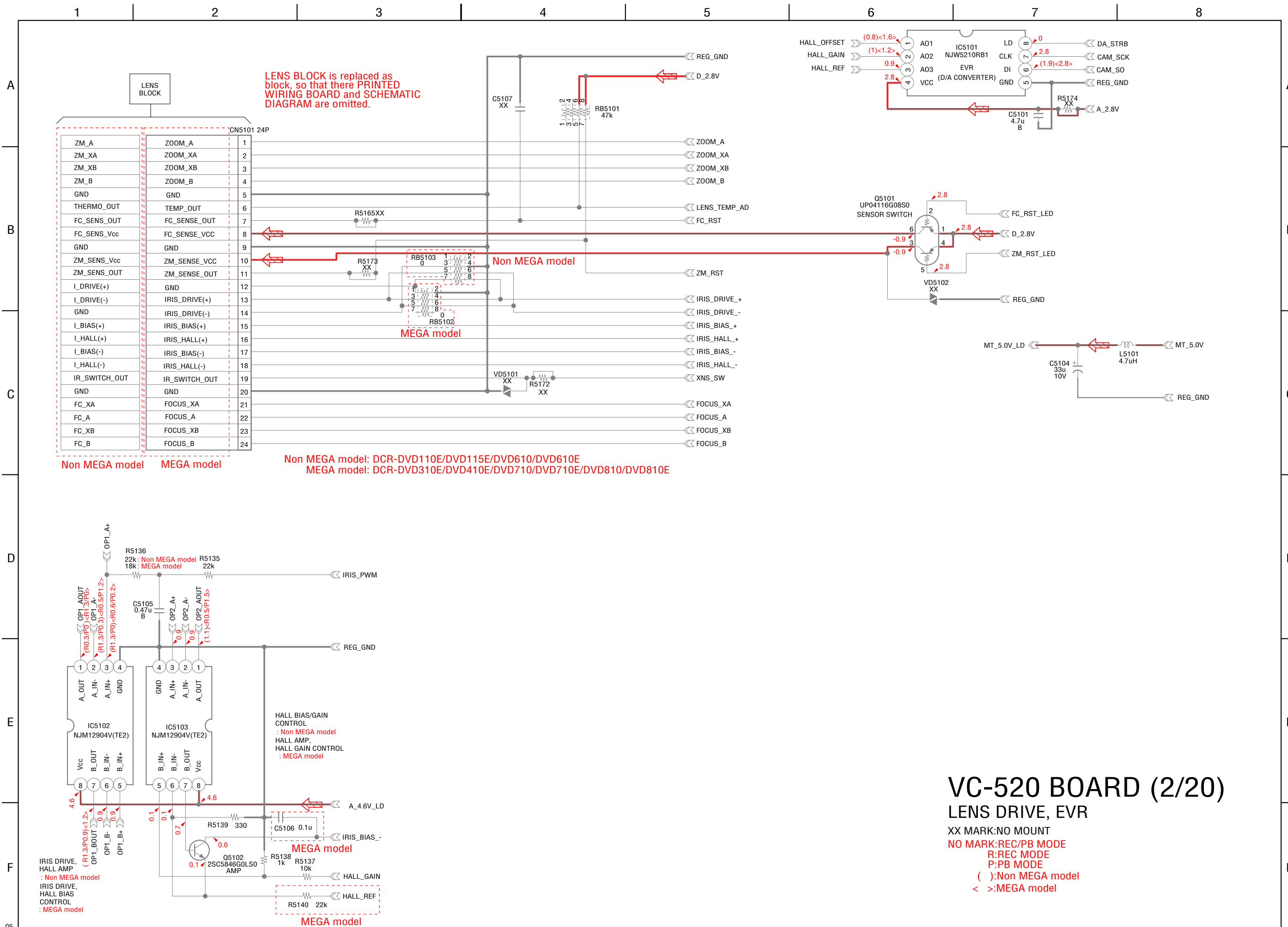
図b (テレビモニタの映像)

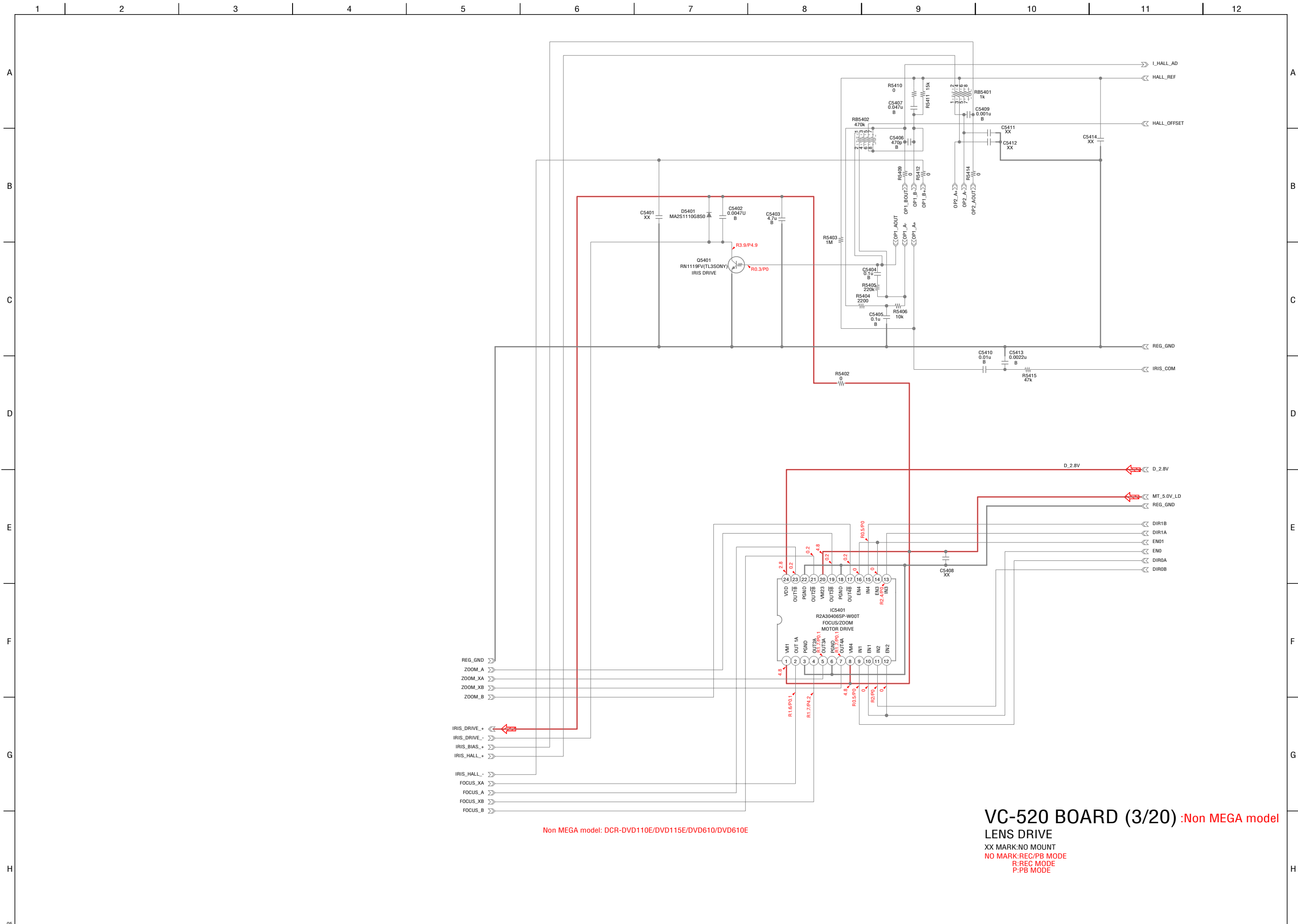
△印の部品、または△印付きの点線で囲まれた部品は、安全性を維持するために重要な部品です。従って交換時は、必ず指定の部品を使用して下さい。

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。



VC-520 BOARD (1/20)
 A/D CONVERTER, TIMING GENERATOR
 XX MARK: NO MOUNT
 NO MARK: REQUIRED MODE
 () : Non MEGA model
 < > : MEGA model





Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVD610E

VC-520 BOARD (3/20) :Non MEGA model

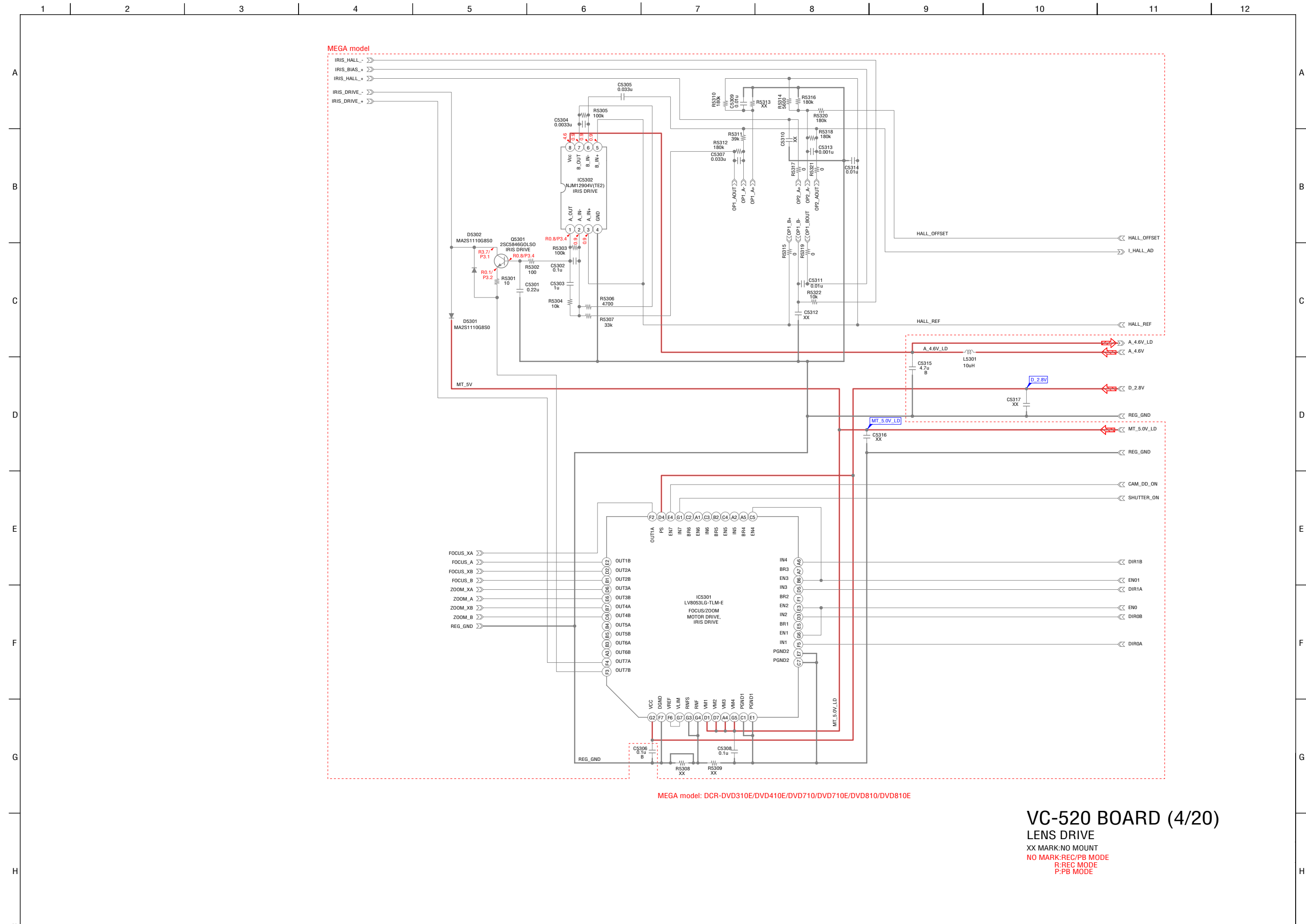
LENS DRIVE

XX MARK:NO MOUNT

NO MARK:REC/PB MODE

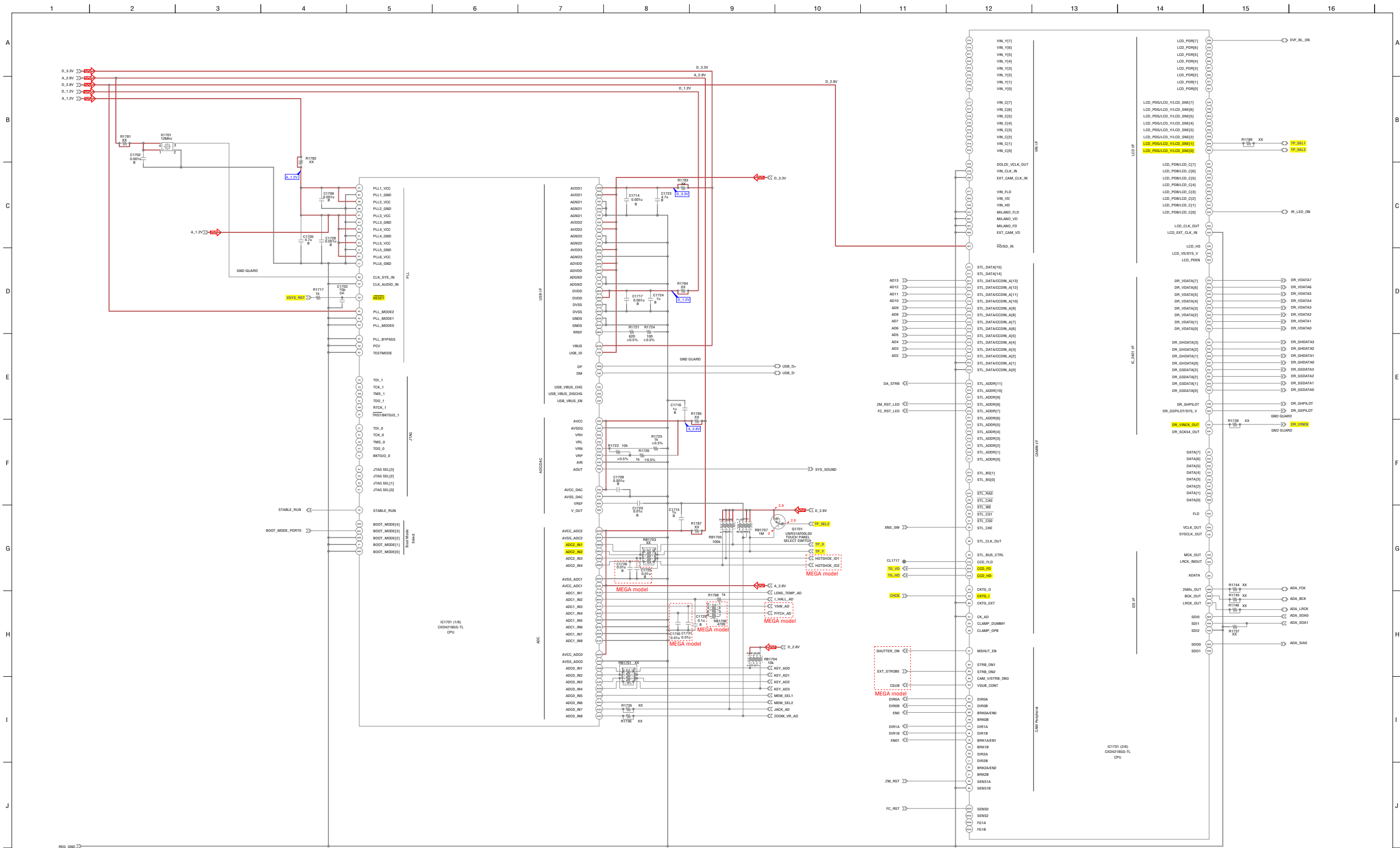
R:REC MODE

P:PB MODE



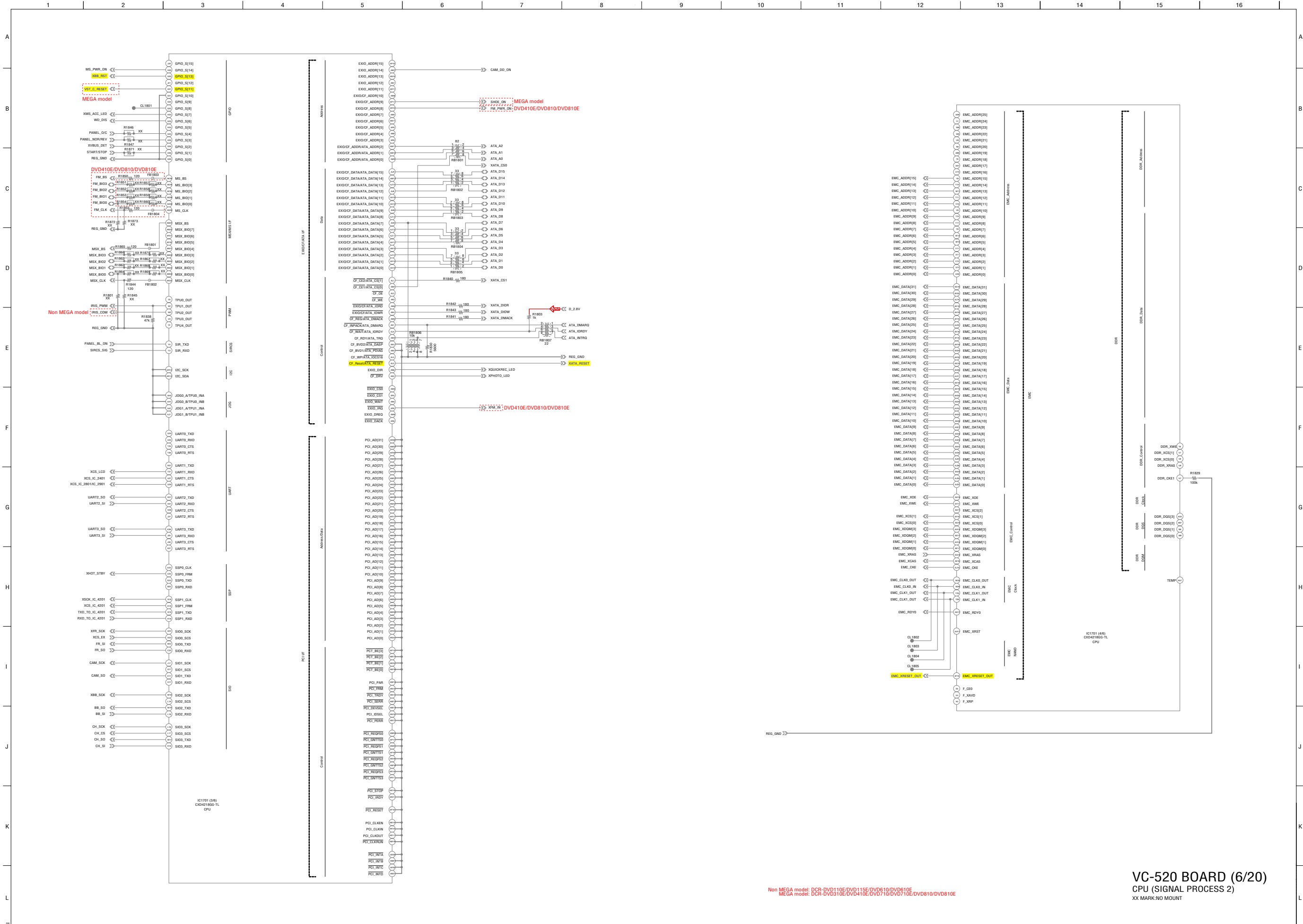
MEGA model: DCR-DVD310E/DVD410E/DVD710E/DVD710E/DVD810E/DVD810E

VC-520 BOARD (4/20)
LENS DRIVE
 XX MARK:NO MOUNT
 NO MARK:REC/PB MODE
 R:REC MODE
 P:PB MODE



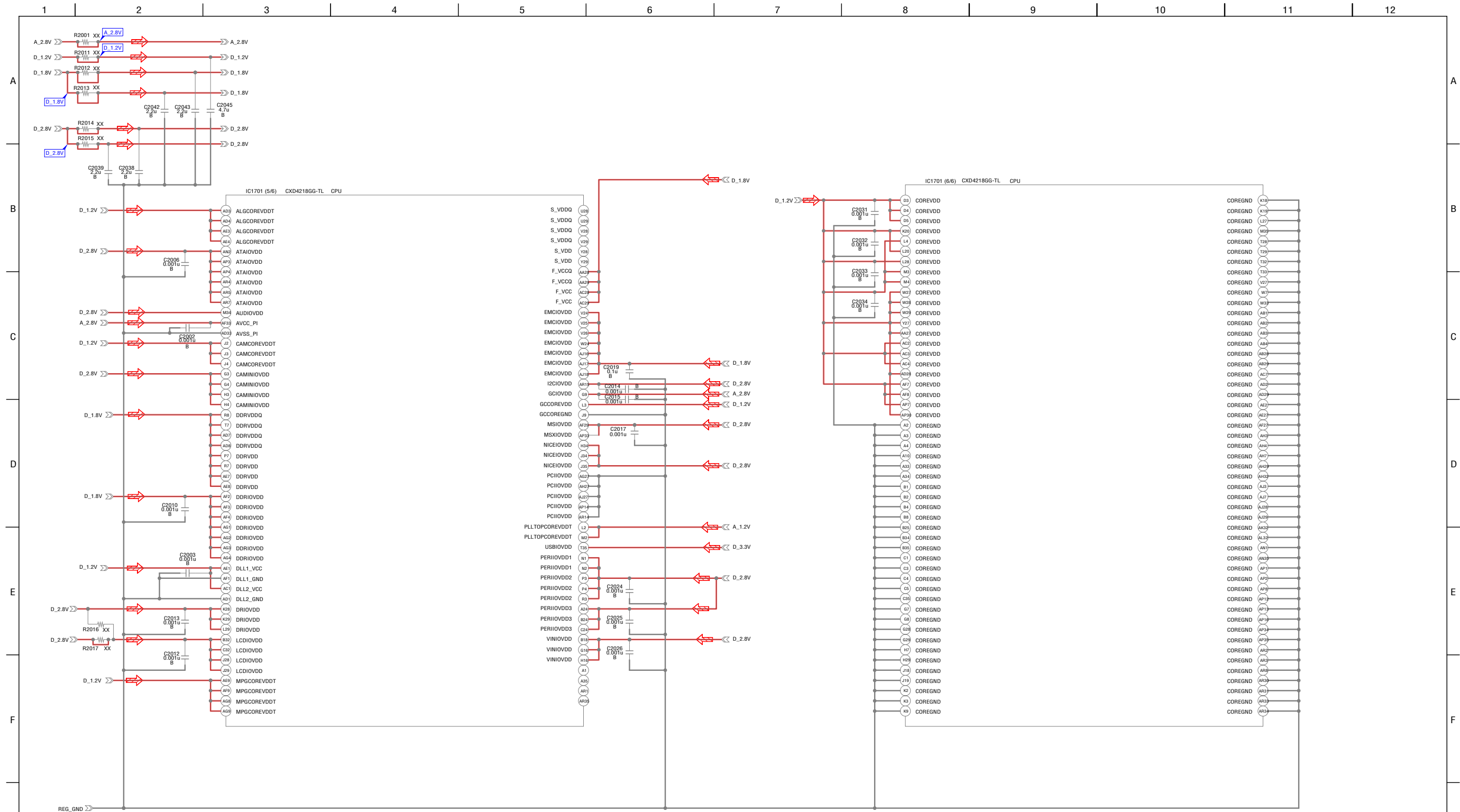
MEGA model: DCR-DVD310E/DVD410E/DVD710E/DVD710EDVD810/DVD810E

VC-520 BOARD (5/20)
 CPU (SIGNAL PROCESS 1)
 XX MARK:NO MOUNT
 NO MARK:REC/PB MODE

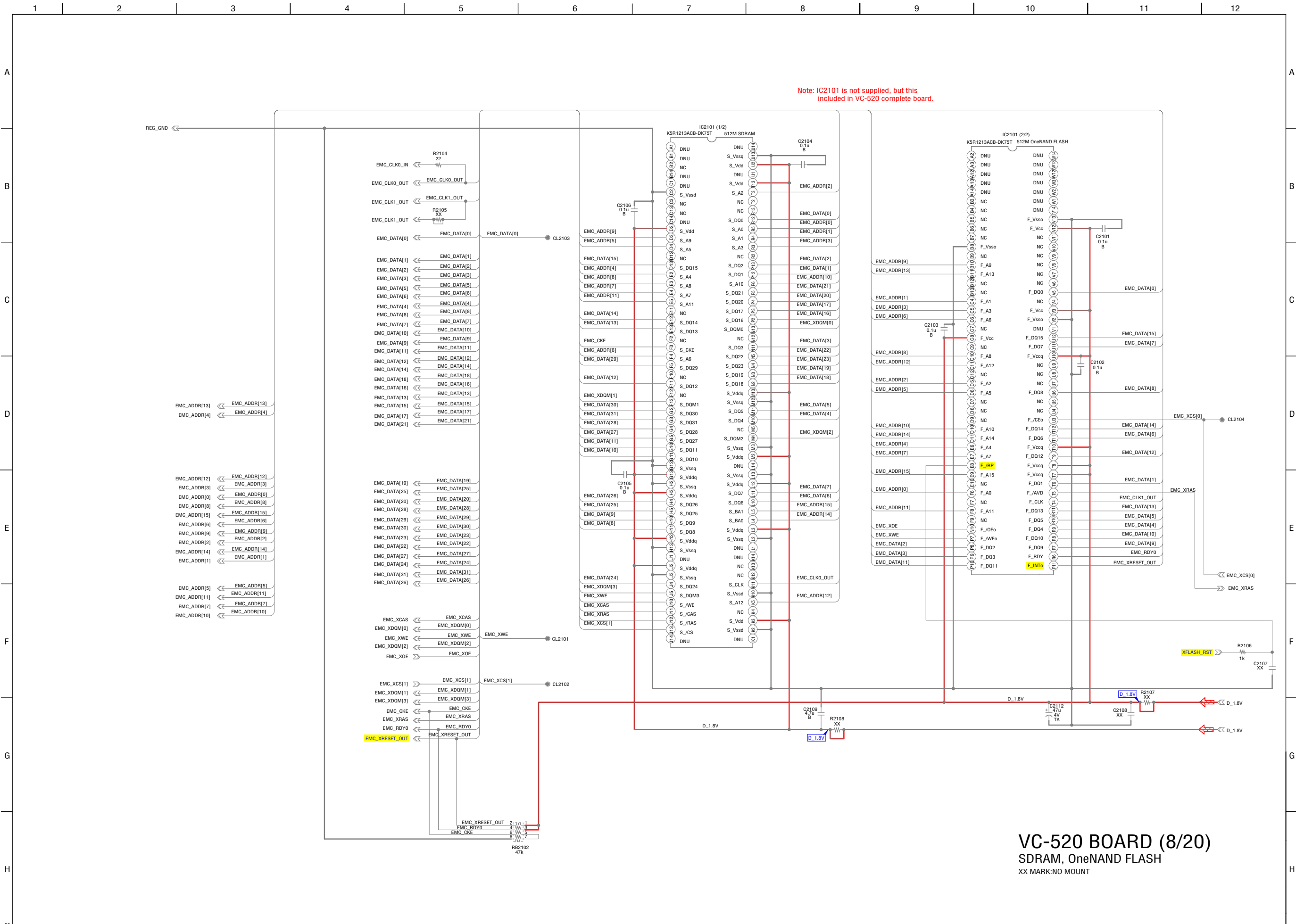


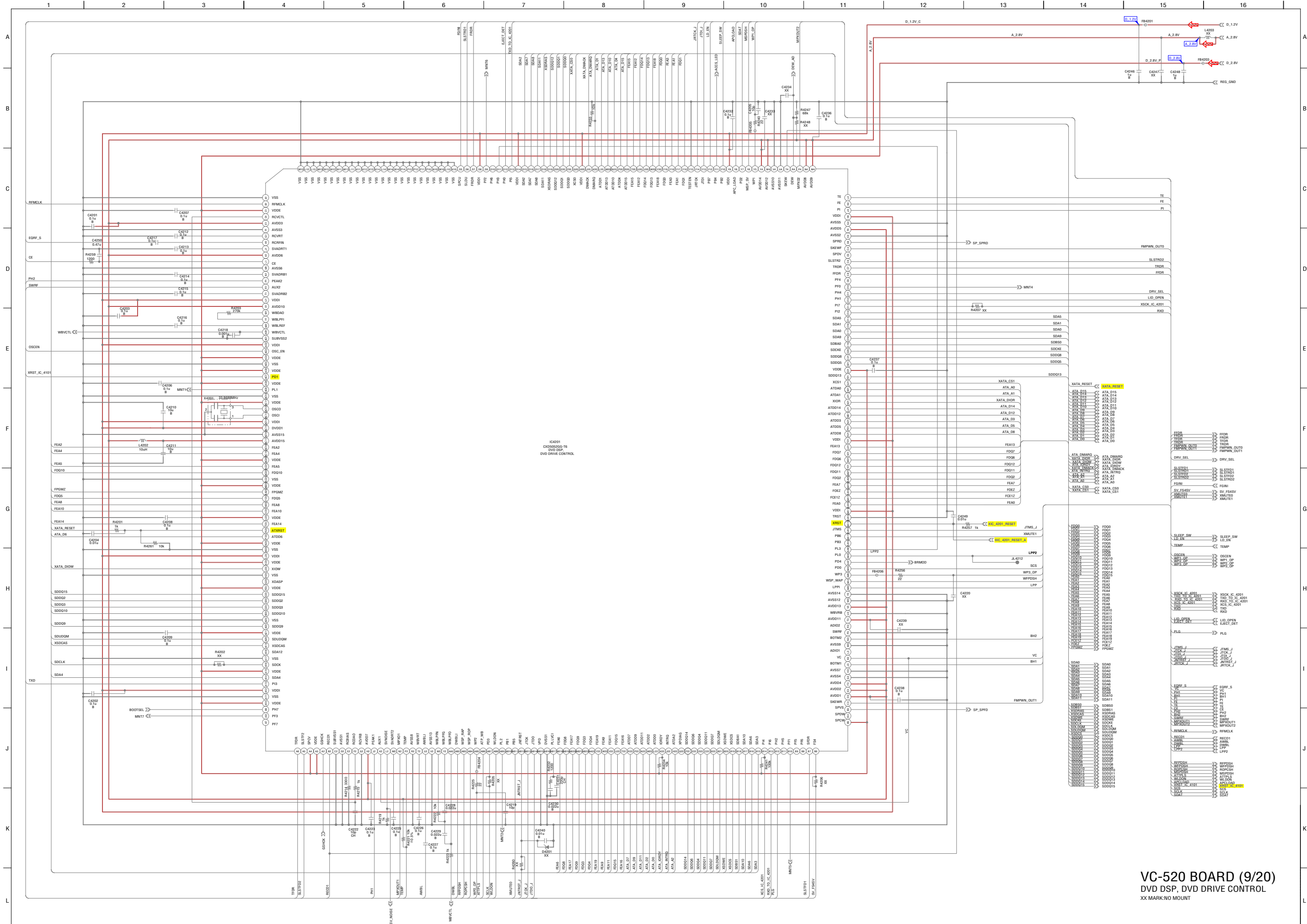
Non MEGA model: DCR-DVD110E/DVD115E/DVD310E/DVD410E/DVD610E/DVD610E/DVD710E/DVD710E/DVD810E/DVD810E
 MEGA model: DCR-DVD310E/DVD410E/DVD710E/DVD810E/DVD810E

VC-520 BOARD (6/20)
 CPU (SIGNAL PROCESS 2)
 XX MARK/NO MOUNT

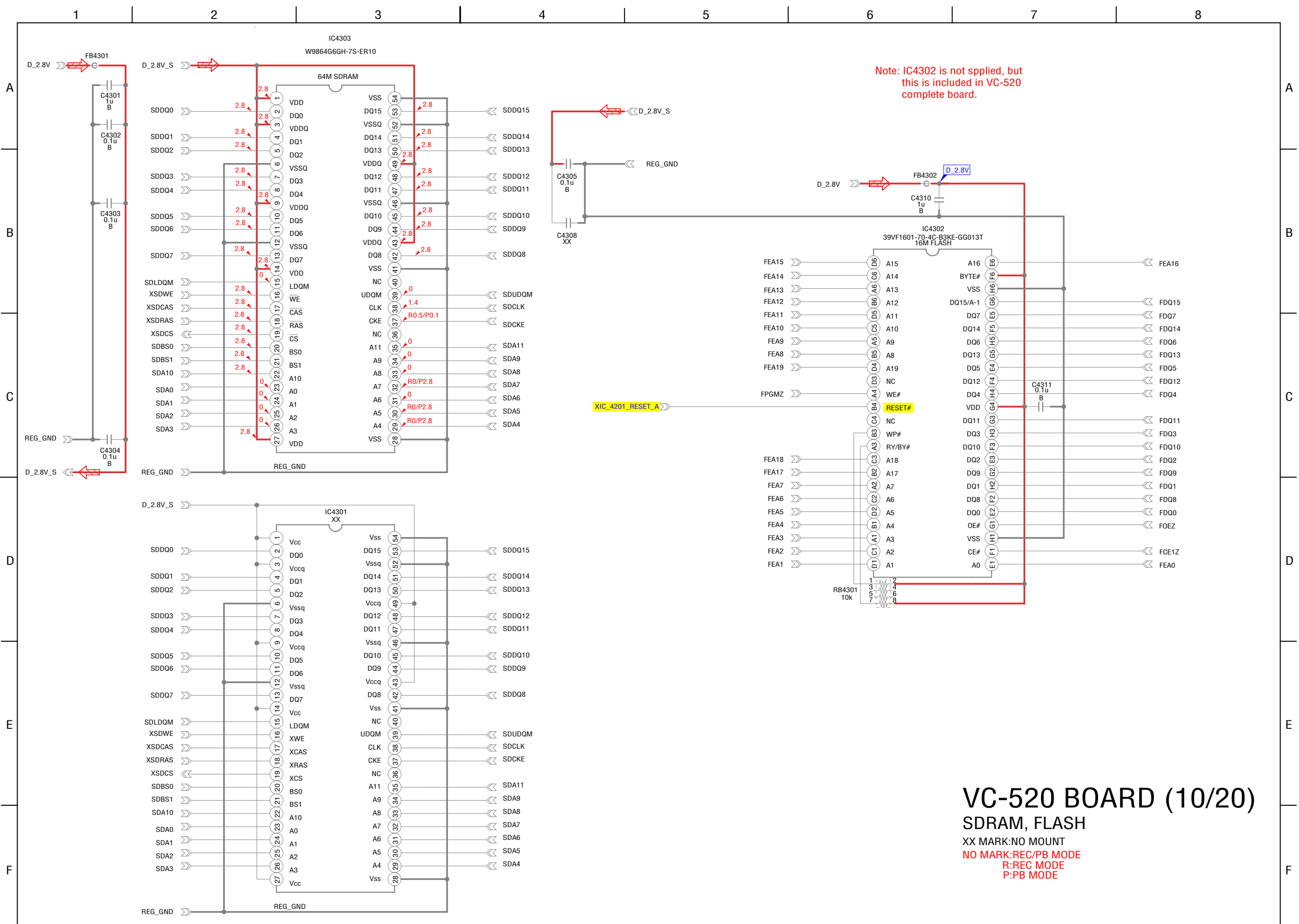


VC-520 BOARD (7/20)
CPU (POWER SUPPLY)
 XX MARK:NO MOUNT

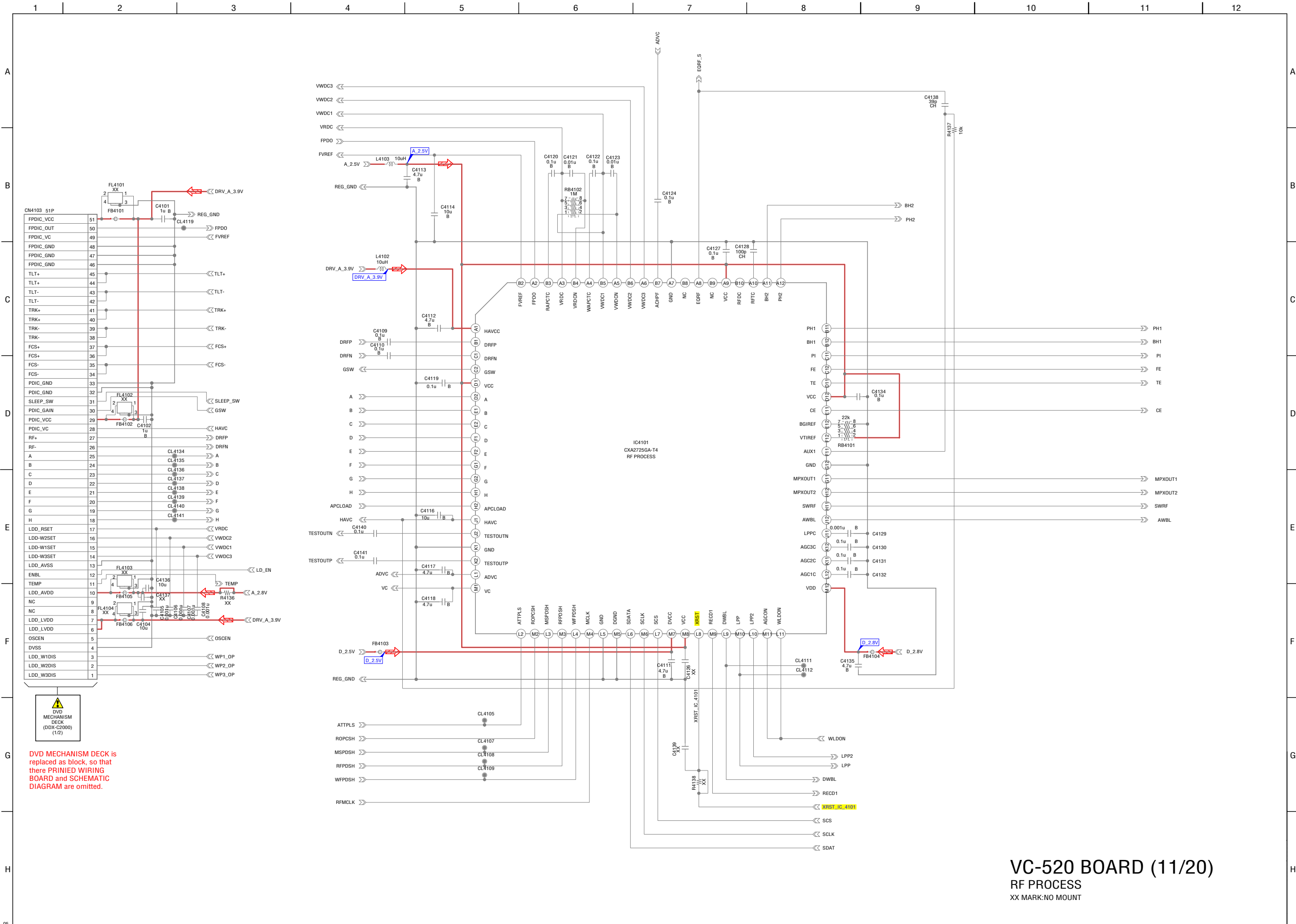




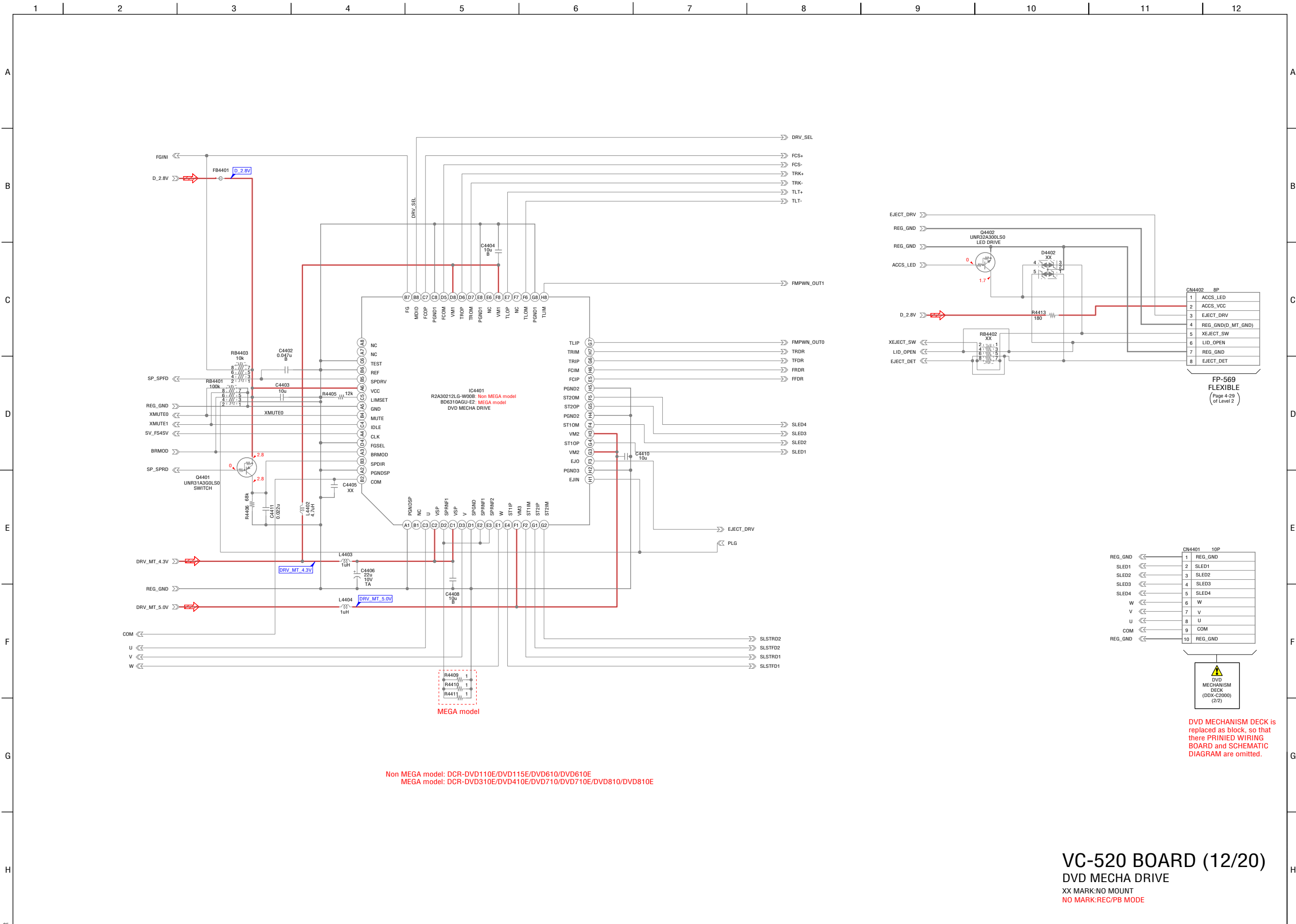
VC-520 BOARD (9/20)
 DVD DSP, DVD DRIVE CONTROL
 XX MARK:NO MOUNT



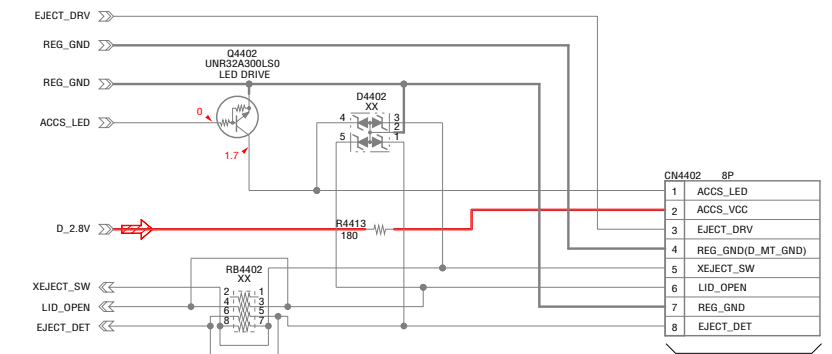
VC-520 BOARD (10/20)
SDRAM, FLASH
 XX MARK:NO MOUNT
 NO MARK:REC/PB MODE
 R:REC MODE
 P:PB MODE



• Refer to page 4-2 (English), 4-3 (Japanese) for mark △.



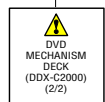
Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVD610E
 MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E



CN4402 8P	
1	ACCS_LED
2	ACCS_VCC
3	EJECT_DRV
4	REG_GND(ID_MT_GND)
5	XEJECT_SW
6	LID_OPEN
7	REG_GND
8	EJECT_DET

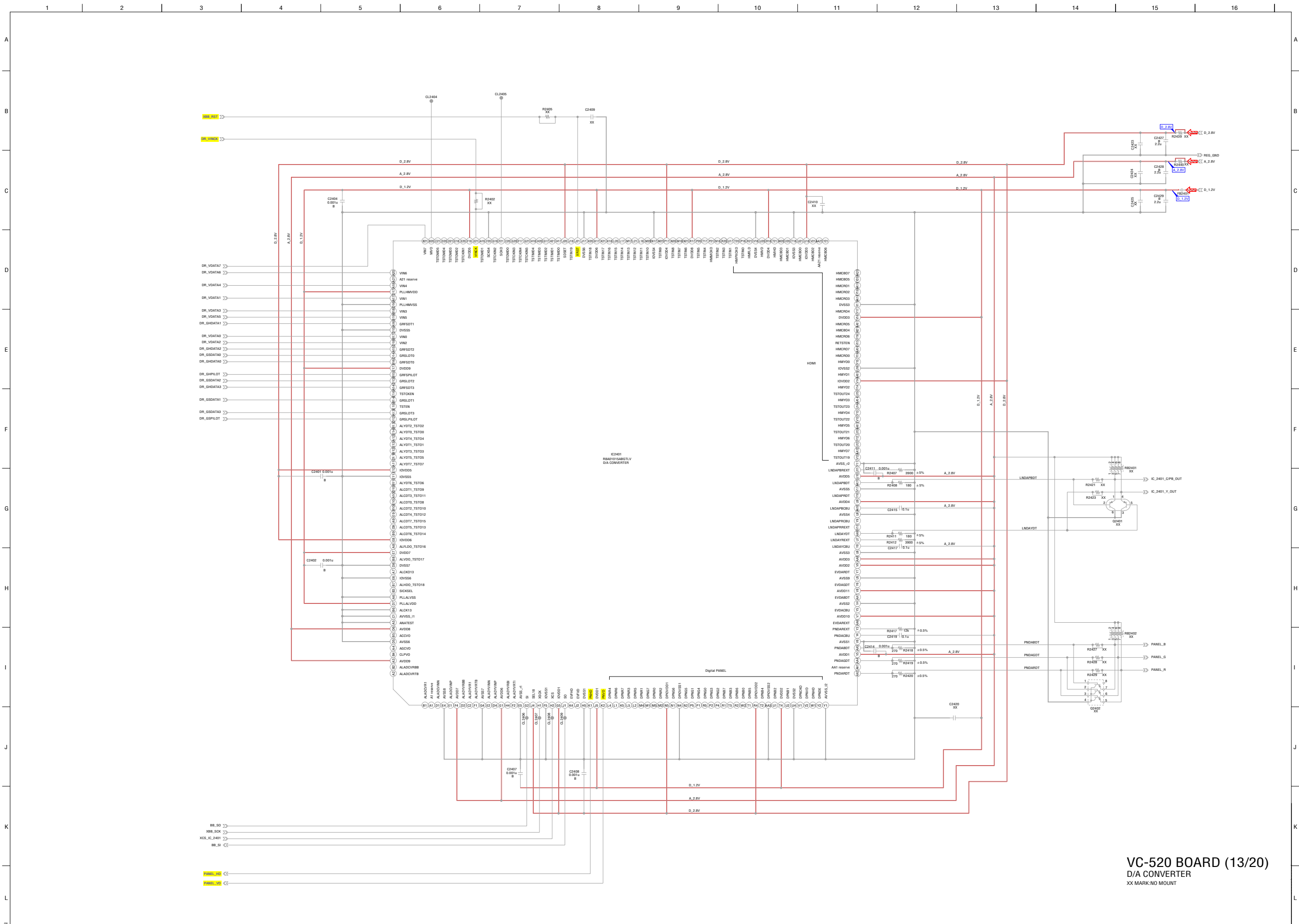
FP-569
 FLEXIBLE
 (Page 4-29)
 (Level 2)

CN4401 10P	
REG_GND	1 REG_GND
SLED1	2 SLED1
SLED2	3 SLED2
SLED3	4 SLED3
SLED4	5 SLED4
W	6 W
V	7 V
U	8 U
COM	9 COM
REG_GND	10 REG_GND

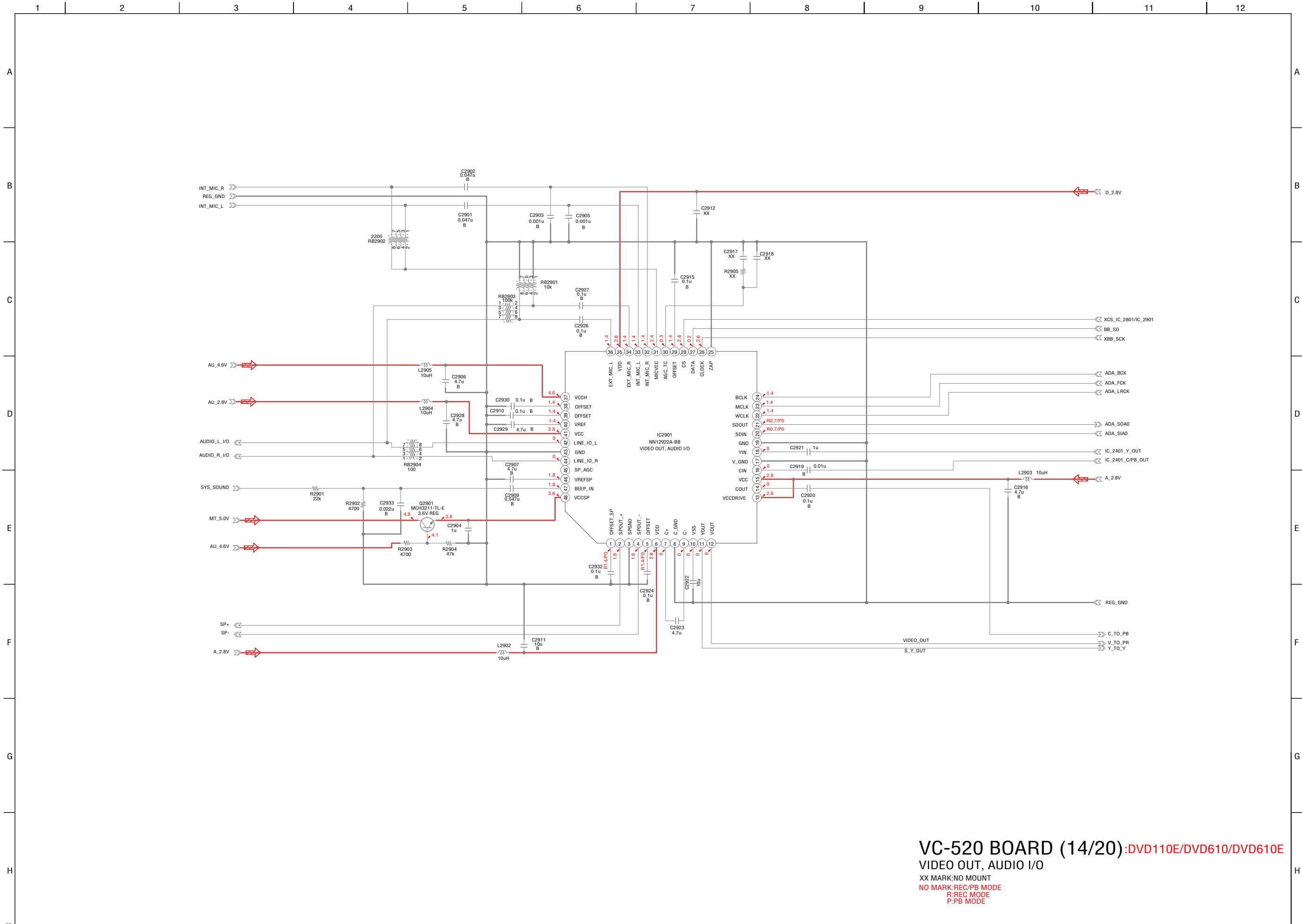


DVD MECHANISM DECK is replaced as block, so that there PRINIED WIRING BOARD and SCHEMATIC DIAGRAM are omitted.

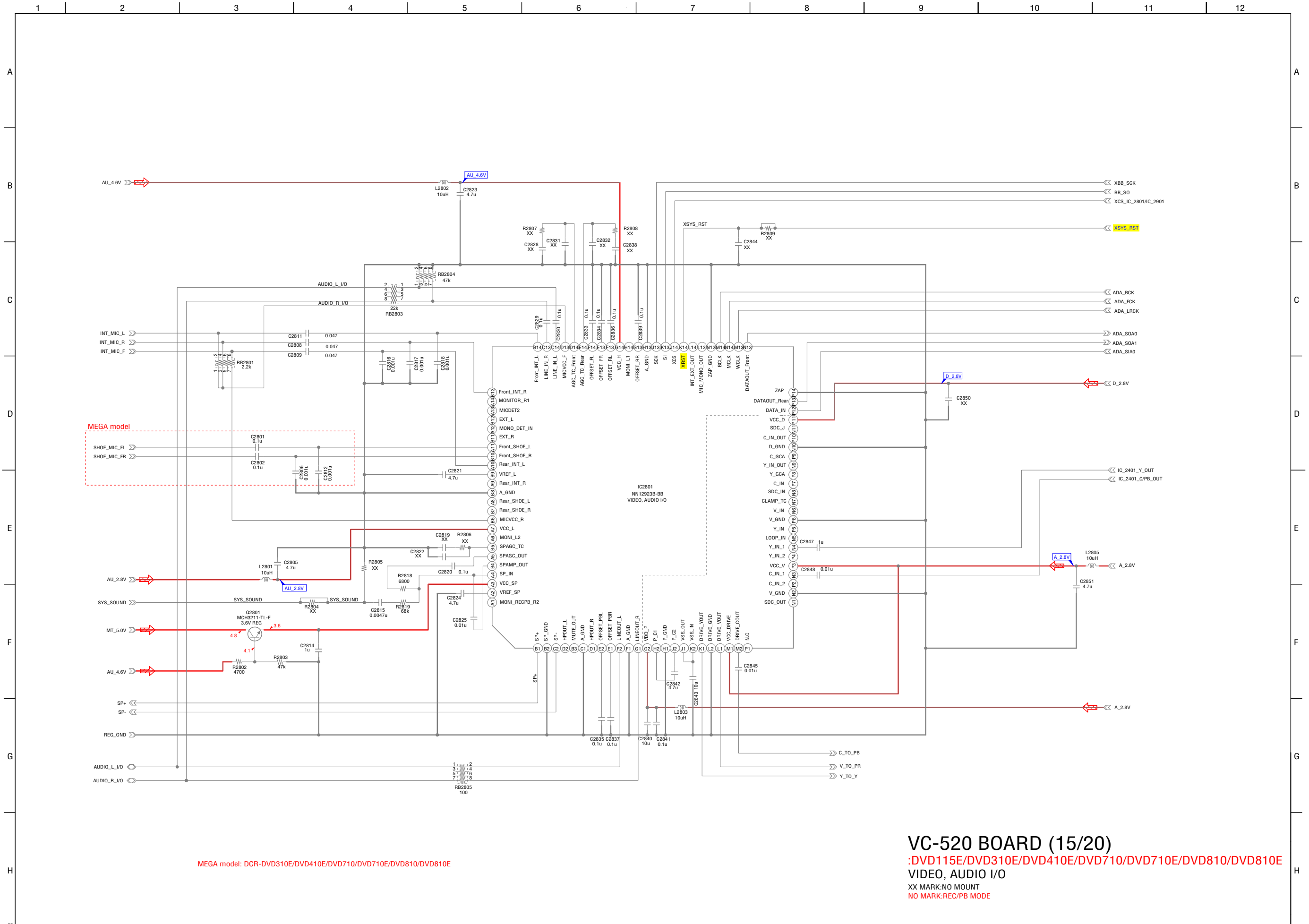
VC-520 BOARD (12/20)
 DVD MECHA DRIVE
 XX MARK:NO MOUNT
 NO MARK:REC/PB MODE



VC-520 BOARD (13/20)
D/A CONVERTER
XX MARK:NO MOUNT



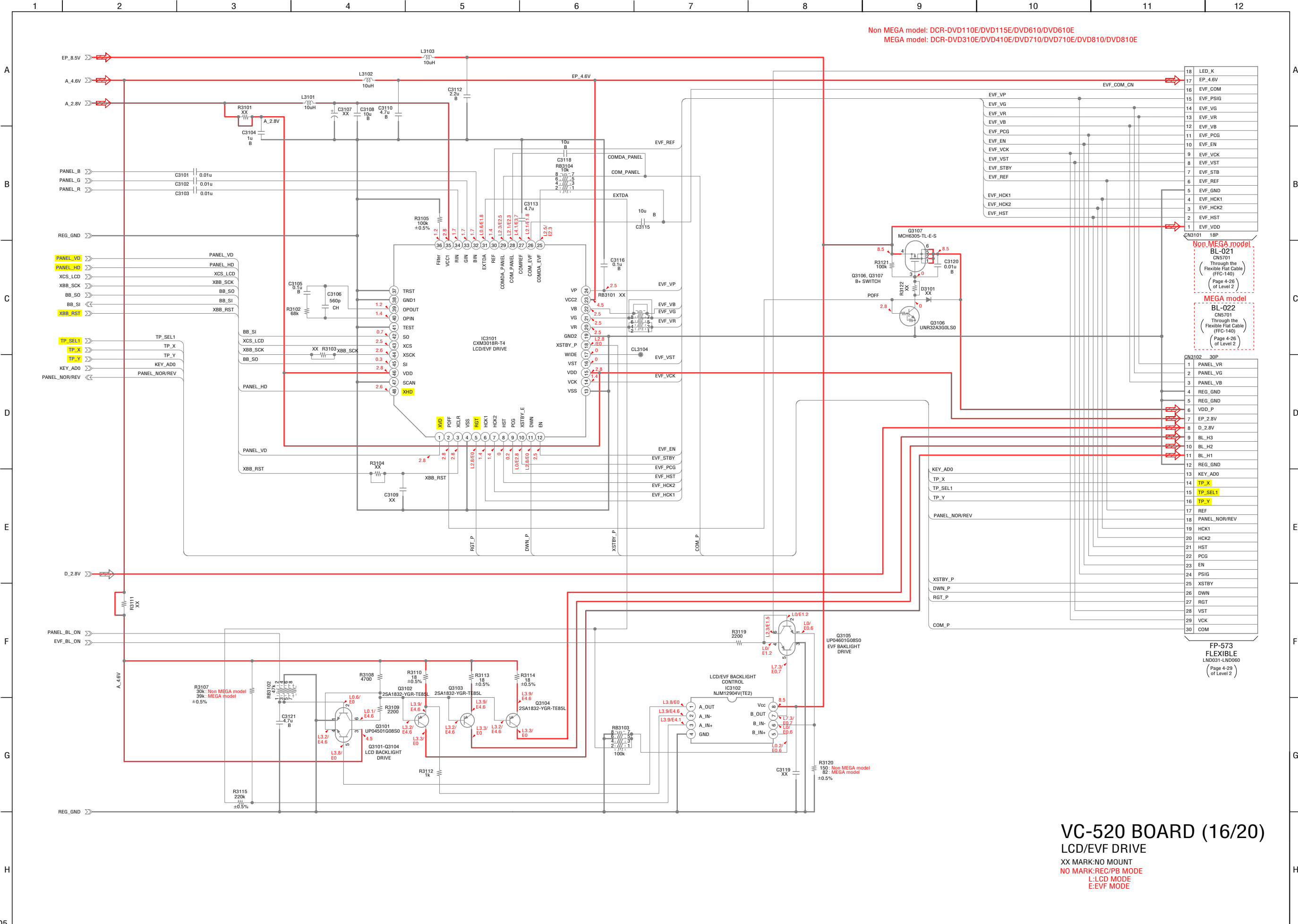
VC-520 BOARD (14/20):DVD110E/DVD610/DVD610E
 VIDEO OUT, AUDIO I/O
 XX MARK:NO MOUNT
 NO MARK:REG/PB MODE
 R:REG MODE
 P:PB MODE



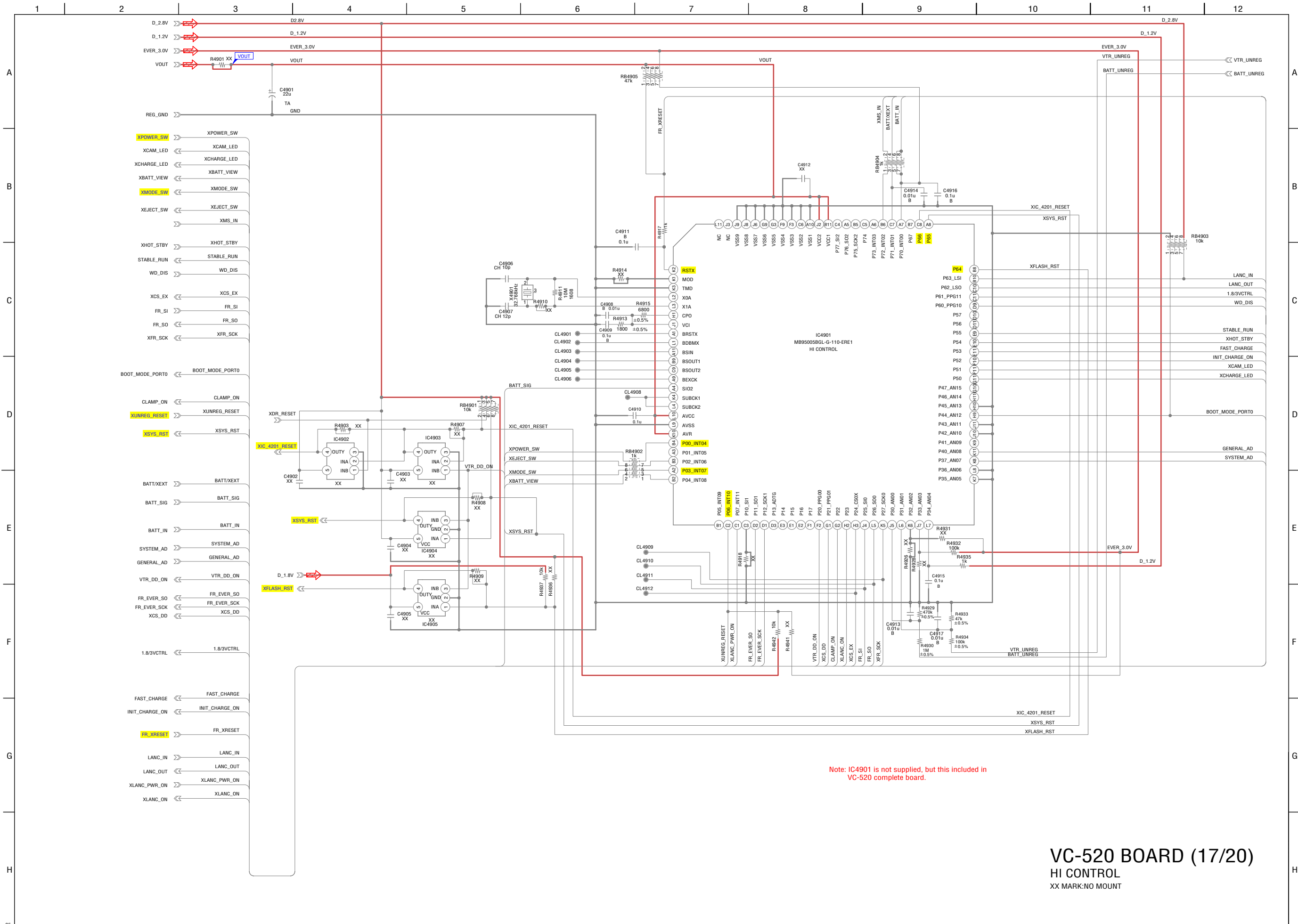
MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E

VC-520 BOARD (15/20)
 :DVD115E/DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E
 VIDEO, AUDIO I/O
 XX MARK:NO MOUNT
 NO MARK:REC/PB MODE

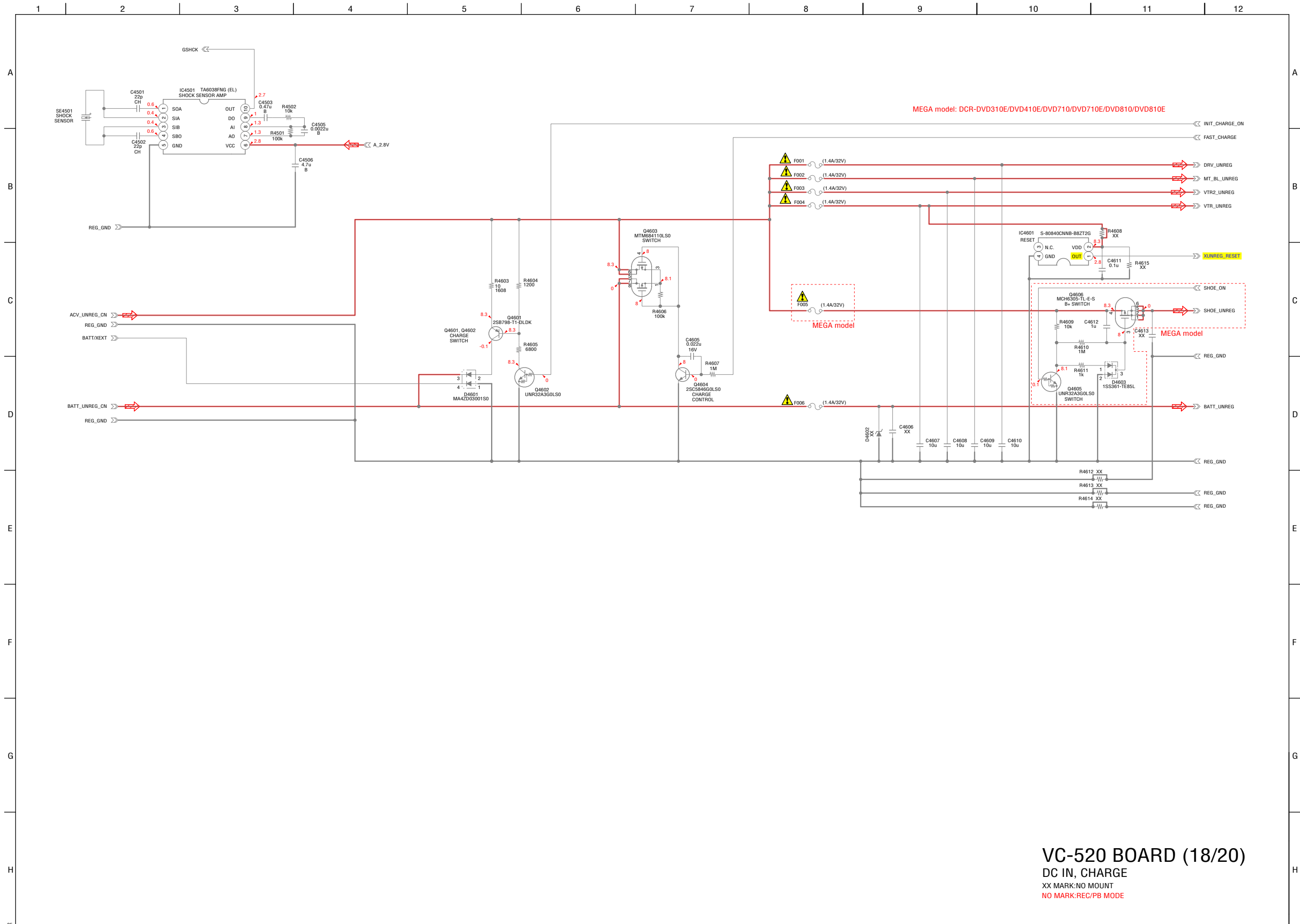
Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVD610E
 MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E



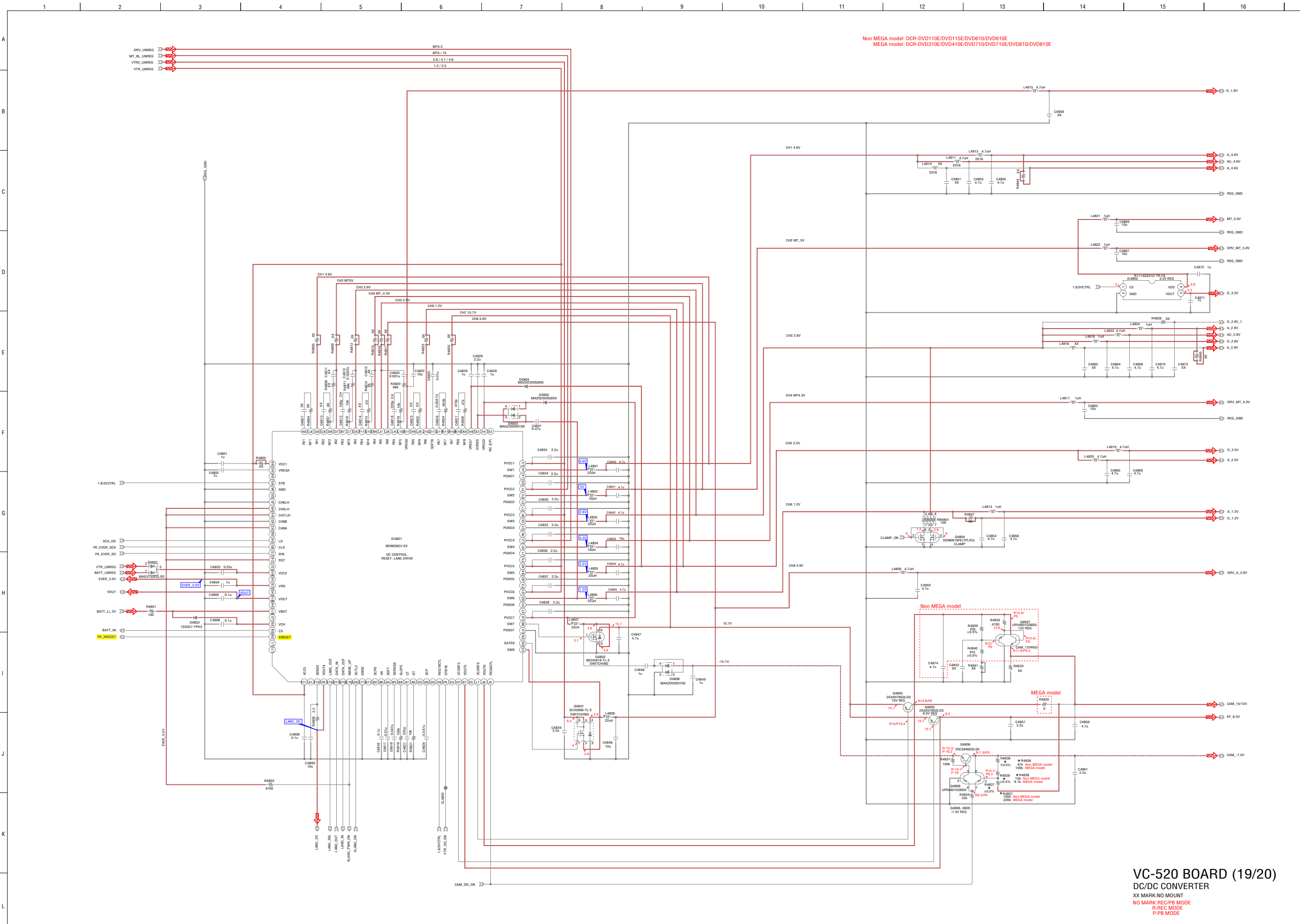
VC-520 BOARD (16/20)
 LCD/EVF DRIVE
 XX MARK:NO MOUNT
 NO MARK:REC/PB MODE
 L:LCD MODE
 E:EVF MODE



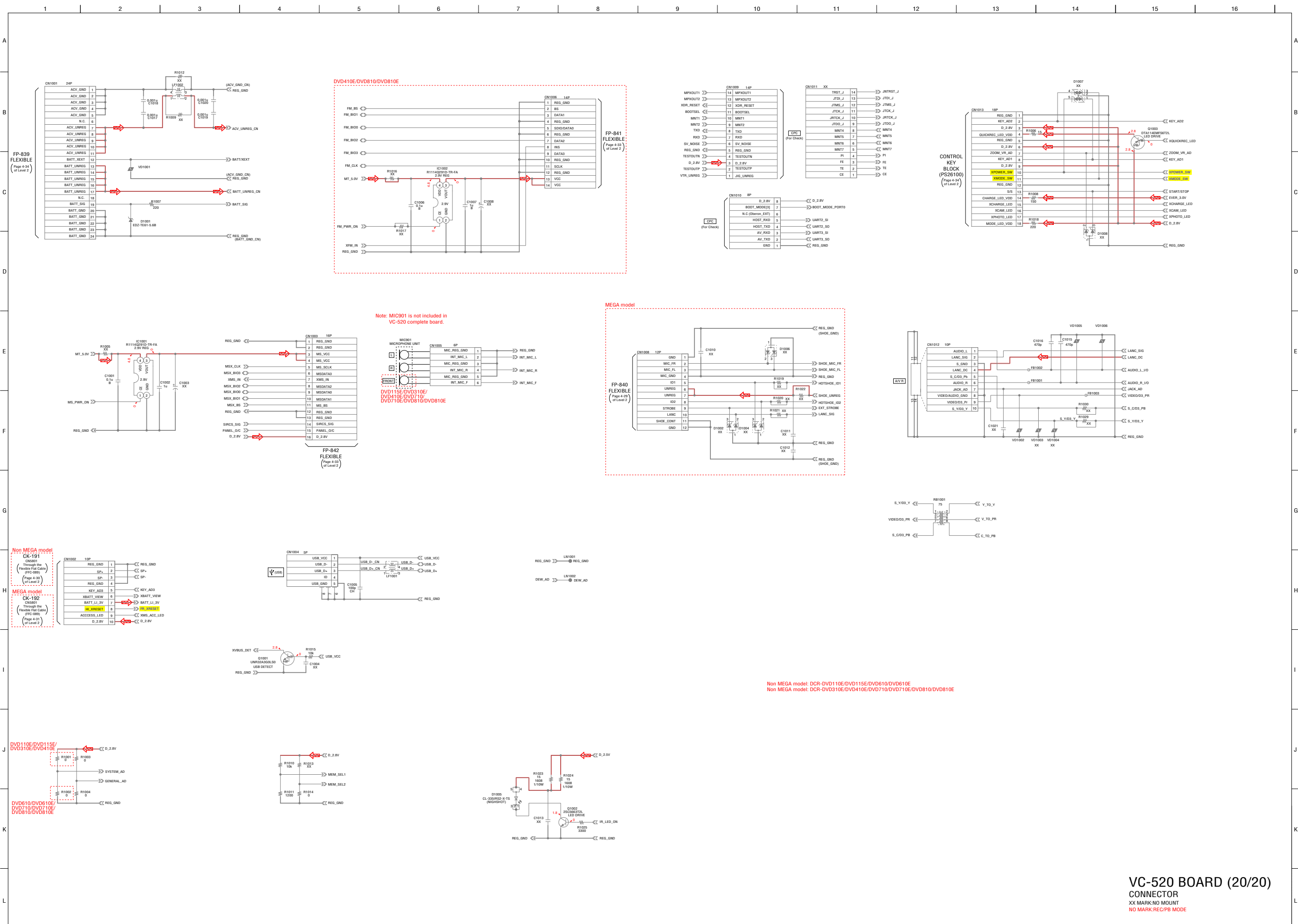
• Refer to page 4-2 (English), 4-3 (Japanese) for mark △.



Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVD610E
MEGA model: DCR-DVD310E/DVD410E/DVD710E/DVD810/DVD810E



VC-520 BOARD (19/20)
DC/DC CONVERTER
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE



VC-520 BOARD (20/20)
 CONNECTOR
 XX-MARK:NO MOUNT
 NO MARK:REC/PB MODE

4-3. PRINTED WIRING BOARDS

Link

• [VC-520 BOARD \(SIDE A\)](#)

• [VC-520 BOARD \(SIDE B\)](#)






• [COMMON NOTE FOR PRINTED WIRING BOARDS](#)

4-3. PRINTED WIRING BOARDS

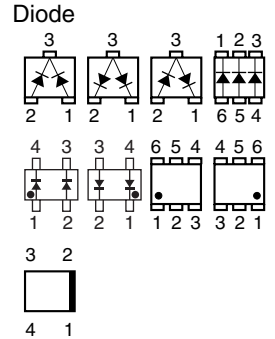
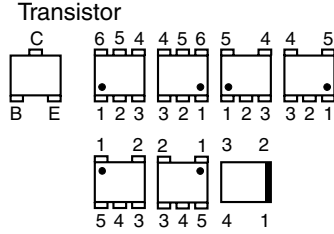
4-3. PRINTED WIRING BOARDS

(ENGLISH)

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS

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






- Chip parts.



(JAPANESE)

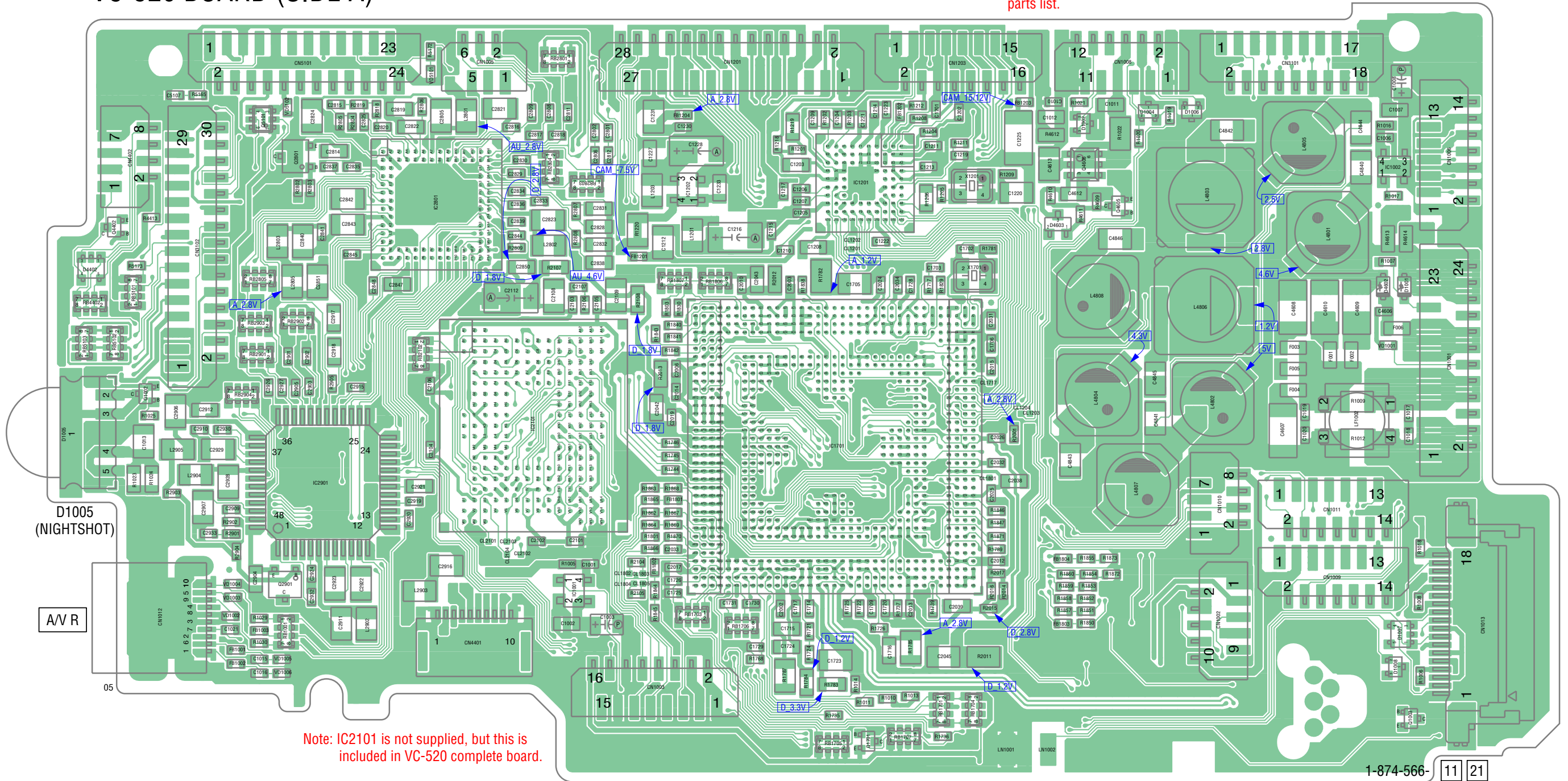
プリント図共通ノート

【プリント図ノート】

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

VC-520 BOARD (SIDE A)

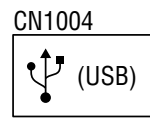
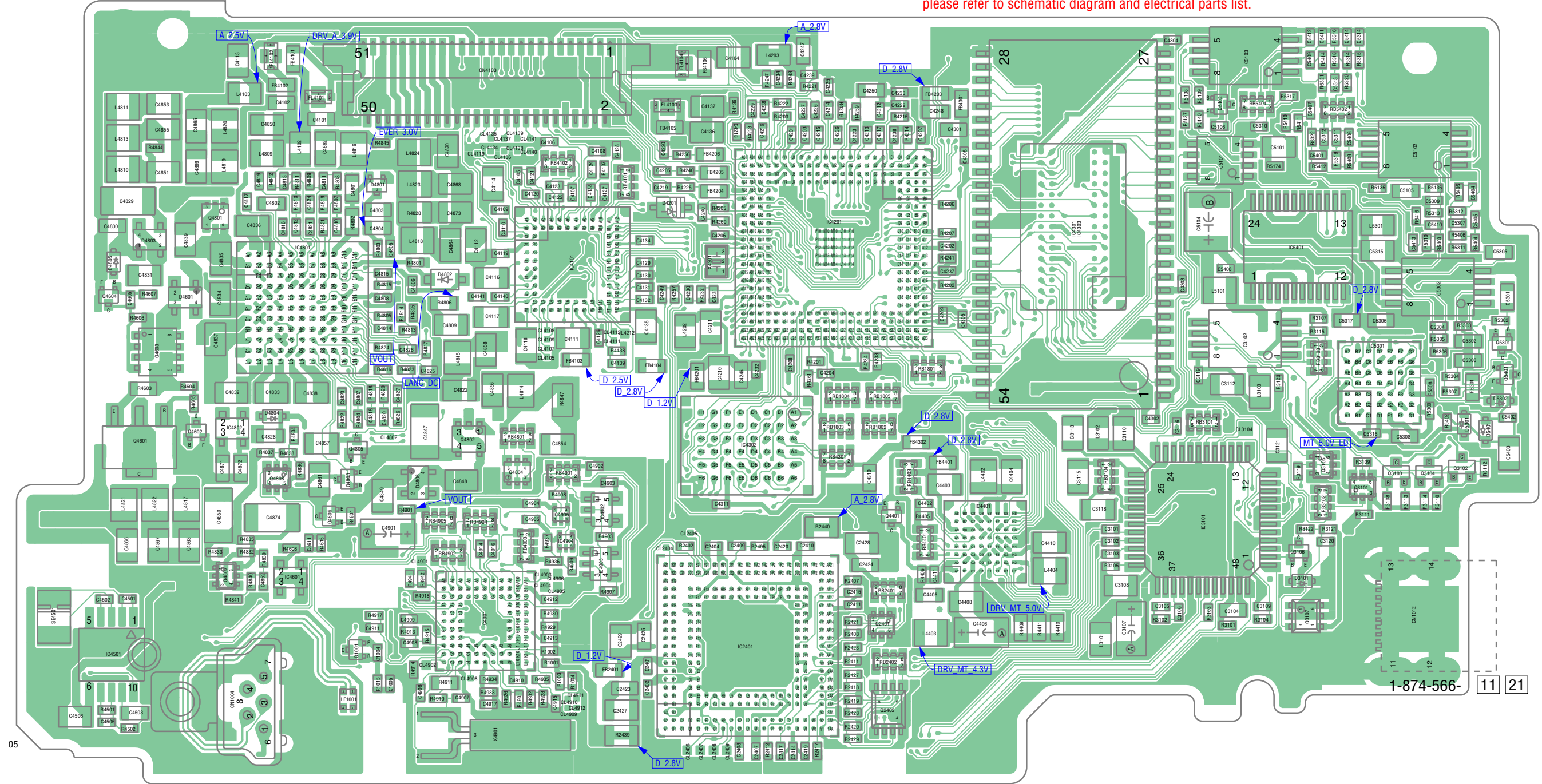
Note: LF1002, R1009 and R1012 have the same mount location.
When you replace, since either LF1002 or R1009 and R1012
are used, please refer to schematic diagram and electrical
parts list.



Note: IC2101 is not supplied, but this is
included in VC-520 complete board.

VC-520 BOARD (SIDE B)

Note: IC4301 and IC4303 have the same mounted location.
When you replace, since either IC4301 or IC4303 are used,
please refer to schematic diagram and electrical parts list.



Note: IC4302 and IC4901 are not supplied, but they are included in VC-520 complete board.

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】

- ここに記載されている部品は、補修用部品であるため、回路図及びセットに付いている部品と異なる場合があります。
- -XX, -Xは標準化部品のため、セットに付いている部品と異なる場合があります。
- *印の部品は常備在庫しておりません。
- コンデンサの単位でuFは μ Fを示します。
- 抵抗の単位 Ω は省略してあります。
 - 金 被：金属被膜抵抗。
 - サンキン：酸化金属被膜抵抗。
- インダクタの単位でuHは μ Hを示します。
- 半導体の名称でuA..., uPA..., uPB..., uPC..., uPD...等はそれぞれ μ A..., μ PA..., μ PB..., μ PC..., μ PD...を示します。

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

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

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

- Color Indication of Appearance Parts
 - Example:
 - (SILVER) : Cabinet's Color
 - (Silver) : Parts Color

— 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。

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

- 外装部品色表示
 - 例：
 - (SILVER):セットの色を表す。
 - (Silver) : 部品の色を表す。

- Abbreviation
 - AR : Argentine model
 - AUS : Australian model
 - BR : Brazilian model
 - CH : Chinese model
 - CND : Canadian model
 - EE : East European model
 - HK : Hong Kong model
 - J : Japanese model
 - JE : Tourist model
 - KR : Korea model
 - NE : North European model

5-2. ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
A-1439-718-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD110E)		C1231	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V
A-1439-719-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD115E)		C1233	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
A-1439-720-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD610/DVD610E)		C1702	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
A-1439-739-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD310E)		C1703	1-164-850-11	CERAMIC CHIP 10PF 0.5PF 50V
A-1439-741-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD710)		C1705	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V
A-1439-742-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD710E)		C1706	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
A-1439-744-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD410E)		C1709	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
A-1439-745-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD810)		C1714	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
A-1439-746-A	VC-520 BOARD, COMPLETE (SERVICE) (DVD810E)		C1715	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
*****			C1716	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
(IC2101, IC4302 and IC4901 are not supplied, but they are included in VC-520 complete board.)			C1717	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
< CAPACITOR >			C1720	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V
C1001	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C1723	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V
C1002	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	C1724	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
C1005	1-164-874-11	CERAMIC CHIP 100PF 5% 50V	C1725	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
C1006	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD410E/DVD810/DVD810E)	C1726	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
C1007	1-165-908-11	CERAMIC CHIP 1uF 10% 10V (DVD410E/DVD810/DVD810E)	C1728	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C1015	1-164-935-11	CERAMIC CHIP 470PF 10% 50V	C1729	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C1016	1-164-935-11	CERAMIC CHIP 470PF 10% 50V	C1730	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
C1017	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V	C1731	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
C1018	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V	C2002	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C1019	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V	C2003	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C1020	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V	C2006	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C1201	1-164-866-11	CERAMIC CHIP 47PF 5% 50V	C2010	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C1202	1-164-866-11	CERAMIC CHIP 47PF 5% 50V	C2012	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C1203	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	C2013	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C1204	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V	C2014	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C1205	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C2015	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C1206	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C2017	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C1207	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C2019	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C1208	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	C2024	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C1209	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C2025	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C1211	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C2026	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C1212	1-112-300-91	CERAMIC CHIP 4.7uF 10% 10V	C2031	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C1213	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V (DVD710/DVD810)	C2032	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C1213	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V (EXCEPT DVD710/DVD810)	C2033	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C1214	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C2034	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C1216	1-119-750-11	TANTAL. CHIP 22uF 20% 6.3V	C2038	1-165-884-11	CERAMIC CHIP 2.2uF 10% 6.3V
C1220	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V	C2039	1-165-884-11	CERAMIC CHIP 2.2uF 10% 6.3V
C1221	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C2042	1-165-884-11	CERAMIC CHIP 2.2uF 10% 6.3V
C1222	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C2043	1-165-884-11	CERAMIC CHIP 2.2uF 10% 6.3V
C1225	1-127-820-11	CERAMIC CHIP 4.7uF 10% 16V	C2045	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V
C1227	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	C2101	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C1228	1-119-750-11	TANTAL. CHIP 22uF 20% 6.3V	C2102	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
			C2103	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
			C2104	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
			C2105	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
			C2106	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
			C2109	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
C2112	1-131-862-91	TANTAL. CHIP 47uF 20% 4V	C2824	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2401	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V	C2825	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2402	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V	C2829	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2404	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V	C2830	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2407	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V	C2833	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2408	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V	C2834	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2411	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V	C2835	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2414	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V	C2836	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2415	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C2837	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2417	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C2839	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2419	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V	C2840	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2427	1-125-889-11	CERAMIC CHIP 2.2uF 10% 10V	C2841	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2428	1-125-889-11	CERAMIC CHIP 2.2uF 10% 10V	C2842	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2429	1-125-889-11	CERAMIC CHIP 2.2uF 10% 10V	C2843	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2801	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	C2845	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2802	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	C2847	1-165-908-11	CERAMIC CHIP 1uF 10% 10V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2805	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)	C2848	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2806	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	C2851	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
C2808	1-119-923-11	CERAMIC CHIP 0.047uF 10% 10V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)	C2901	1-119-923-11	CERAMIC CHIP 0.047uF 10% 10V (DVD110E/DVD610/DVD610E)
C2809	1-119-923-11	CERAMIC CHIP 0.047uF 10% 10V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)	C2902	1-119-923-11	CERAMIC CHIP 0.047uF 10% 10V (DVD110E/DVD610/DVD610E)
C2811	1-119-923-11	CERAMIC CHIP 0.047uF 10% 10V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)	C2903	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V (DVD110E/DVD610/DVD610E)
C2812	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	C2904	1-165-908-11	CERAMIC CHIP 1uF 10% 10V (DVD110E/DVD610/DVD610E)
C2814	1-165-908-11	CERAMIC CHIP 1uF 10% 10V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)	C2905	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V (DVD110E/DVD610/DVD610E)
C2815	1-100-581-81	CERAMIC CHIP 0.0047uF 10% 50V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)			
C2816	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)			
C2817	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)			
C2818	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)			
C2820	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)			
C2821	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)			
C2823	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)			

Ref. No.	Part No.	Description
C2906	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V (DVD110E/DVD610/DVD610E)
C2907	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V (DVD110E/DVD610/DVD610E)
C2909	1-119-923-11	CERAMIC CHIP 0.047uF 10% 10V (DVD110E/DVD610/DVD610E)
C2910	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD110E/DVD610/DVD610E)
C2911	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V (DVD110E/DVD610/DVD610E)
C2915	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD110E/DVD610/DVD610E)
C2916	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V (DVD110E/DVD610/DVD610E)
C2919	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V (DVD110E/DVD610/DVD610E)
C2920	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD110E/DVD610/DVD610E)
C2921	1-165-908-11	CERAMIC CHIP 1uF 10% 10V (DVD110E/DVD610/DVD610E)
C2922	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V (DVD110E/DVD610/DVD610E)
C2923	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V (DVD110E/DVD610/DVD610E)
C2924	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD110E/DVD610/DVD610E)
C2926	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD110E/DVD610/DVD610E)
C2927	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD110E/DVD610/DVD610E)
C2928	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V (DVD110E/DVD610/DVD610E)
C2929	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V (DVD110E/DVD610/DVD610E)
C2930	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD110E/DVD610/DVD610E)
C2932	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD110E/DVD610/DVD610E)
C2933	1-107-819-11	CERAMIC CHIP 0.022uF 10% 16V (DVD110E/DVD610/DVD610E)
C3101	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V
C3102	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V
C3103	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V
C3104	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
C3105	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
* C3106	1-100-741-81	CERAMIC CHIP 560PF 5% 50V
C3108	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C3110	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V
C3112	1-125-889-11	CERAMIC CHIP 2.2uF 10% 10V
C3113	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V
C3115	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C3116	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C3118	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C3120	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V
C3121	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V
C4101	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
C4102	1-165-908-11	CERAMIC CHIP 1uF 10% 10V
C4104	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C4105	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C4106	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C4107	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V

Ref. No.	Part No.	Description
C4108	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C4109	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4110	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4111	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V
C4112	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V
C4113	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V
C4114	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C4116	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C4117	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V
C4118	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V
C4119	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4120	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4121	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V
C4122	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4123	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V
C4124	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4127	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4128	1-164-874-11	CERAMIC CHIP 100PF 5% 50V
C4129	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C4130	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4131	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4132	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4134	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4135	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V
C4136	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C4138	1-164-864-11	CERAMIC CHIP 39PF 5% 50V
C4140	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4141	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4201	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4202	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4203	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4204	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V
C4205	1-164-850-11	CERAMIC CHIP 10PF 0.5PF 50V
C4206	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4207	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4208	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4209	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4210	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C4211	1-165-989-11	CERAMIC CHIP 10uF 10% 6.3V
C4212	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4213	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4214	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4215	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4216	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4217	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4218	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V
C4219	1-164-850-11	CERAMIC CHIP 10PF 0.5PF 50V
C4222	1-164-850-11	CERAMIC CHIP 10PF 0.5PF 50V
C4223	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4225	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4226	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4227	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C4228	1-107-819-11	CERAMIC CHIP 0.022uF 10% 16V
C4229	1-107-819-11	CERAMIC CHIP 0.022uF 10% 16V
C4230	1-107-819-11	CERAMIC CHIP 0.022uF 10% 16V
C4231	1-164-882-11	CERAMIC CHIP 220PF 5% 16V
C4232	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V

Ref. No.	Part No.	Description			
C4236	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4237	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4238	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4240	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C4246	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C4248	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C4249	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C4250	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C4301	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C4302	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4303	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4304	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4305	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4310	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C4311	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4402	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C4403	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C4404	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C4406	1-165-897-11	TANTAL. CHIP	22uF	20%	10V
C4408	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C4410	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C4411	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C4501	1-164-858-11	CERAMIC CHIP	22PF	5%	50V
C4502	1-164-858-11	CERAMIC CHIP	22PF	5%	50V
C4503	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C4505	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C4506	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4605	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C4607	1-165-875-11	CERAMIC CHIP	10uF	10%	10V
C4608	1-165-875-11	CERAMIC CHIP	10uF	10%	10V
C4609	1-165-875-11	CERAMIC CHIP	10uF	10%	10V
C4610	1-165-875-11	CERAMIC CHIP	10uF	10%	10V
C4611	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4612	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
		(DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)			
C4801	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C4802	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C4803	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C4804	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C4805	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4806	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4808	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4809	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C4812	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C4813	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C4816	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4817	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C4818	1-164-882-11	CERAMIC CHIP	220PF	5%	16V
C4819	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C4820	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C4821	1-164-933-11	CERAMIC CHIP	220PF	10%	50V
C4822	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C4824	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C4825	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C4826	1-100-581-81	CERAMIC CHIP	0.0047uF	10%	50V
C4827	1-164-935-11	CERAMIC CHIP	470PF	10%	50V
C4828	1-165-908-11	CERAMIC CHIP	1uF	10%	10V

Ref. No.	Part No.	Description			
C4829	1-127-861-11	CERAMIC CHIP	2.2uF	10%	16V
C4830	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C4831	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C4832	1-125-889-11	CERAMIC CHIP	2.2uF	10%	10V
C4833	1-125-889-11	CERAMIC CHIP	2.2uF	10%	10V
C4834	1-125-889-11	CERAMIC CHIP	2.2uF	10%	10V
C4835	1-125-889-11	CERAMIC CHIP	2.2uF	10%	10V
C4836	1-125-889-11	CERAMIC CHIP	2.2uF	10%	10V
C4837	1-125-889-11	CERAMIC CHIP	2.2uF	10%	10V
C4838	1-125-889-11	CERAMIC CHIP	2.2uF	10%	10V
C4839	1-125-889-11	CERAMIC CHIP	2.2uF	10%	10V
C4840	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4841	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4842	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4843	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C4844	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4845	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4846	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C4847	1-127-820-11	CERAMIC CHIP	4.7uF	10%	16V
C4848	1-100-591-91	CERAMIC CHIP	1uF	10%	25V
C4849	1-100-591-91	CERAMIC CHIP	1uF	10%	25V
C4850	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4853	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4854	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4855	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4856	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4857	1-125-889-11	CERAMIC CHIP	2.2uF	10%	10V
C4859	1-127-820-11	CERAMIC CHIP	4.7uF	10%	16V
C4861	1-125-889-11	CERAMIC CHIP	2.2uF	10%	10V
C4863	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C4864	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4865	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4866	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C4867	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C4868	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4869	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4870	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4871	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C4872	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C4874	1-127-820-11	CERAMIC CHIP	4.7uF	10%	16V
		(DVD110E/DVD115E/DVD610/DVD610E)			
C4901	1-119-750-11	TANTAL. CHIP	22uF	20%	6.3V
C4906	1-164-850-11	CERAMIC CHIP	10PF	0.5PF	50V
C4907	1-164-852-11	CERAMIC CHIP	12PF	5%	50V
C4908	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C4909	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4910	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4911	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4913	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C4914	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C4915	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4916	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4917	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C5101	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C5104	1-113-682-11	TANTAL. CHIP	33uF	20%	10V
C5105	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
C5106	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	CN1006	1-815-762-51	CONNECTOR, FFC/FPC 14P (DVD410E/DVD810/DVD810E)
C5301	1-127-715-11	CERAMIC CHIP 0.22uF 10% 16V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	CN1008	1-779-330-51	FFC/CONNECTOR, FPC (LIF (NON-ZIF)) 12P (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
C5302	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	CN1009	1-815-762-51	CONNECTOR, FFC/FPC 14P
C5303	1-165-908-11	CERAMIC CHIP 1uF 10% 10V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	CN1010	1-779-328-51	FFC/CONNECTOR, FPC (LIF (NON-ZIF)) 8P
C5304	1-164-940-11	CERAMIC CHIP 0.0033uF 10% 16V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	CN1012	1-815-794-13	CONNECTOR (MULTIPLE) (A/V R)
C5305	1-164-677-11	CERAMIC CHIP 0.033uF 10% 16V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	* CN1013	1-821-546-61	CONNECTOR, FFC/FPC (ZIF) 18P
C5306	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	CN1201	1-779-338-51	FFC/CONNECTOR, FPC (LIF (NON-ZIF)) 28P (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
C5307	1-127-772-81	CERAMIC CHIP 0.033uF 10% 10V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	CN1203	1-779-332-51	FFC/CONNECTOR, FPC (LIF (NON-ZIF)) 16P (DVD110E/DVD115E/DVD610/DVD610E)
C5308	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	* CN3101	1-779-333-51	CONNECTOR, FFC/FPC 18P
C5309	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	CN3102	1-779-339-51	FFC/CONNECTOR, FPC (LIF (NON-ZFF)) 30P
C5311	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	* CN4103	1-819-860-51	CONNECTOR, FPC (ZIF) 51P
C5313	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	* CN4401	1-816-643-51	FFC/CONNECTOR, FPC (LIF) 10P
C5314	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	CN4402	1-779-328-51	FFC/CONNECTOR, FPC (LIF (NON-ZIF)) 8P
C5315	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V	* CN5101	1-815-763-51	CONNECTOR, FFC/FPC 24P
C5402	1-100-581-81	CERAMIC CHIP 0.0047uF 10% 50V (DVD110E/DVD115E/DVD610/DVD610E)	< DIODE >		
C5403	1-127-760-11	CERAMIC CHIP 4.7uF 10% 6.3V (DVD110E/DVD115E/DVD610/DVD610E)	D1001	8-719-074-67	DIODE EDZ-TE61-5.6B
C5404	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD110E/DVD115E/DVD610/DVD610E)	* D1005	6-501-598-01	DIODE CL-335IRS-X-TS (NIGHTSHOT)
C5405	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V (DVD110E/DVD115E/DVD610/DVD610E)	D4601	8-719-074-08	DIODE MA4ZD03001S0
C5406	1-164-935-11	CERAMIC CHIP 470PF 10% 50V (DVD110E/DVD115E/DVD610/DVD610E)	D4603	8-719-421-67	DIODE MA132WK (DVD310E/DVD410E/ DVD710/DVD710E/DVD810/DVD810E)
C5407	1-119-923-11	CERAMIC CHIP 0.047uF 10% 10V (DVD110E/DVD115E/DVD610/DVD610E)	* D4801	6-501-928-01	DIODE MAS3132EGLS0
C5409	1-164-937-11	CERAMIC CHIP 0.001uF 10% 50V (DVD110E/DVD115E/DVD610/DVD610E)	D4802	8-719-027-76	DIODE 1SS357-TPH3
C5410	1-100-567-81	CERAMIC CHIP 0.01uF 10% 25V (DVD110E/DVD115E/DVD610/DVD610E)	D4803	8-719-074-08	DIODE MA4ZD03001S0
C5413	1-164-939-11	CERAMIC CHIP 0.0022uF 10% 50V (DVD110E/DVD115E/DVD610/DVD610E)	D4804	6-500-813-01	DIODE MA2SD32008S0
< CONNECTOR >			D4805	6-500-813-01	DIODE MA2SD32008S0
* CN1001	1-815-763-51	CONNECTOR, FFC/FPC 24P	D4806	8-719-074-08	DIODE MA4ZD03001S0
* CN1002	1-779-329-51	FFC/CONNECTOR, FPC (LIF (NON-ZIF)) 10P	* D5301	6-501-947-01	DIODE MA2S1110G8S0 (DVD310E/DVD410E/ DVD710/DVD710E/DVD810/DVD810E)
* CN1003	1-779-332-51	FFC/CONNECTOR, FPC (LIF (NON-ZIF)) 16P	* D5302	6-501-947-01	DIODE MA2S1110G8S0 (DVD310E/DVD410E/ DVD710/DVD710E/DVD810/DVD810E)
* CN1004	1-821-723-11	CONNECTOR, SQUARE TYPE (USB) 5P (USB)	* D5401	6-501-947-01	DIODE MA2S1110G8S0 (DVD110E/DVD115E/DVD610/DVD610E)
* CN1005	1-779-327-51	FFC/CONNECTOR, FPC (LIF (NON-ZIF)) 6P	< FUSE >		
			△ F001	1-576-406-21	FUSE, MICRO (1608) (1.4A/32V)
			△ F002	1-576-406-21	FUSE, MICRO (1608) (1.4A/32V)
			△ F003	1-576-406-21	FUSE, MICRO (1608) (1.4A/32V)
			△ F004	1-576-406-21	FUSE, MICRO (1608) (1.4A/32V)
			△ F005	1-576-406-21	FUSE, MICRO (1608) (1.4A/32V) (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
			△ F006	1-576-406-21	FUSE, MICRO (1608) (1.4A/32V)
			< FERRITE BEAD >		
			FB1001	1-400-927-31	BEAD, FERRITE (1005)
			FB1002	1-400-927-31	BEAD, FERRITE (1005)
			FB1003	1-400-833-21	SMD EMI FERRITE
			FB1201	1-400-331-11	FERRITE, EMI (SMD) (1005)
			FB1202	1-400-723-11	INDUCTOR, FERRITE BEAD (1005)
			FB1203	1-400-331-11	FERRITE, EMI (SMD) (1005)
			FB1204	1-400-331-11	FERRITE, EMI (SMD) (1005)
			FB1801	1-469-580-21	INDUCTOR, FERRITE BEAD (1005)

• Refer to page 5-1 for mark △.

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The changed portions from Ver. 1.0 are shown in blue.

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Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
FB1802	1-469-580-21	INDUCTOR, FERRITE BEAD (1005)	IC5302	8-759-693-13	IC NJM12904V (TE2) (DVD310E/DVD410E/ DVD710/DVD710E/DVD810/DVD810E)
FB1803	1-469-580-21	INDUCTOR, FERRITE BEAD (1005) (DVD410E/DVD810/DVD810E)	IC5401	8-759-637-96	IC uPD16877MA-6A5-E2 (DVD110E/DVD115E/DVD610/DVD610E)
FB1804	1-469-580-21	INDUCTOR, FERRITE BEAD (1005) (DVD410E/DVD810/DVD810E)	< COIL >		
FB2401	1-400-619-11	BEAD, FERRITE (CHIP) (1608)	L1201	1-400-588-11	INDUCTOR 10uH
FB4101	1-400-619-11	BEAD, FERRITE (CHIP) (1608)	L2801	1-400-588-11	INDUCTOR 10uH (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
FB4102	1-400-619-11	BEAD, FERRITE (CHIP) (1608)	L2802	1-400-588-11	INDUCTOR 10uH (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
FB4103	1-400-619-11	BEAD, FERRITE (CHIP) (1608)	L2803	1-400-588-11	INDUCTOR 10uH (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
FB4104	1-400-619-11	BEAD, FERRITE (CHIP) (1608)	L2805	1-400-588-11	INDUCTOR 10uH (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
FB4105	1-400-619-11	BEAD, FERRITE (CHIP) (1608)	L2902	1-400-588-11	INDUCTOR 10uH (DVD110E/DVD610/DVD610E)
FB4106	1-414-864-11	FERRITE, EMI (SMD) (1608)	L2903	1-400-588-11	INDUCTOR 10uH (DVD110E/DVD610/DVD610E)
FB4201	1-400-619-11	BEAD, FERRITE (CHIP) (1608)	L2904	1-400-588-11	INDUCTOR 10uH (DVD110E/DVD610/DVD610E)
FB4203	1-400-619-11	BEAD, FERRITE (CHIP) (1608)	L2905	1-400-588-11	INDUCTOR 10uH (DVD110E/DVD610/DVD610E)
FB4204	1-414-864-11	FERRITE, EMI (SMD) (1608)	L3101	1-400-588-11	INDUCTOR 10uH
FB4205	1-469-109-21	FERRITE, EMI (SMD) (1608)	L3102	1-400-588-11	INDUCTOR 10uH
FB4206	1-469-109-21	FERRITE, EMI (SMD) (1608)	L3103	1-400-588-11	INDUCTOR 10uH
FB4301	1-400-619-11	BEAD, FERRITE (CHIP) (1608)	L4102	1-400-588-11	INDUCTOR 10uH
FB4302	1-400-619-11	BEAD, FERRITE (CHIP) (1608)	L4103	1-400-588-11	INDUCTOR 10uH
FB4401	1-400-619-11	BEAD, FERRITE (CHIP) (1608)	L4202	1-400-588-11	INDUCTOR 10uH
< IC >			L4402	1-469-553-21	INDUCTOR 4.7uH
* IC1001	6-708-445-01	IC R1114Q291D-TR-FA	L4403	1-469-549-21	INDUCTOR 1uH
* IC1002	6-708-445-01	IC R1114Q291D-TR-FA (DVD410E/DVD810/DVD810E)	L4404	1-469-549-21	INDUCTOR 1uH
* IC1201	6-711-079-01	IC R2J45015AHBGW0	L4801	1-456-137-11	INDUCTOR 22uH
* IC1202	6-708-445-01	IC R1114Q291D-TR-FA (DVD110E/DVD115E/DVD610/DVD610E)	L4802	1-457-049-21	INDUCTOR 10uH
* IC1202	6-708-447-01	IC R1114Q341D-TR-FA (DVD310E/DVD410E/ DVD710/DVD710E/DVD810/DVD810E)	L4803	1-416-669-11	INDUCTOR 22uH
* IC1701	8-753-300-16	IC CXD4218GG-TL	L4804	1-457-049-21	INDUCTOR 10uH
IC2101	(Not supplied)	IC K5R1213ACB-AK75T	L4805	1-456-137-11	INDUCTOR 22uH
* IC2401	6-709-936-01	IC R8A01015ABGTLV	L4806	1-416-669-11	INDUCTOR 22uH
* IC2801	6-710-768-01	IC NN12923B-BB (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)	L4807	1-456-138-11	INDUCTOR 33uH
* IC2901	6-710-463-01	IC NN12922A-BB (DVD110E/DVD610/DVD610E)	L4808	1-456-137-11	INDUCTOR 22uH
* IC3101	8-753-242-24	IC CXM3018R-T4	L4809	1-469-553-21	INDUCTOR 4.7uH
IC3102	8-759-693-13	IC NJM12904V (TE2)	L4811	1-469-553-21	INDUCTOR 4.7uH
* IC4101	8-753-235-82	IC CXA2725GA-T4	L4813	1-469-553-21	INDUCTOR 4.7uH
* IC4201	8-753-274-88	IC CXD5052GG-T6	L4814	1-469-549-21	INDUCTOR 1uH
IC4302	(Not supplied)	IC 39VF1601-70-4C-B3KE-GG013T	L4815	1-469-553-21	INDUCTOR 4.7uH
* IC4303	6-710-459-01	IC W9864G6GH-7S-ER10	L4817	1-469-549-21	INDUCTOR 1uH
* IC4401	6-710-787-01	IC R2A30212LG-W00B (DVD110E/DVD115E/DVD610/DVD610E)	L4818	1-469-549-21	INDUCTOR 1uH
* IC4401	6-709-970-01	IC BD6310GU-E2 (DVD310E/DVD410E/ DVD710/DVD710E/DVD810/DVD810E)	L4819	1-469-553-21	INDUCTOR 4.7uH
IC4501	6-707-601-01	IC TA6038FNG (EL)	L4820	1-469-553-21	INDUCTOR 4.7uH
IC4601	6-702-519-01	IC S-80840CNNB-B8ZT2G	L4821	1-469-549-21	INDUCTOR 1uH
* IC4801	6-710-736-01	IC BD9838GV-E2	L4822	1-469-549-21	INDUCTOR 1uH
IC4802	6-703-977-01	IC R1114Q331D-TR-FA	L4823	1-469-553-21	INDUCTOR 4.7uH
IC4901	(Not supplied)	IC MB95005BGL-G-110-ERE1	L4824	1-469-549-21	INDUCTOR 1uH
IC5101	6-706-663-01	IC NJW5210RB1	L5101	1-469-553-21	INDUCTOR 4.7uH
IC5102	8-759-693-13	IC NJM12904V (TE2)	L5301	1-400-588-11	INDUCTOR 10uH
IC5103	8-759-693-13	IC NJM12904V (TE2)			
* IC5301	6-708-988-01	IC LV8053LG-TLM-E (DVD310E/DVD410E/ DVD710/DVD710E/DVD810/DVD810E)			

Ref. No.	Part No.	Description
< LINE FILTER >		
LF1001	1-457-223-11	COMMON MODE CHOKE COIL
* LF1002	1-457-217-21	COMMON MODE CHOKE COIL
< TRANSISTOR >		
* Q1001	6-551-766-01	TRANSISTOR UNR32A3G0LS0
Q1002	6-550-102-01	TRANSISTOR 2SC5663T2L
Q1003	6-550-238-01	TRANSISTOR DTA114EMFS6T2L
* Q1701	6-551-771-01	TRANSISTOR UNR31AFG0LS0
Q2801	8-729-056-75	TRANSISTOR MCH3211-TL-E (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
Q2901	8-729-056-75	TRANSISTOR MCH3211-TL-E (DVD110E/DVD610/DVD610E)
* Q3101	6-551-847-01	TRANSISTOR UP04501G08S0
Q3102	8-729-425-50	TRANSISTOR 2SB1462-Q
Q3103	8-729-425-50	TRANSISTOR 2SB1462-Q
Q3104	8-729-425-50	TRANSISTOR 2SB1462-Q
Q3105	8-729-054-48	TRANSISTOR UP04601008S0
* Q3106	6-551-766-01	TRANSISTOR UNR32A3G0LS0
Q3107	6-551-184-01	TRANSISTOR MCH6305-TL-E-S
* Q4401	6-551-760-01	TRANSISTOR UNR31A3G0LS0
* Q4402	6-551-766-01	TRANSISTOR UNR32A3G0LS0
Q4601	8-729-101-07	TRANSISTOR 2SB798-DL
* Q4602	6-551-766-01	TRANSISTOR UNR32A3G0LS0
Q4603	6-551-442-01	TRANSISTOR TPCP8301 (T5RSONYF)
* Q4604	6-551-758-01	TRANSISTOR 2SC5846G0LS0
* Q4605	6-551-766-01	TRANSISTOR UNR32A3G0LS0 (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
Q4606	6-551-184-01	TRANSISTOR MCH6305-TL-E-S (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
Q4801	6-550-813-01	TRANSISTOR SCH2806-TL-E
Q4802	6-550-533-01	TRANSISTOR MCH5819-TL-E
* Q4803	6-551-836-01	TRANSISTOR 2SA2078G0LS0
Q4804	6-550-180-01	TRANSISTOR SSM6N16FE (TPLR3)
* Q4805	6-551-836-01	TRANSISTOR 2SA2078G0LS0
* Q4806	6-551-758-01	TRANSISTOR 2SC5846G0LS0
Q4807	8-729-054-48	TRANSISTOR UP04601008S0 (DVD110E/DVD115E/DVD610/DVD610E)
* Q4808	6-551-846-01	TRANSISTOR UP04401G08S0
* Q5101	6-551-850-01	TRANSISTOR UP04116G08S0
* Q5102	6-551-758-01	TRANSISTOR 2SC5846G0LS0
* Q5301	6-551-758-01	TRANSISTOR 2SC5846G0LS0 (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
Q5401	6-550-758-01	TRANSISTOR DTC113TMFS6T2L (DVD110E/DVD115E/DVD610/DVD610E)
< RESISTOR >		
R1001	1-218-990-81	SHORT CHIP 0 (DVD110E/DVD115E/DVD310E/DVD410E)
R1002	1-218-990-81	SHORT CHIP 0 (DVD610/DVD610E/ DVD710/DVD710E/DVD810/DVD810E)
R1004	1-218-990-81	SHORT CHIP 0
R1006	1-218-931-11	RES-CHIP 15 5% 1/16W
R1007	1-218-945-11	RES-CHIP 220 5% 1/16W

Ref. No.	Part No.	Description			
R1008	1-218-943-11	RES-CHIP	150	5%	1/16W
R1010	1-218-965-11	RES-CHIP	10K	5%	1/16W
R1011	1-218-954-11	RES-CHIP	1.2K	5%	1/16W
R1014	1-218-990-81	SHORT CHIP	0		
R1015	1-218-965-11	RES-CHIP	10K	5%	1/16W
R1018	1-218-945-11	RES-CHIP	220	5%	1/16W
R1023	1-216-799-11	METAL CHIP	15	5%	1/10W
R1024	1-216-799-11	METAL CHIP	15	5%	1/10W
R1025	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R1201	1-218-990-81	SHORT CHIP	0		(DVD110E/DVD115E/DVD610/DVD610E)
R1202	1-218-937-11	RES-CHIP	47	5%	1/16W
R1203	1-218-971-11	RES-CHIP	33K	5%	1/16W
R1212	1-218-937-11	RES-CHIP	47	5%	1/16W
R1218	1-218-990-81	SHORT CHIP	0		(DVD310E/DVD410E/ DVD710/DVD710E/DVD810/DVD810E)
R1717	1-218-953-11	RES-CHIP	1K	5%	1/16W
R1721	1-220-180-11	RES-CHIP	620	5%	1/16W
R1722	1-208-911-11	METAL CHIP	10K	0.5%	1/16W
R1724	1-218-941-11	RES-CHIP	100	5%	1/16W
R1725	1-208-683-11	METAL CHIP	1K	0.5%	1/16W
R1726	1-208-683-11	METAL CHIP	1K	0.5%	1/16W
R1768	1-218-953-11	RES-CHIP	1K	5%	1/16W
R1803	1-218-953-11	RES-CHIP	1K	5%	1/16W
R1829	1-218-977-11	RES-CHIP	100K	5%	1/16W
R1830	1-218-962-11	RES-CHIP	5.6K	5%	1/16W
R1838	1-218-973-11	RES-CHIP	47K	5%	1/16W
R1840	1-218-944-11	RES-CHIP	180	5%	1/16W
R1841	1-218-944-11	RES-CHIP	180	5%	1/16W
R1842	1-218-944-11	RES-CHIP	180	5%	1/16W
R1843	1-218-944-11	RES-CHIP	180	5%	1/16W
R1844	1-218-942-11	RES-CHIP	120	5%	1/16W
R1850	1-218-942-11	RES-CHIP	120	5%	1/16W (DVD410E/DVD810/DVD810E)
R1855	1-218-942-11	RES-CHIP	120	5%	1/16W (DVD410E/DVD810/DVD810E)
R1865	1-218-942-11	RES-CHIP	120	5%	1/16W
R2104	1-218-933-11	RES-CHIP	22	5%	1/16W
R2106	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2407	1-218-960-11	RES-CHIP	3.9K	5%	1/16W
R2408	1-218-944-11	RES-CHIP	180	5%	1/16W
R2411	1-218-944-11	RES-CHIP	180	5%	1/16W
R2412	1-218-960-11	RES-CHIP	3.9K	5%	1/16W
R2417	1-208-709-11	METAL CHIP	12K	0.5%	1/16W
R2418	1-208-873-81	METAL CHIP	270	0.5%	1/16W
R2419	1-208-873-81	METAL CHIP	270	0.5%	1/16W
R2420	1-208-873-81	METAL CHIP	270	0.5%	1/16W
R2802	1-218-961-11	RES-CHIP	4.7K	5%	1/16W (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
R2803	1-218-973-11	RES-CHIP	47K	5%	1/16W (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
R2818	1-218-963-11	RES-CHIP	6.8K	5%	1/16W (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)
R2819	1-218-975-11	RES-CHIP	68K	5%	1/16W (DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
R2901	1-218-969-11	RES-CHIP 22K 5% 1/16W (DVD110E/DVD610/DVD610E)	R4413	1-218-944-11	RES-CHIP 180 5% 1/16W
R2902	1-218-961-11	RES-CHIP 4.7K 5% 1/16W (DVD110E/DVD610/DVD610E)	R4501	1-218-977-11	RES-CHIP 100K 5% 1/16W
R2903	1-218-961-11	RES-CHIP 4.7K 5% 1/16W (DVD110E/DVD610/DVD610E)	R4502	1-218-965-11	RES-CHIP 10K 5% 1/16W
R2904	1-218-973-11	RES-CHIP 47K 5% 1/16W (DVD110E/DVD610/DVD610E)	R4603	1-216-797-11	METAL CHIP 10 5% 1/10W
R3102	1-218-975-11	RES-CHIP 68K 5% 1/16W	R4604	1-218-954-11	RES-CHIP 1.2K 5% 1/16W
R3105	1-208-935-11	METAL CHIP 100K 0.5% 1/16W	R4605	1-218-963-11	RES-CHIP 6.8K 5% 1/16W
R3107	1-208-922-11	METAL CHIP 30K 0.5% 1/16W (DVD110E/DVD115E/DVD610/DVD610E)	R4606	1-218-977-11	RES-CHIP 100K 5% 1/16W
R3107	1-208-721-11	METAL CHIP 39K 0.5% 1/16W (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	R4607	1-218-989-11	RES-CHIP 1M 5% 1/16W
R3108	1-218-961-11	RES-CHIP 4.7K 5% 1/16W	R4609	1-218-965-11	RES-CHIP 10K 5% 1/16W (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
R3109	1-218-957-11	RES-CHIP 2.2K 5% 1/16W	R4610	1-218-989-11	RES-CHIP 1M 5% 1/16W (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
R3110	1-220-876-81	METAL CHIP 18 0.5% 1/16W	R4611	1-218-953-11	RES-CHIP 1K 5% 1/16W (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
R3112	1-218-953-11	RES-CHIP 1K 5% 1/16W	R4801	1-218-941-81	RES-CHIP 100 5% 1/16W
R3113	1-220-876-81	METAL CHIP 18 0.5% 1/16W	R4803	1-218-961-11	RES-CHIP 4.7K 5% 1/16W
R3114	1-220-876-81	METAL CHIP 18 0.5% 1/16W	R4806	1-216-789-11	METAL CHIP 2.2 5% 1/10W
R3115	1-208-943-11	METAL CHIP 220K 0.5% 1/16W	R4810	1-218-965-11	RES-CHIP 10K 5% 1/16W
R3119	1-218-957-11	RES-CHIP 2.2K 5% 1/16W	R4811	1-218-975-11	RES-CHIP 68K 5% 1/16W
R3120	1-208-861-81	METAL CHIP 82 0.5% 1/16W (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	R4818	1-218-965-11	RES-CHIP 10K 5% 1/16W
R3120	1-208-663-11	METAL CHIP 150 0.5% 1/16W (DVD110E/DVD115E/DVD610/DVD610E)	R4819	1-218-977-11	RES-CHIP 100K 5% 1/16W
R3121	1-218-977-11	RES-CHIP 100K 5% 1/16W	R4820	1-218-975-11	RES-CHIP 68K 5% 1/16W
R4137	1-218-965-11	RES-CHIP 10K 5% 1/16W	R4821	1-218-965-11	RES-CHIP 10K 5% 1/16W
R4201	1-218-953-11	RES-CHIP 1K 5% 1/16W	R4824	1-218-986-11	RES-CHIP 560K 5% 1/16W
R4203	1-218-982-11	RES-CHIP 270K 5% 1/16W	R4826	1-218-973-11	RES-CHIP 47K 5% 1/16W
R4214	1-218-959-11	RES-CHIP 3.3K 5% 1/16W	R4831	1-218-977-11	RES-CHIP 100K 5% 1/16W
R4215	1-218-953-11	RES-CHIP 1K 5% 1/16W	R4832	1-218-961-11	RES-CHIP 4.7K 5% 1/16W (DVD110E/DVD115E/DVD610/DVD610E)
R4219	1-218-953-11	RES-CHIP 1K 5% 1/16W	R4834	1-218-969-11	RES-CHIP 22K 5% 1/16W
R4221	1-208-911-11	METAL CHIP 10K 0.5% 1/16W	R4835	1-218-990-81	SHORT CHIP 0 (DVD310E/DVD410E/ DVD710/DVD710E/DVD810/DVD810E)
R4222	1-218-965-11	RES-CHIP 10K 5% 1/16W	R4836	1-208-927-11	METAL CHIP 47K 0.5% 1/16W (DVD110E/DVD115E/DVD610/DVD610E)
R4223	1-218-953-11	RES-CHIP 1K 5% 1/16W	R4836	1-208-935-11	METAL CHIP 100K 0.5% 1/16W (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
R4225	1-218-933-11	RES-CHIP 22 5% 1/16W	R4837	1-208-935-11	METAL CHIP 100K 0.5% 1/16W (DVD110E/DVD115E/DVD610/DVD610E)
R4232	1-218-954-11	RES-CHIP 1.2K 5% 1/16W	R4837	1-208-943-11	METAL CHIP 220K 0.5% 1/16W (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
R4233	1-218-965-11	RES-CHIP 10K 5% 1/16W	R4838	1-208-910-11	METAL CHIP 9.1K 0.5% 1/16W (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
R4234	1-218-965-11	RES-CHIP 10K 5% 1/16W	R4838	1-208-711-11	METAL CHIP 15K 0.5% 1/16W (DVD110E/DVD115E/DVD610/DVD610E)
R4240	1-218-933-11	RES-CHIP 22 5% 1/16W	R4839	1-208-715-11	METAL CHIP 22K 0.5% 1/16W (DVD110E/DVD115E/DVD610/DVD610E)
R4241	1-218-977-11	RES-CHIP 100K 5% 1/16W	R4840	1-208-934-11	METAL CHIP 91K 0.5% 1/16W (DVD110E/DVD115E/DVD610/DVD610E)
R4247	1-218-975-11	RES-CHIP 68K 5% 1/16W	R4911	1-219-570-11	METAL CHIP 10M 5% 1/10W
R4256	1-218-933-11	RES-CHIP 22 5% 1/16W	R4913	1-208-893-11	METAL CHIP 1.8K 0.5% 1/16W
R4257	1-218-953-11	RES-CHIP 1K 5% 1/16W	R4915	1-208-703-11	METAL CHIP 6.8K 0.5% 1/16W
R4259	1-208-889-11	METAL CHIP 1.2K 0.5% 1/16W	R4917	1-218-953-11	RES-CHIP 1K 5% 1/16W
R4261	1-218-965-11	RES-CHIP 10K 5% 1/16W	R4929	1-218-985-11	RES-CHIP 470K 5% 1/16W
R4405	1-218-966-11	RES-CHIP 12K 5% 1/16W	R4930	1-218-989-11	RES-CHIP 1M 5% 1/16W
R4406	1-218-975-11	RES-CHIP 68K 5% 1/16W	R4932	1-218-977-11	RES-CHIP 100K 5% 1/16W
R4409	1-218-446-11	METAL CHIP 1 5% 1/10W (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)	R4933	1-208-927-11	METAL CHIP 47K 0.5% 1/16W
R4410	1-218-446-11	METAL CHIP 1 5% 1/10W (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)			
R4411	1-218-446-11	METAL CHIP 1 5% 1/10W (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)			

Ref. No.	Part No.	Description			
R4934	1-208-935-11	METAL CHIP	100K	0.5%	1/16W
R4935	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4937	1-218-965-11	RES-CHIP	10K	5%	1/16W
R4942	1-218-965-11	RES-CHIP	10K	5%	1/16W
R5135	1-218-969-11	RES-CHIP	22K	5%	1/16W
R5136	1-218-968-11	RES-CHIP	18K	5%	1/16W
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
R5136	1-218-969-11	RES-CHIP	22K	5%	1/16W
		(DVD110E/DVD115E/DVD610/DVD610E)			
R5137	1-218-965-11	RES-CHIP	10K	5%	1/16W
R5138	1-218-953-11	RES-CHIP	1K	5%	1/16W
R5139	1-218-947-11	RES-CHIP	330	5%	1/16W
R5140	1-218-969-11	RES-CHIP	22K	5%	1/16W
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
R5301	1-216-797-11	METAL CHIP	10	5%	1/10W
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
R5302	1-218-941-81	RES-CHIP	100	5%	1/16W
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
R5303	1-218-977-11	RES-CHIP	100K	5%	1/16W
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
R5304	1-218-965-11	RES-CHIP	10K	5%	1/16W
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
R5305	1-218-977-11	RES-CHIP	100K	5%	1/16W
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
R5306	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
R5307	1-218-971-11	RES-CHIP	33K	5%	1/16W
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
R5310	1-218-980-11	RES-CHIP	180K	5%	1/16W
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
R5311	1-218-972-11	RES-CHIP	39K	5%	1/16W
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
R5312	1-218-980-11	RES-CHIP	180K	5%	1/16W
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
R5314	1-218-962-11	RES-CHIP	5.6K	5%	1/16W
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
R5315	1-218-990-81	SHORT CHIP	0		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)
R5316	1-218-980-11	RES-CHIP	180K	5%	1/16W
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
R5317	1-218-990-81	SHORT CHIP	0		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)
R5318	1-218-980-11	RES-CHIP	180K	5%	1/16W
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
R5319	1-218-990-81	SHORT CHIP	0		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)

Ref. No.	Part No.	Description			
R5320	1-218-980-11	RES-CHIP	180K	5%	1/16W
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
R5321	1-218-990-81	SHORT CHIP	0		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)
R5322	1-218-965-11	RES-CHIP	10K	5%	1/16W
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
R5402	1-218-990-81	SHORT CHIP	0		(DVD110E/DVD115E/DVD610/DVD610E)
R5403	1-218-989-11	RES-CHIP	1M	5%	1/16W
		(DVD110E/DVD115E/DVD610/DVD610E)			
R5404	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
		(DVD110E/DVD115E/DVD610/DVD610E)			
R5405	1-218-981-91	RES-CHIP	220K	5%	1/16W
		(DVD110E/DVD115E/DVD610/DVD610E)			
R5406	1-218-965-11	RES-CHIP	10K	5%	1/16W
		(DVD110E/DVD115E/DVD610/DVD610E)			
R5409	1-218-990-81	SHORT CHIP	0		(DVD110E/DVD115E/DVD610/DVD610E)
R5410	1-218-990-81	SHORT CHIP	0		(DVD110E/DVD115E/DVD610/DVD610E)
R5411	1-218-967-11	RES-CHIP	15K	5%	1/16W
		(DVD110E/DVD115E/DVD610/DVD610E)			
R5412	1-218-990-81	SHORT CHIP	0		(DVD110E/DVD115E/DVD610/DVD610E)
R5414	1-218-990-81	SHORT CHIP	0		(DVD110E/DVD115E/DVD610/DVD610E)
R5415	1-218-973-11	RES-CHIP	47K	5%	1/16W
		(DVD110E/DVD115E/DVD610/DVD610E)			
		< COMPOSITION CIRCUIT BLOCK >			
* RB1001	1-234-723-21	RES, NETWORK	75		(1005X4)
RB1704	1-234-378-11	RES, NETWORK	10K		(1005X4)
RB1705	1-234-381-21	RES, NETWORK	100K		(1005X4)
RB1706	1-234-377-21	RES, NETWORK	4.7K		(1005X4)
		(DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
* RB1707	1-234-384-21	RES, NETWORK	1M		(1005X4)
* RB1801	1-200-016-21	RES, NETWORK	82		(1005X4)
RB1802	1-242-963-21	RES, NETWORK	33		(1005X4)
RB1803	1-242-963-21	RES, NETWORK	33		(1005X4)
RB1804	1-242-963-21	RES, NETWORK	33		(1005X4)
RB1805	1-242-963-21	RES, NETWORK	33		(1005X4)
RB1806	1-234-378-11	RES, NETWORK	10K		(1005X4)
RB1807	1-234-943-21	RES, NETWORK	22		(1005X4)
* RB2102	1-234-380-21	RES, NETWORK	47K		(1005X4)
RB2801	1-234-376-11	RES, NETWORK	2.2K		(1005X4)
		(DVD115E/DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
* RB2803	1-234-379-21	RES, NETWORK	22K		(1005X4)
		(DVD115E/DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
* RB2804	1-234-380-21	RES, NETWORK	47K		(1005X4)
		(DVD115E/DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
RB2805	1-234-945-21	RES, NETWORK	100		(1005X4)
		(DVD115E/DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E)			
RB2901	1-234-378-11	RES, NETWORK	10K		(1005X4)
		(DVD110E/DVD610/DVD610E)			

Ref. No.	Part No.	Description
RB2902	1-234-376-11	RES, NETWORK 2.2K (1005X4) (DVD110E/DVD610/DVD610E)
RB2903	1-234-381-21	RES, NETWORK 100K (1005X4) (DVD110E/DVD610/DVD610E)
RB2904	1-234-945-21	RES, NETWORK 100 (1005X4) (DVD110E/DVD610/DVD610E)
* RB3102	1-234-380-21	RES, NETWORK 47K (1005X4)
RB3103	1-234-381-21	RES, NETWORK 100K (1005X4)
RB3104	1-234-378-11	RES, NETWORK 10K (1005X4)
* RB4101	1-234-379-21	RES, NETWORK 22K (1005X4)
* RB4102	1-234-384-21	RES, NETWORK 1M (1005X4)
RB4301	1-234-378-11	RES, NETWORK 10K (1005X4)
RB4401	1-234-381-21	RES, NETWORK 100K (1005X4)
RB4403	1-234-378-11	RES, NETWORK 10K (1005X4)
RB4801	1-234-945-21	RES, NETWORK 100 (1005X4)
RB4901	1-234-378-11	RES, NETWORK 10K (1005X4)
RB4902	1-234-375-21	RES, NETWORK 1K (1005X4)
RB4903	1-234-378-11	RES, NETWORK 10K (1005X4)
RB4904	1-234-375-21	RES, NETWORK 1K (1005X4)
* RB4905	1-234-380-21	RES, NETWORK 47K (1005X4)
* RB5101	1-234-380-21	RES, NETWORK 47K (1005X4)
RB5102	1-234-400-21	CONDUCTOR, NETWORK (1005X4) (DVD310E/DVD410E/DVD710/DVD710E/ DVD810/DVD810E)
RB5103	1-234-400-21	CONDUCTOR, NETWORK (1005X4) (DVD110E/DVD115E/DVD610/DVD610E)
RB5401	1-234-375-21	RES, NETWORK 1K (1005X4) (DVD110E/DVD115E/DVD610/DVD610E)
RB5402	1-234-956-21	RES, NETWORK 470K (1005X4) (DVD110E/DVD115E/DVD610/DVD610E)
< SENSOR >		
* SE4501	1-480-013-21	SHOCK SENSOR
< VARISTOR >		
* VD1001	1-802-279-11	VARISTOR (SMD)
* VD1002	1-802-279-11	VARISTOR (SMD)
* VD1005	1-802-279-11	VARISTOR (SMD)
* VD1006	1-802-279-11	VARISTOR (SMD)
< VIBRATOR >		
* X1201	1-813-856-11	OSCILLATOR, CRYSTAL (27MHz) (DVD310E/DVD410E/DVD710E/DVD810E)
* X1201	1-813-857-21	OSCILLATOR, CRYSTAL (33MHz) (DVD710/DVD810)
X1201	1-814-072-21	QUARTZ CRYSTAL OSCILLATOR (24MHz) (DVD110E/DVD115E/DVD610/DVD610E)
* X1701	1-813-403-21	QUARTZ CRYSTAL OSCILLATOR (12MHz)
* X4201	1-813-816-21	VIBRATOR, CERAMIC (33.8688MHz)
* X4901	1-813-709-41	QUARTZCRYSTALUNITFOROSCILLATOR (32.768kHz)

Revision History

Ver.	Date	History	Contents	S.M. Rev. issued
1.0	2007.12	Official Release	—	—
1.1	2008.01	Revised-1 (A1 DI07-258)	<ul style="list-style-type: none">• Correction of Schematic Diagrams• Correction of Repair Parts S.M. correction: Page 4-9 , Page 4-20 , Page 5-20	Yes

Ver. 1.2 2008.03

Revision History

SECTION 6 ADJUSTMENTS

Auto-ADJ

Link

• Before starting adjustments

- Adjusting items when replacing main parts and boards (Non MEGA model)
- Adjusting items when replacing main parts and boards (MEGA model)
- List of service tools

• CAMERA SECTION ADJUSTMENTS

- PREPARATIONS BEFORE ADJUSTMENTS
- ADJUSTMENT PROGRAM
- DESTINATION DATA WRITE
- USB SERIAL No. INPUT
- VIDEO SYSTEM ADJUSTMENTS
- CAMERA SYSTEM ADJUSTMENTS (Non MEGA model)
- CAMERA SYSTEM ADJUSTMENTS (MEGA model)
- LCD/EVF SYSTEM ADJUSTMENTS
- AUDIO SYSTEM ADJUSTMENTS
- ERROR

• DRIVE SECTION ADJUSTMENTS

- PREPARATIONS BEFORE ADJUSTMENTS
- AUDIT (Drive Adjustment Program)
- DIAGNOSIS
- POWER ADJUSTMENT
- SERVO ADJUSTMENT
- TROUBLESHOOTING

• SERVICE MODE

- APPLICATION FOR ADJUSTMENT (SeusEX)
- SERVICE MODE
- DATA BACKUP

- Use this Service Manual together with the Automatic Adjustment Program (DCR-DVD610 Series Auto-Adj Ver_1.2r03.exe or DCR-DVD710 Series Auto-Adj Ver_1.2r03.exe) and the AUDIT (Drive Adjustment Program).

Non MEGA model: DCR-DVD110E/DVD115E/DVD610/DVD610E

- Automatic Adjustment Program: DCR-DVD610 Series Auto-Adj Ver_1.2r03.exe

MEGA model: DCR-DVD310E/DVD410E/DVD710/DVD710E/DVD810/DVD810E

- Automatic Adjustment Program: DCR-DVD710 Series Auto-Adj Ver_1.2r03.exe

SONY®

CAUTION :

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

CLASS 1 LASER PRODUCT
LASER KLASSE 1
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

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.

CAUTION:

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

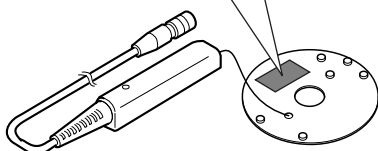
CAUTION

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



CAUTION

In the process of adjusting optical power, CLASS1M laser optical radiates. so do not remove this sensor disk.



Optical sensor disc (J-6082-570-A)

1-2. Adjusting items when replacing main parts and boards (MEGA model)

When replacing main parts and boards, adjust the items indicated by ● in the following table.

Note 1: The Automatic Adjustment Program does not support.

Note 2: When replacing the Flash Memory block, erase the data in internal memory of the board before replacement.

Note 3: DCR-DVD410E/DVD810/DVD810E only.

Note 4: CD-672 complete board is supplied instead of CD-687 complete board, because CD-672 complete board and CD-687 complete board are compatible.

Note 5: IC2101 (Flash memory) on the VC-520 board and IC4302 (Flash memory) on the VC-520 board cannot be replaced.

Adjusting item	Adjustment	Replaced parts																						
		Block replacement					Parts replacement							Board replacement										
		Lens device	Drive block	LCD block LCD901 (LCD panel)	EVF block LCD902 (LCD panel)	Microphone unit MIC901	Flash Memory block (Note 2, 3)	CD-672/687 board IC7002 (CCD imager) (Note 4)	CD-672/687 board SE7001, 7002 (YAW, PITCH sensor) (Note 4)	BL-022 board D5701 (EVF backlight)	PD-352 board D6203 - 6205 (LCD backlight)	VC-520 board IC1701, X1701 (CPU, Oscillator)	VC-520 board IC1201 (A/D converter, Timing generator)	VC-520 board IC2401 (D/A converter)	VC-520 board IC2801 (Video, Audio I/O)	VC-520 board IC3101 (LCD/EVF driver)	VC-520 board IC4101 (RF process)	VC-520 board IC4201 (DVD DSP)	VC-520 board IC4401 (DVD mecha drive)	CD-672/687 board (COMPLETE) (Note 4)	BL-022 board (COMPLETE)	PD-352 board (COMPLETE)	VC-520 board (COMPLETE)	
Destination Data Write	Destination data write																							●
USB Serial No. Input	USB serial No. input																							●
(Note 1)	Origin oscillation check											●												●
VIDEO adjustment	S VIDEO OUT Y level adj.																							●
	S VIDEO OUT chroma level adj.												●	●										●
	VIDEO OUT level check																							●
CAMERA adjustment 1	HALL adj.	●																						●
CAMERA adjustment 2	Flange back adj.	●					●					●												●
CAMERA adjustment 3	Flange back check	●					●					●												●
CAMERA adjustment 4	F No. standard data input																							●
	MAX GAIN adj.	●					●					●	●											●
	Mechanical shutter adj																							●
CAMERA adjustment 5	Color reproduction adj.																							●
	Color reproduction check																							●
	AWB & LV standard data input	●					●					●	●											●
	AWB adj.																							●
	AWB check																							●
CAMERA adjustment 6	Black Defec adj.						●																	●
CAMERA adjustment 7	Steady shot check							●																●
LCD adjustment	LCD automatic adj. (VCO adj, Contrast adj.)																							●
	V-COM adj.			●																				●
	Transmissive mode white balance adj.												●		●									●
	Reflective mode white balance adj.																							●
EVF adjustment	EVF automatic adj. (VCO adj, Contrast adj.)				●			●					●		●									●
	White balance adj.																							●
Touch panel adjustment	Touch panel adj.		●																					●
AUDIO adjustment	Internal 3ch microphone sensitivity adj.					●								●										●
AUDIT	POWER adj.		●															●	●	●				●
	SERVO adj.		●																					●

Table 6-1-2

1-3. List of service tools

- Oscilloscope
- Amplifier built-in speaker for PC
- Color monitor
- Adjustment sound source file
- Frequency counter



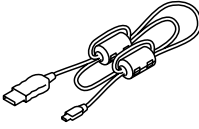
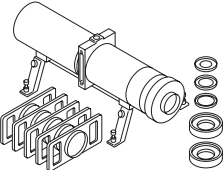
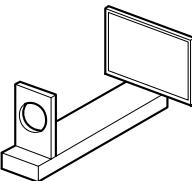
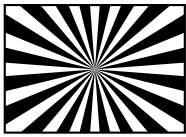
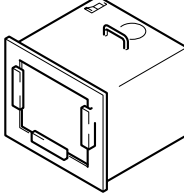
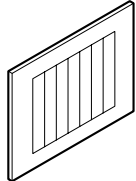
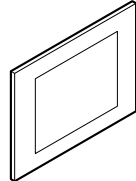
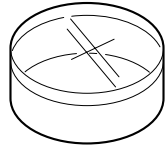
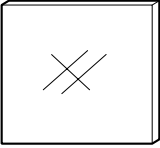
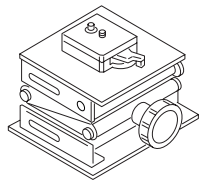
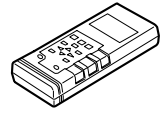
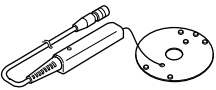

<p>J-1</p>  <p>Personal computer (Note 1, 2)</p>	<p>J-2</p>  <p>HASP key and application for adjustment (SeusEX)</p> <p>Contact our service headquarters of each area how to get the application for adjustment (SeusEX) and HASP key.</p>	<p>J-3</p>  <p>USB cable 1-829-868-31</p>
<p>J-4</p>  <p>Minipattern box J-6082-353-B</p>	<p>J-5</p>  <p>Flange back adjustment jig J-6082-563-A</p>	<p>J-6</p>  <p>Siemens star chart J-6080-875-A</p>
<p>J-7</p>  <p>Pattern box PTB-450 J-6082-200-A or Small pattern box PTB-1450 J-6082-557-A</p>	<p>J-8</p>  <p>Color bar chart</p> <p>For PTB-450: J-6020-250-A</p> <p>For PTB-1450: J-6082-559-A</p>	<p>J-9</p>  <p>Clear chart</p> <p>For PTB-450: J-6080-621-A</p> <p>For PTB-1450: J-6082-560-A</p>
<p>J-10</p>  <p>Filter for color temperature correction (C14) J-6080-058-A</p>	<p>J-11</p>  <p>ND filter 1.0 J-6080-808-A ND filter 0.4 J-6080-806-A ND filter 0.1 J-6080-807-A</p>	<p>J-12</p>  <p>Camera table J-6082-384-A</p>
<p>J-13</p>  <p>Optical power meter J-6082-569-A</p>	<p>J-14</p>  <p>Optical sensor disc J-6082-570-A</p>	<p>J-15</p>  <p>DVD-RW (DRW3) Reference + DOW Disc 8-212-001-51</p>

Fig. 6-1-1 (1)

Note 1: Personal computer

- OS: Windows 2000/XP (Camera Section)
- Windows 2000 SP4 or later/XP SP2 or later (Drive Section)
- RAM: 256MB or more recommended
- USB: 2.0 recommended (also compatible with 1.1)
- Three connectors are required.

Note 2: The following programs and driver must already be installed in the personal computer. (Contact our service headquarters of each area how to get the programs and driver)

- SeusEX
- Optical power meter driver
- AUDIT



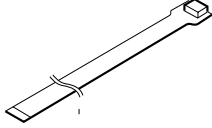
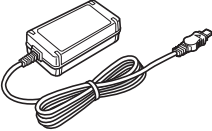
<p>J-16</p>  <p>DVD-R for Self Jitter Disc 8-212-002-11</p>	<p>J-17</p>  <p>DVD+RDL for Self Disc (Manufactured by Sony Corporation)</p>	<p>J-18</p>  <p>Extension cable (10P) J-6082-572-A</p>
<p>J-19</p>  <p>AC adaptor AC-L200/L200B 1-479-285-21/41 (Note 3)</p>		

Fig. 6-1-1 (2)

Note 3: 1-479-285-21 (for except J model)
1-479-285-41 (for J model)

6-1. CAMERA SECTION ADJUSTMENTS

1-1. PREPARATIONS BEFORE ADJUSTMENTS (CAMERA SECTION)

1-1-1. Preparations

1) Connect the equipment for adjustments according to Fig. 6-1-3.

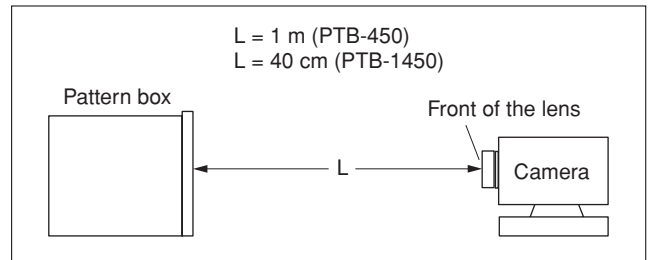


Fig. 6-1-2

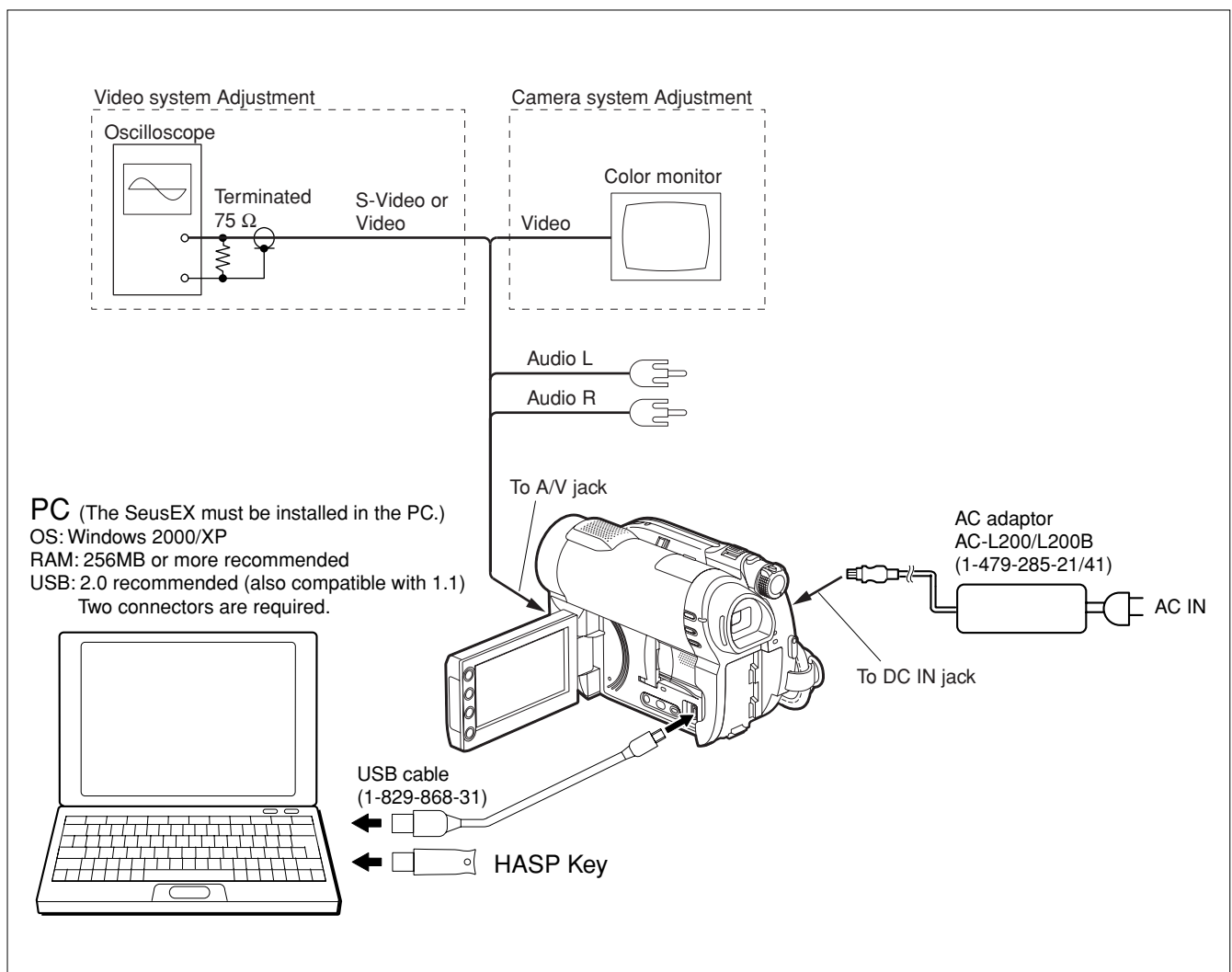


Fig. 6-1-3

1-1-2. Precaution

1. Setting the Switch

Unless otherwise specified, set the switches as follows and perform adjustments without inserting disc.

- | | | | |
|-------------------------|-------|--|-----|
| 1. POWER switch | Movie | 5. (HOME) menu – (SETTINGS) – MOVIE SETTINGS | |
| 2. BACK LIGHT | OFF | DIGITAL ZOOM | OFF |
| 3. NIGHTSHOT PLUS | OFF | STEADY SHOT | OFF |
| 4. (OPTION) menu | | AUTO SLW SHUTTR | OFF |
| FOCUS | AUTO | 6. (HOME) menu – (SETTINGS) – GENERAL SET | |
| | | DEMO MODE | OFF |

2. Order of Adjustments

Basically carry out adjustments in the order given.

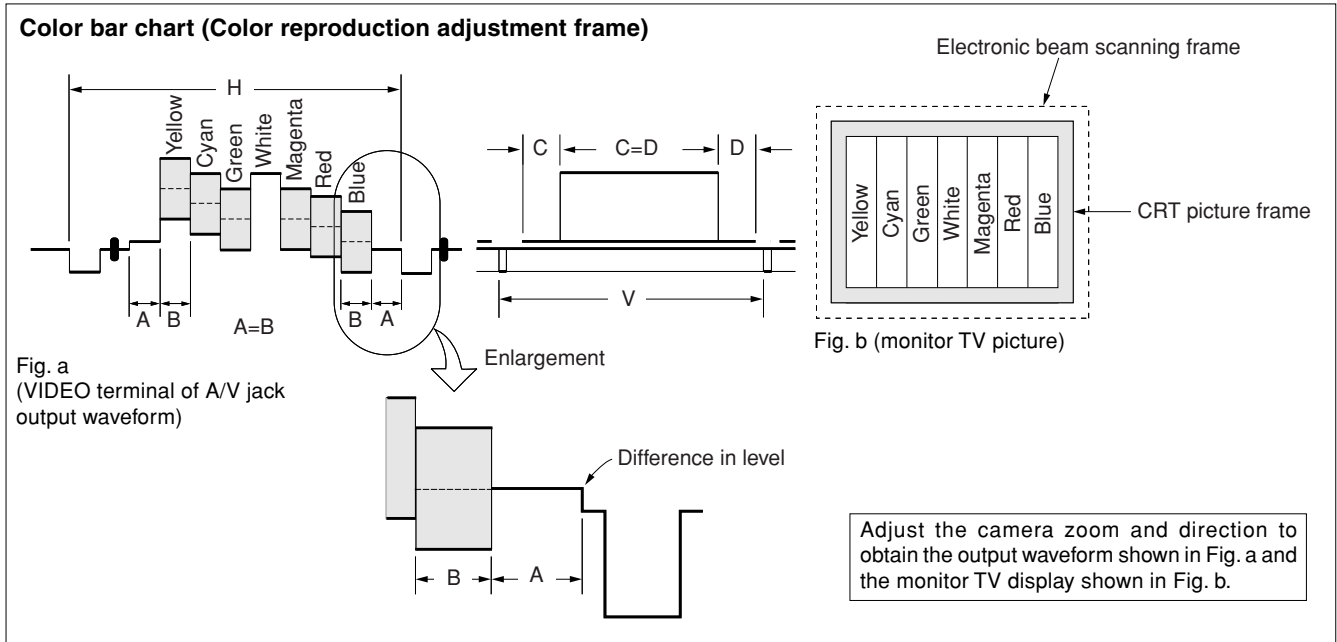


Fig. 6-1-4

3. Subjects

- 1) Color bar chart (Color reproduction adjustment frame)
When performing adjustments using the color bar chart, adjust the picture frame as shown in Fig. 6-1-4. (Color reproduction adjustment frame)
- 2) Clear chart (AWB adjustment frame)
Shoot the color bar chart. Then adjust the zoom to TELE side from WIDE side, and stop it when the black frame of the chart disappears. Remove the color bar chart from pattern box and insert a clear chart in its place.
- 3) Chart for flange back adjustment
Join together a piece of white A0 size paper (1189mm × 841 mm) and a piece of black paper to make the chart shown in Fig. 6-1-5.

Note: Use a non-reflecting and non-glazing vellum paper. The size must be A0 or larger and the joint between the white and black paper must not have any undulations.

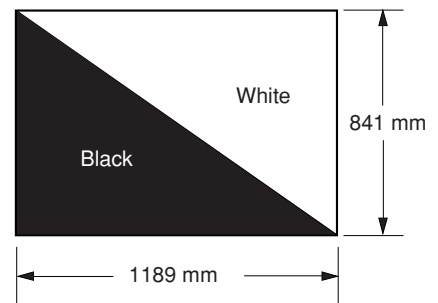


Fig. 6-1-5

1-2. ADJUSTMENT PROGRAM

The DCR-DVD110E/DVD115E/DVD310E/DVD410E//DVD610/DVD610E/DVD710/DVD710E/DVD810/DVD810E are adjusted by the Automatic Adjustment Program. The Automatic Adjustment Program enters automatically via the SeusEX the adjustment operations that were formerly entered manually by the adjustment remote commander (some items may be adjusted by manual operation on the operation screen of the SeusEX).

1. Precautions When Using Automatic Adjustment Program

- 1) The Automatic Adjustment Program writes the adjustment results such as EVR data to the set through two-way communication with the camcorder via the SeusEX. Accordingly, the Automatic Adjustment Program must be used in the environment where the SeusEX operates.
- 2) The Automatic Adjustment Program cannot be used when the SEUS or the SeusCam is running. Exit the SEUS or the SeusCam before using the Automatic Adjustment Program.
- 3) The SeusEX must be already started on the PC when using the Automatic Adjustment Program. With the SeusEX not started, some adjustment items will take time in adjustment.
- 4) The program run time may vary depending on the environment of the personal computer used.

2. Start of Automatic Adjustment Program

Double-click the application file (DCR-DVD610 Series Auto-Adj Ver_1.2r03.exe or DCR-DVD710 Series Auto-Adj Ver_1.2r03.exe), and the Automatic Adjustment Program will start.

3. Function of Each Button on Main Menu Screen

When the Automatic Adjustment Program started, the Main Menu screen in Fig. 6-1-6 will appear. On this screen, select each adjustment section.

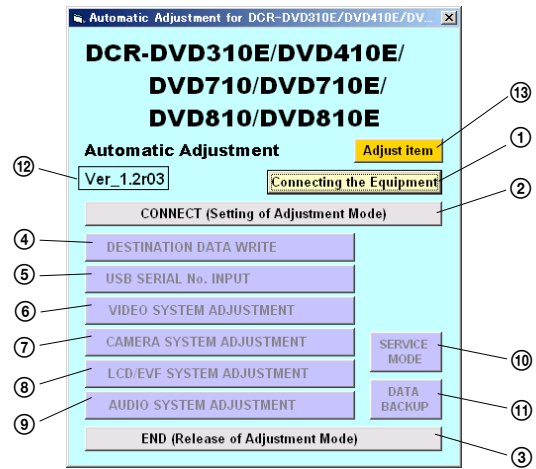


Fig. 6-1-6

- ① **Connecting the Equipment** button
A connection diagram of the equipment is displayed.
- ② **CONNECT** button
The mode of Camcorder is switched to the Adjustment Mode. When the Adjustment Mode has switched normally, the operation of the buttons ④ - ⑪ is enabled.
- ③ **END** button
The mode of Camcorder is switched to the normal mode. When the normal mode has switched correctly, the Automatic Adjustment Program is finished.
- ④ **DESTINATION DATA WRITE** button
The "DESTINATION DATA WRITE" screen appears.
- ⑤ **USB SERIAL No. INPUT** button
The "USB SERIAL No. INPUT" screen appears.
- ⑥ **VIDEO SYSTEM ADJUSTMENT** button
The "VIDEO SYSTEM ADJUSTMENT" screen appears.
- ⑦ **CAMERA SYSTEM ADJUSTMENT** button
The "CAMERA SYSTEM ADJUSTMENT" screen appears.
- ⑧ **LCD/EVF SYSTEM ADJUSTMENT** button
The "LCD/EVF SYSTEM ADJUSTMENT" screen appears.
- ⑨ **AUDIO SYSTEM ADJUSTMENT** button
The "AUDIO SYSTEM ADJUSTMENT" screen appears.
- ⑩ **SERVICE MODE** button
The "SERVICE MODE" screen appears.
- ⑪ **DATA BACKUP** button
The "DATA BACKUP" screen appears.
- ⑫ This part indicates the version of Automatic Adjustment Program.
- ⑬ **Adjust item** button
"Adjusting items when replacing main parts and boards" table is displayed.

4. Setting of Adjustment Mode

Before performing the adjustment, "Setting of Adjustment Mode" is required.

[Setting method]

- 1) Connect the Camcorder to the PC with a USB cable, and turn on the power switch.
- 2) The USB SELECT menu will appear on the LCD screen of the Camcorder, and then select "USB CONNECT (Memory Stick)" to establish the connection.
- 3) Start the Automatic Adjustment Program, and click the **Connect** button on the Main Menu screen.
- 4) When the following message is displayed, turn off and on again the power switch of the Camcorder.

Note: Turning off and on the power switch causes the Camcorder to be switched to the Adjustment Mode. After the Camcorder restarted, click the **OK** button in the message window.



- 5) Upon successful completion of the settings in the Adjustment Mode, the operation of each button on the Main Menu screen is enabled.

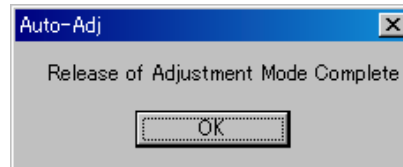
5. Release of Adjustment Mode

To finish the adjustment, be sure to perform "Release of Adjustment Mode".

[Releasing method]

- 1) Click the **END** button on the Main Menu screen.
- 2) When the following message is displayed, releasing of adjustment mode has completed. Click the **OK** button in the message window to exit the Automatic Adjustment Program.

Note: The Camcorder switches to the normal mode by turning off and on the power switch. After the adjustment finished, turn off and on again the power switch of the Camcorder to confirm that the USB SELECT menu is displayed.



1-3. DESTINATION DATA WRITE

Note: The DESTINATION DATA WRITE can be set with the Service board only.

Performing the DESTINATION DATA WRITE with other than the Service board causes the error (E:20:00 will be blinking) and the power to be shut down.

1. Function of Each Button on Destination Data Write Screen

Click the [DESTINATION DATA WRITE] button on the Main Menu screen, and the “DESTINATION DATA WRITE” screen in Fig. 6-1-7 will appear.

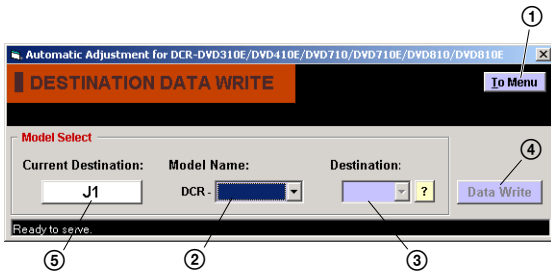


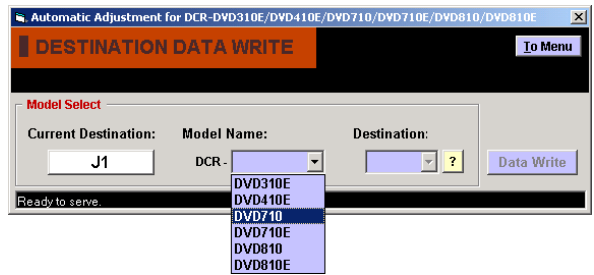
Fig. 6-1-7

- ① [To Menu] button
Return to the main menu.
- ② Model Name List
Selects the model name.
- ③ Destination List
Selects the written destination.
- ④ [Data Write] button
Write the destination data to the camcorder.
- ⑤ Destination Check button
Current destination setting checked when the “DESTINATION DATA WRITE” screen started is displayed.
When this button is clicked, the destination is checked and the display is updated.

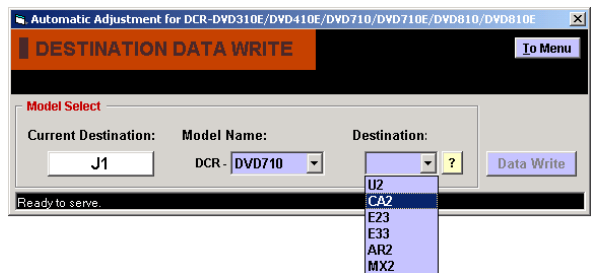
2. Destination Data Write

[Writing method]

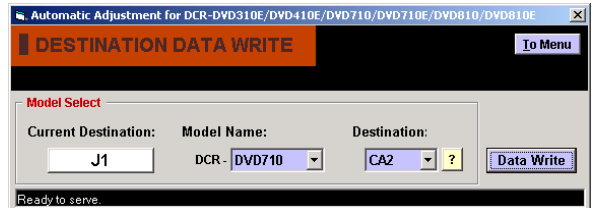
- 1) Select the model name from the pulldown list.



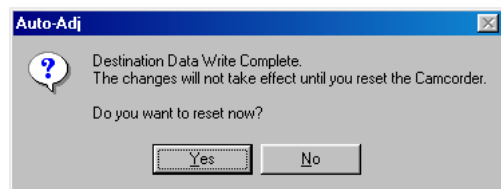
- 2) Select the target destination from the pulldown list.



- 3) Click the [Data Write] button.



- 4) Following message will be appeared after completing data writing.



- 5) After the destination data writing completed, click the Destination Check button to check the destination.

3. Selectable Language Table

DESTINATION	AREA	SELECTABLE LANGUAGE																									
		English	Japanese	French	Italian	German	Spanish	Dutch	Russian	Simplified Chinese	Portuguese	Greek	Braz.Portuguese	Canadian French	Espanyol	Traditional Chinese	Korean	Simplified English	Albanian	Persian	Thai	Turkish	Polish	Czech	Hungarian	Indonesia	Melayu
NTSC model	J1	J	●																								
	U2	US	●									○	○	○			○										
	MX2	MX	○									○	○	●			○										
	AR2	AR	○									○	○	○	○			○									
	BR1	BR	○									●	○	○	○			○									
	E33	E	○									○	○	○	○			○									
	E23		●										○	○	○	○			○								
	HK1	HK	○										○	○	○	○			○								
	KR2	KR	○										○	○	○	○			○								
	PL1	PL	○										○	○	○	○			○								
	JE3	JE	○										○	○	○	○			○								
CA2	CND	○										○	○	○	○			○									
PAL model	E34	E	○	○	○	○	○	○	○	○	○	○				○		○	○	○	○					○	○
	E35		○	○	○	○	○	○	○	○	○	○				○		○	○	○	○	○				○	○
	E36		○	○	○	○	○	○	○	○	○	○				○		○	○	○	○	○				○	○
	E37		○	○	○	○	○	○	○	○	○	○				○		○	○	○	○	○				○	○
	HK1	HK	○	○	○	○	○	○	○	○	○				○		○	○	○	○	○				○	○	
	AU2	AUS	○	○	○	○	○	○	○	○	○				○		○	○	○	○	○				○	○	
	CN1	CH	○	○	○	○	○	○	○	○	○				○		○	○	○	○	○				○	○	
	CN2		○	○	○	○	○	○	○	○	○				○		○	○	○	○	○				○	○	
	SV1	SV	○	○	○	○	○	○	○	○	○				○		○	○	○	○	○				○	○	
	JE3	JE	○	○	○	○	○	○	○	○	○				○		○	○	○	○	○				○	○	
	CEL	NE	○	○	○	○	○	○	○	○	○				○		○	○	○	○	○				○	○	
	CEE	AEP	○	○	○	○	○	○	○	○	○				○		○	○	○	○	○				○	○	
	CEI		○	○	○	○	○	○	○	○	○				○		○	○	○	○	○				○	○	
	CEJ		○	○	○	○	○	○	○	○	○				○		○	○	○	○	○				○	○	
	CEM		○	○	○	○	○	○	○	○	○				○		○	○	○	○	○				○	○	
	CEP		○	○	○	○	○	○	○	○	○				○		○	○	○	○	○				○	○	
	CEN		○	○	○	○	○	○	○	○	○				○		○	○	○	○	○				○	○	
CEH	UK	○	○	○	○	○	○	○	○				○		○	○	○	○	○				○	○			

●: INITIAL LANGUAGE

Table 6-1-3

1-4. USB SERIAL No. INPUT

The set is shipped with a unique ID (USB Serial No.) written in it. This ID has not been written in a new board for service, and therefore it must be entered after the board replacement.

If original ID can be read from the board before replacement, read it from the board before replacement using the “SERIAL READ/WRITE” screen, and then write it after replacement.

If original ID cannot be read from the board before replacement, write the ID for service using the “MANUAL WRITE” screen. (The ID for service is different from the ID written when the set is shipped.) Enter the PRODUCT ID (last 5 characters of model name) and SERIAL No. into the screen and write them.

1. Function of Each Button on USB Serial No. Input Screen

Click the [USB SERIAL No. INPUT] button on the Main Menu screen, and the “USB SERIAL No. INPUT” screen in Fig. 6-1-8 will appear.

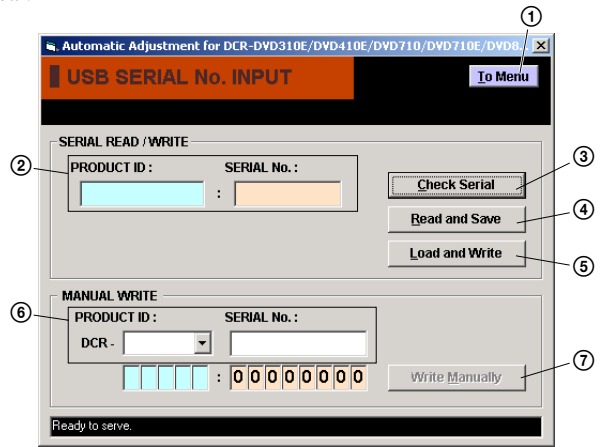


Fig. 6-1-8

- ① [To Menu] button
Return to the main menu.
- ② Display area
The “PRODUCT ID” and “SERIAL No.” are displayed.
- ③ [Check Serial] button
The USB SERIAL No. data is read from the camcorder and displayed in the display area.
- ④ [Read and Save] button
The USB SERIAL No. data is read from the camcorder and saved in PC as a file.
Default file name is as follows:
(Example: MEGA model)
DCR-DVD710_SERIAL_XXXXXXX_YYYYMMDD.dat

	Date	Date
	USB serial number	Date
	Date	Date
- ⑤ [Load and Write] button
The USB SERIAL No. data is loaded from the file saved in PC and written to the camcorder.
- ⑥ Input area
Enter “PRODUCT ID” and “SERIAL No.” when writing the ID for service.
The “PRODUCT ID” is set from the last 5 characters of model name if the model name is selected.
For the “SERIAL No.”, read it from the label on the camcorder body and enter it.
- ⑦ [Write Manually] button
The USB SERIAL No. data entered in the input area is written to the camcorder.

1-5. VIDEO SYSTEM ADJUSTMENTS

1. Function of Each Button on Video System Adjustment Screen

Click the [VIDEO SYSTEM ADJUSTMENT] button on the Main Menu screen, and the “VIDEO SYSTEM ADJUSTMENT” screen in Fig. 6-1-9 will appear.

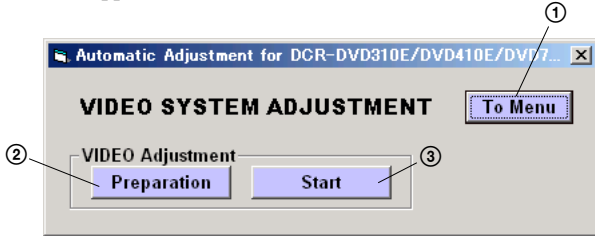


Fig. 6-1-9

- ① [To Menu] button
Return to the main menu.
- ② [Preparation] button
Notes for adjustment or jigs used are displayed.
- ③ [Start] button
“Video Adjustment” starts.

2. Adjustment Items of VIDEO System Adjustment

The adjustment items of video system adjustment are as listed in Table 6-1-4. The Automatic Adjustment Program executes the adjustment items if the VIDEO Adjustment Start button is clicked.

Button Name	Adjustment	Measurement Point	Measuring Instrument	Adjusting Address		
				Block	Page	Address
(Note)	Origin Oscillation Check	Pin ③ of X1701 on VC-520 board	Frequency counter	-	-	-
VIDEO Adjustment	S VIDEO OUT Y Level Adj.	Y signal terminal of S VIDEO plug of A/V jack (75 ohm terminated)	Oscilloscope	10	60	4400
	S VIDEO OUT Chroma Level Adj.	Chroma signal terminal of S VIDEO plug of A/V jack (75 ohm terminated)	Oscilloscope	10	60	4401, 4402
	VIDEO OUT Level Check	VIDEO terminal of A/V jack (75 ohm terminated)	Oscilloscope	-	-	-

Note: The Automatic Adjustment Program does not support.

Table 6-1-4

3. Origin Oscillation Check

Check the frequency of the clock for synchronization. If deviated, the synchronization will be disrupted and the color will become inconsistent.

Subject	Not required
Measurement Point	Pin ③ of X1701 on VC-520 board
Measuring Instrument	Frequency counter
Specified value	$f = 12000000 \pm 240 \text{ Hz}$

Switch setting

- POWER MOVIE mode

Checking method:

- Check that the frequency (f) satisfies the specified value.

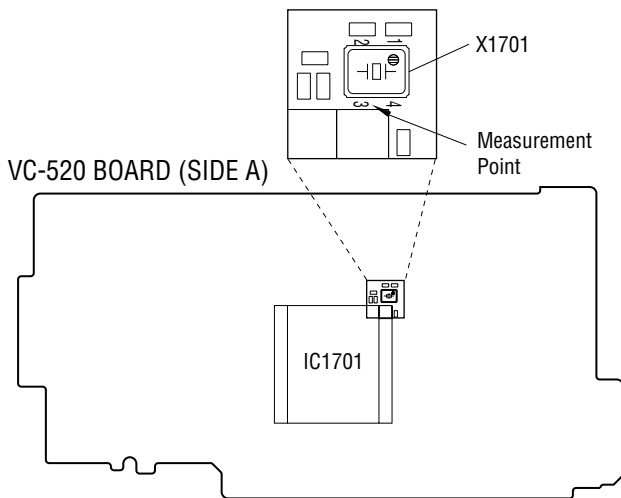


Fig. 6-1-10

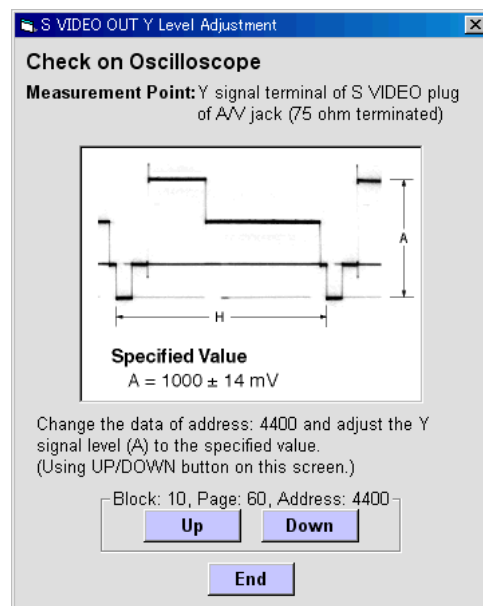
4. VIDEO Adjustment

[Automatic Adjustment Program execution items and sequence]

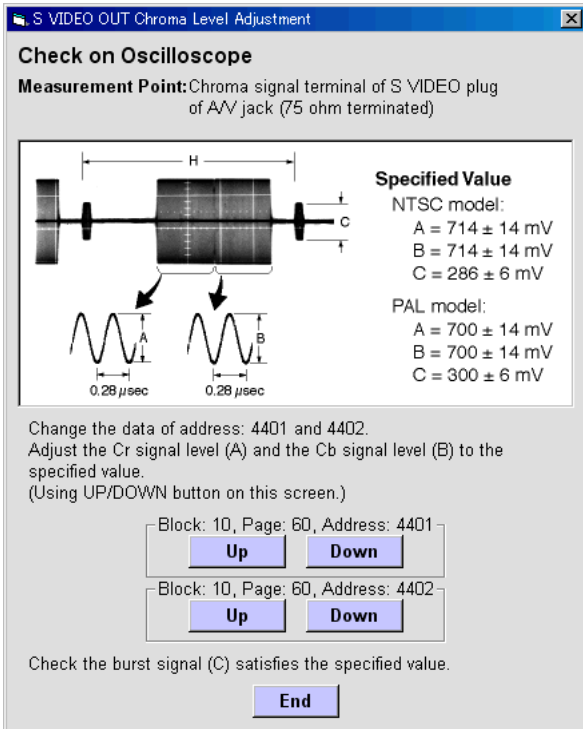
- Data Setting during Video Adj.
- S VIDEO OUT Y Level Adj.
- S VIDEO OUT Chroma Level Adj.
- VIDEO OUT Level Check

[Adjusting method]

- Click the [Start] button of the VIDEO Adjustment.
- The Automatic Adjustment Program executes the "1. Data Setting during Video Adj."
- If "1. Data Setting during Video Adj." completed successfully, the following screen is displayed during the execution of "2. S VIDEO OUT Y Level Adj.". Using the [Up]/[Down] button on the screen, adjust so that the Y signal level satisfies the specified value. After the adjustment, click the [End] button in the screen.



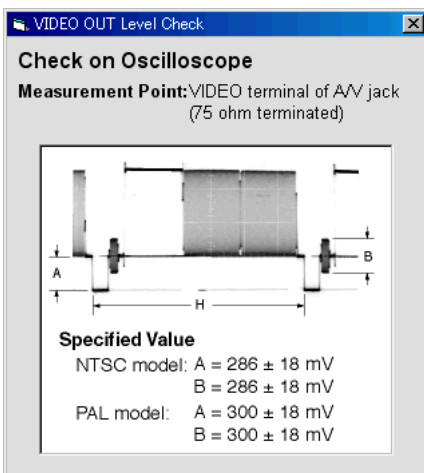
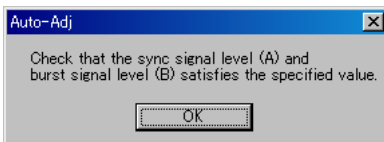
- 4) After that, the following screen is displayed during the execution of "3. S VIDEO OUT Chroma Level Adj.". Using the **[Up]**/**[Down]** button on the screen, adjust so that the Cr signal level and the Cb signal level satisfies the specified value. After the adjustment, check that the burst level of the chroma signals satisfies the specified value, and click the **[End]** button in the screen.



- 6) Upon successful completion of all item the VIDEO Adjustment, the following message is displayed. Click the **[OK]** button.



- 5) If the **[End]** button is clicked, "4. VIDEO OUT Level Check" will be executed. The following message and screen are displayed. Check that the sync signal level and burst level of the video signals satisfies the specified value, and click the **[OK]** button in the message.



1-6. CAMERA SYSTEM ADJUSTMENTS (Non MEGA model)

1. Function of Each Button on Camera System Adjustment Screen

Click the **CAMERA SYSTEM ADJUSTMENT** button on the Main Menu screen, and the “CAMERA SYSTEM ADJUSTMENT” screen in Fig. 6-1-11 will appear.

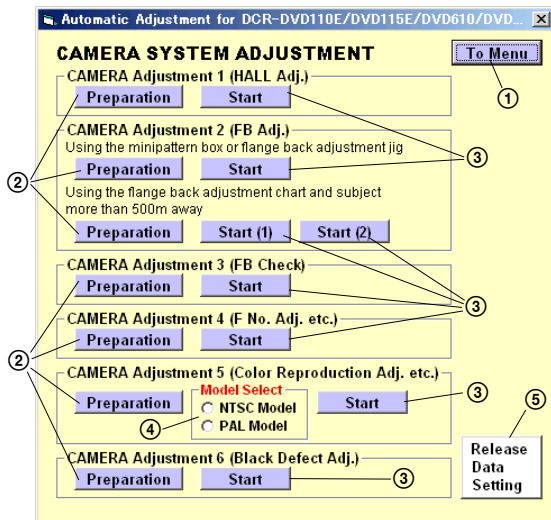


Fig. 6-1-11

- ① **To Menu** button
Return to the main menu.
- ② **Preparation** button
Notes for adjustment or jigs used are displayed.
- ③ **Start** button
Each adjustment from “Camera Adjustment 1” to “Camera Adjustment 6” starts.
- ④ **Model Select** radio button
Selects the model to be adjusted.
Note: NTSC model: DCR-DVD610
PAL model: DCR-DVD110E/DVD115E/DVD610E
- ⑤ **Release Data Setting** button
The data setting at the adjustment is cancelled.
During the data setting, the button color changes from “white” to “red”. When the data setting is cancelled, the button color returns to “white”.
(Use this button when an error occurred in the camera adjustment. If the adjustment completed successfully, the data setting is automatically cancelled and the button color returns to “white”.)

2. Adjustment Items of Camera System Adjustment

The adjustment items of camera system adjustment are as listed in Table 6-1-5. The Automatic Adjustment Program divides the adjustment items into six, camera adjustment 1-6. Clicking either CAMERA Adjustment Start button allows the adjustment item which corresponds to that button to be executed.

The adjustment conditions of the subject and filter vary depending on which item is adjusted. The Adjustment Program displays an instruction for the subject and filter as a message during the adjustment.

Button Name	Adjustment	Subject	Adjusting Address		
			Block	Page	Address
CAMERA Adjustment 1	HALL Adj.	Not required	11	61	0150 to 0159, 0190 to 019B
CAMERA Adjustment 2	Flange Back Adj.	Siemens star chart with ND filter for minipattern box (Note) or Flange back adjustment jig	11	61	0020 to 0030, 004C, 004D
		Flange back adjustment chart and subject more than 500 m away			
CAMERA Adjustment 3	Flange Back Check	Siemens star chart	-	-	-
CAMERA Adjustment 4	F No. Standard Data Input	Clear chart (Center frame)	11	61	0160 to 017F
	MAX GAIN Adj.		11	61	015C to 015F
CAMERA Adjustment 5	Color Reproduction Adj.	Color bar chart (Color reproduction adjustment frame)	11	61	0060 to 006E
	Color Reproduction Check		-	-	-
	AWB & LV Standard Data Input	Clear chart (All White frame)	11	61	0074 to 007B, 0180 to 018B, 01C0 to 01C3
	AWB Adj.	Clear chart (All White frame) Filter C14 for color temperature correction	11	61	0070 to 0073, 008C to 0093, 01C4 to 01C7
	AWB Check	Clear chart (All White frame) ND filter 1.0, 0.4 and 0.1	-	-	-
CAMERA Adjustment 6	Black Defect Adj.	Clear chart (All White) (Shoot the clear chart with the zoom TELE end.)	11	61	00C0 to 011D, 01A0 to 01B3

Note: Dark Siemens star chart.

Table 6-1-5

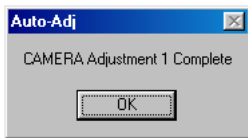
3. CAMERA Adjustment 1

[Automatic Adjustment Program execution items and sequence]

1. Data Setting during Camera Adj.
2. HALL Adj.
3. Release of Data Setting during Camera Adj.

[Adjusting method]

- 1) Click the **[Start]** button of the CAMERA Adjustment 1.
- 2) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”
- 3) If “1. Data Setting during Camera Adj.” completed successfully, and the items “2. HALL Adj.” and “3. Release of Data Setting during Camera Adj.” will be executed.
- 4) Upon successful completion of all items of the CAMERA Adjustment 1, the following message is displayed. Click the **[OK]** button.



4. CAMERA Adjustment 2 (Using the minipattern box or flange back adjustment jig)

[Automatic Adjustment Program execution items and sequence]

1. Data Setting during Camera Adj.
2. Flange Back Adj.
3. Release of Data Setting during Camera Adj.

[Preparation (Using the minipattern box)]

- 1) The minipattern box is installed as shown in the following figure.
Note 1: The attachment lenses are not used.
- 2) Install the minipattern box so that the distance between it and the front of lens of camera is less than 3 cm.
- 3) Make the height of minipattern box and the camera equal.
- 4) Check the output voltage of the regulated power supply is the specified voltage ± 0.01 Vdc.
- 5) Check that the center of Siemens star chart meets the center of shot image screen with the zoom lens at TELE end and WIDE end respectively.

Specified voltage: The specified voltage varies according to the minipattern box, so adjustment the power supply output voltage to the specified voltage written on the sheet which is supplied with the minipattern box.

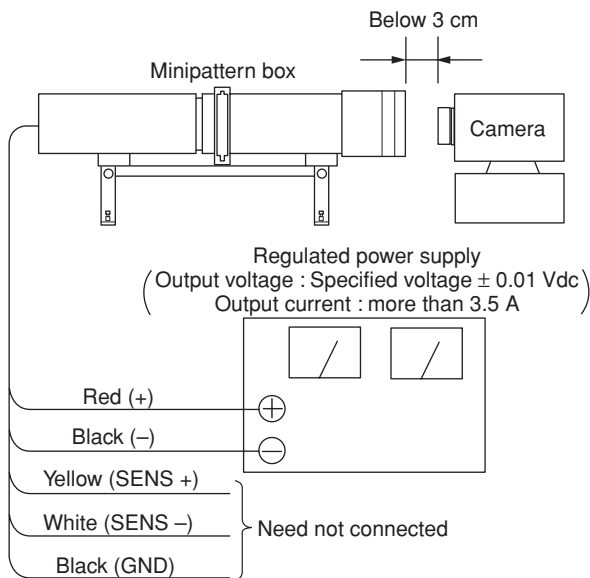


Fig. 6-1-12

[Preparation (Using the flange back adjustment jig)] (Illuminance: 950 to 1050 lux)

Note 2: When using the flange back adjustment jig, take care of the following points:

- For the illumination, use a light source such as an incandescent lamp or inverter type fluorescent light free from flickering.
 - Do not make an adjustment in the environment where fluorescent lamp flickering occurs even if the illuminance can be ensured with the room illumination only. Use an incandescent lamp or inverter type fluorescent light at a place free from the influence of room illumination.
- 1) Install the flange back adjustment jig so that the distance between it and the front of lens of camera is less than 3 cm.
 - 2) Make the height of flange back adjustment jig and the camera equal.
 - 3) Check that the center of chart meets the center of shot image screen with the zoom lens at TELE end and WIDE end respectively.

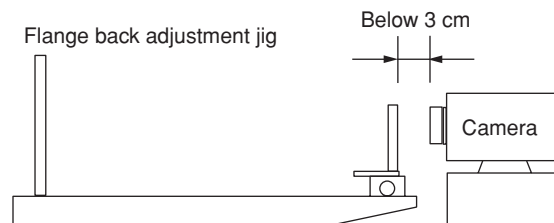
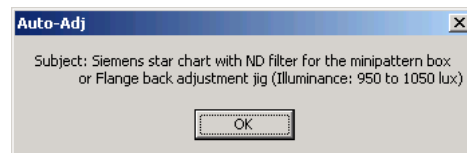


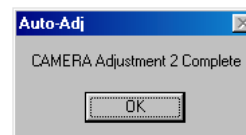
Fig. 6-1-13

[Adjusting method]

- 1) Click the **[Start]** button of the CAMERA Adjustment 2.
- 2) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”.
- 3) Upon successful completion of the “1. Data Setting during Camera Adj.”, the following message is displayed. Set the subject by referring to “Preparation”.



- 4) If the **[OK]** button is clicked, “2. Flange Back Adj.” and “3. Release of Data Setting during Camera Adj.” will be executed.
- 5) Upon successful completion of all items of the CAMERA Adjustment 2, the following message is displayed. Click the **[OK]** button.



**5. CAMERA Adjustment 2
(Using the flange back adjustment chart and subject more than 500 m away)**

5-1. CAMERA Adjustment 2 (1)

[Automatic Adjustment Program execution items and sequence]

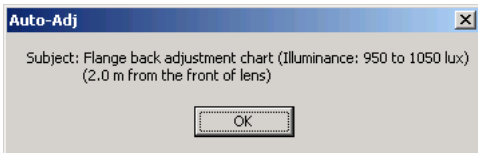
1. Data Setting during Camera Adj.
2. Flange Back (1) Adj.
3. Release of Data Setting during Camera Adj.

[Preparation]

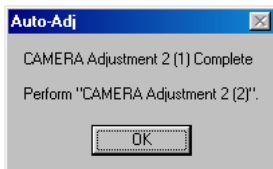
- 1) Place the Flange back adjustment chart at 2 m position away from the lens.
- 2) Check that the center of Flange back adjustment chart meets the center of shot image screen with the zoom lens at TELE end and WIDE end respectively.

[Adjusting method]

- 1) Click the **[Start (1)]** button of the CAMERA Adjustment 2.
- 2) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”.
- 3) Upon successful completion of the “1. Data Setting during Camera Adj.”, the following message is displayed. Set the subject by referring to “Preparation”.



- 4) If the **[OK]** button is clicked, “2. Flange Back (1) Adj.” and “3. Release of Data Setting during Camera Adj.” will be executed.
- 5) Upon successful completion of all items of the CAMERA Adjustment 2 (1), the following message is displayed. Click the **[OK]** button.



- 6) Perform “CAMERA Adjustment 2 (2)”.

5-2. CAMERA Adjustment 2 (2)

[Automatic Adjustment Program execution items and sequence]

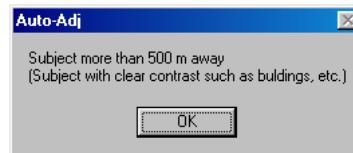
1. Data Setting during Camera Adj.
2. Flange Back (2) Adj.
3. Release of Data Setting during Camera Adj.

[Preparation]

- 1) Set the zoom lens to the TELE end and expose a subject that is more than 500 m away.
(subjects with clear contrast such as building, etc.)
(Nearby subjects less than 500 m away should not be in the screen)

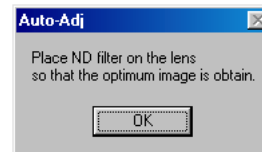
[Adjusting method]

- 1) Click the **[Start (2)]** button of the CAMERA Adjustment 2.
- 2) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”.
- 3) Upon successful completion of the “1. Data Setting during Camera Adj.”, the following message is displayed. Set the subject by referring to “Preparation”.

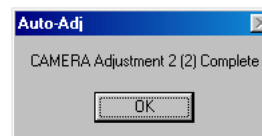


- 4) If the **[OK]** button is clicked, “2. Flange Back (2) Adj.” will be executed.

The following message is displayed during the execution of adjustment, and then place the ND filter on the lens so as to obtain the optimum image.



- 5) If “2. Flange Back Adj.” completed successfully, “3. Release of Data Setting during Camera Adj.” will be executed.
- 6) Upon successful completion of all items of the CAMERA Adjustment 2 (2), the following message is displayed. Click the **[OK]** button.



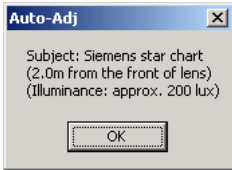
6. CAMERA Adjustment 3

[Automatic Adjustment Program execution items and sequence]

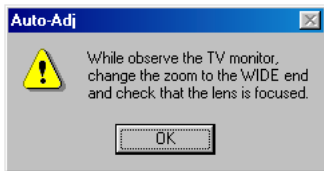
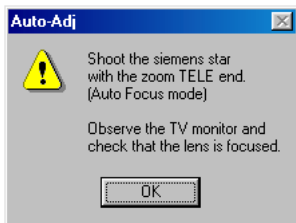
1. Data Setting during Camera Adj.
2. Flange Back Check
3. Release of Data Setting during Camera Adj.

[Adjusting method]

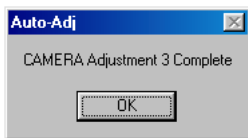
- 1) Click the **[Start]** button of the CAMERA Adjustment 3.
- 2) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”.
- 3) Upon successful completion of the “1. Data Setting during Camera Adj.”, the following message is displayed. Set the subject in accordance with the message.



- 4) If the **[OK]** button is clicked, “2. Flange Back Check” is executed. The following messages are displayed, and then operate the camera to make a check in accordance with the messages.



- 5) Upon completion of “2. Flange Back Check”, “3. Release of Data Setting during Camera Adj.” is executed.
- 6) Upon successful completion of all items of the CAMERA Adjustment 3, the following message is displayed. Click the **[OK]** button.



7. CAMERA Adjustment 4

[Automatic Adjustment Program execution items and sequence]

1. Data Setting during Camera Adj.
2. Picture Frame Setting (Center Frame)
3. F No. Standard Data Input
4. MAX GAIN Adj.
5. Release of Data Setting during Camera Adj.

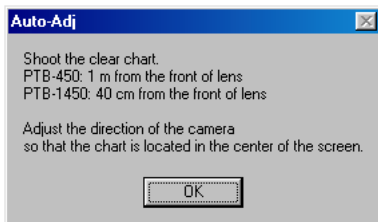
[Adjusting method]

- 1) Select the model (NTSC Model or PAL Model) with the Model Select radio button.

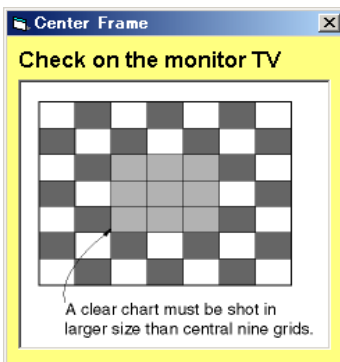
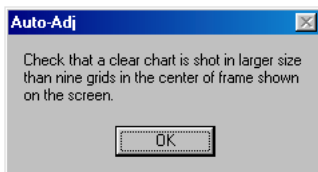
Note: NTSC model: DCR-DVD610

PAL model: DCR-DVD110E/DVD115E/DVD610E

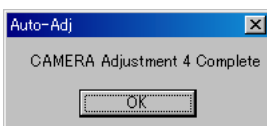
- 2) Click the **[Start]** button of the CAMERA Adjustment 4.
- 3) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”.
- 4) Upon successful completion of the “1. Data Setting during Camera Adj.”, the following message is displayed during the execution of “2. Picture Frame Setting (Center Frame)”. Set the subject in accordance with the message.



- 5) If the **[OK]** button is clicked, the following message is displayed, and then check the size of clear chart shot on the monitor screen.



- 6) After the checking, if the **[OK]** button in the message window is clicked, the adjustment items from “3. F No. Standard Data Input” to “4. MAX GAIN Adj.” are executed.
- 7) Upon successful completion of the “4. MAX GAIN Adj.”, “5. Release of Data Setting during Camera Adj.” is executed.
- 8) Upon successful completion of all items of the CAMERA Adjustment 4, the following message is displayed. Click the **[OK]** button.



8. CAMERA Adjustment 5

[Automatic Adjustment Program execution items and sequence]

1. Data Setting during Camera Adj.
2. Picture Frame Setting (Color Reproduction Adjustment Frame)
3. Color Reproduction Adj.
4. Color Reproduction Check
5. Picture Frame Setting (AWB Adjustment Frame)
6. AWB & LV Standard Data Input
7. AWB Adj.
8. AWB Check
9. Release of Data Setting during Camera Adj.

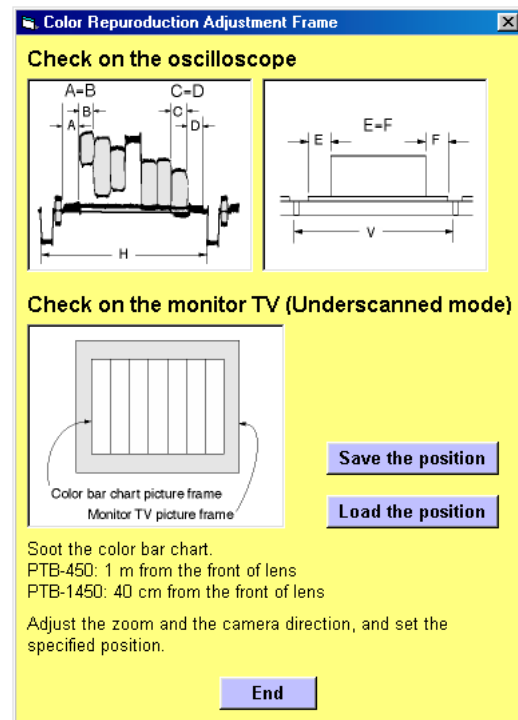
[Adjusting method]

- 1) Select the model (NTSC Model or PAL Model) with the Model Select radio button.

Note: NTSC model: DCR-DVD610

PAL model: DCR-DVD110E/DVD115E/DVD610E

- 2) Click the **[Start]** button of the CAMERA Adjustment 5.
- 3) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”.
- 4) Upon successful completion of the “1. Data Setting during Camera Adj.”, “2. Picture Frame Setting (Color Reproduction Adjustment Frame)” is executed and the following message is displayed. Adjust the zoom and camera direction and then set the picture frame. After the setting finished, click the **[End]** button.



The buttons on this screen provide the following functions:

[Save the position] button

Saves the camera zoom and focus position data.

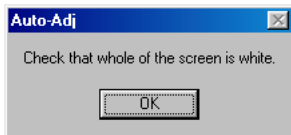
[Load the position] button

Reads the camera zoom and focus position data saved last and moves the camera zoom and focus to that position.

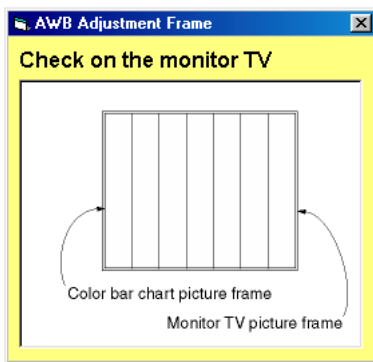
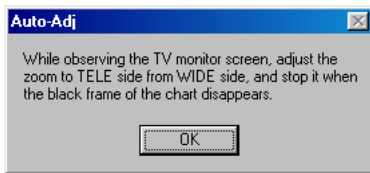
Note 1: The zoom and focus position data are saved with “DCR_DVD610_ZoomFocusData.txt” file name in the same holder as the Automatic Adjustment Program. No position data can be read if this file is moved or deleted.

Note 2: Only the latest position data can be saved. If the **[Save the position]** button is clicked, the latest data are saved overwriting the previous data.

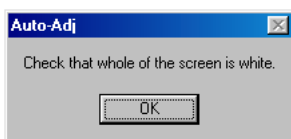
- 5) After setting the picture frame, if the **[End]** button is clicked, “3. Color Reproduction Adj.” and the adjustment items of “4. Color Reproduction Check” are executed. The following messages are displayed in the order given below during the execution. Then, change the chart in accordance with the messages.



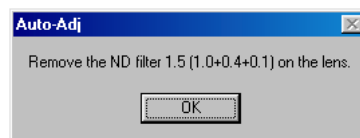
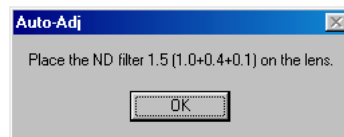
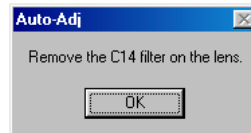
- 6) Upon successful completion of the “7. Color Reproduction Check”, the following message is displayed. Then, set the picture frame in accordance with the message.



- 7) If the **[OK]** button is clicked, “5. Picture Frame Setting (AWB Adjustment Frame)” is executed. The following messages are displayed in the order given below during the execution. Then, change the chart in accordance with the messages.



- 8) After the setting, if the **[OK]** button is clicked, the adjustment items from “6. AWB & LV Standard Data Input” to “8. AWB Check” are executed. During the execution, the following messages are displayed in the order given below. Place or remove the filters on the lens in accordance with the messages.



- 9) Upon completion of “8. AWB Check”, “9. Release of Data Setting during Camera Adj.” is executed

- 10) Upon successful completion of all items of the CAMERA Adjustment 5, the following message is displayed. Click the **[OK]** button.



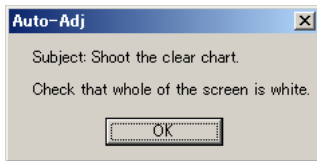
9. CAMERA Adjustment 6

[Automatic Adjustment Program execution items and sequence]

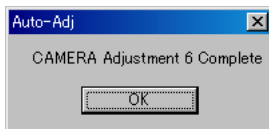
1. Data Setting during Camera Adj.
2. Black Defect Adj.
3. Release of Data Setting during Camera Adj.

[Adjusting method]

- 1) Click the **[Start]** button of the CAMERA Adjustment 6.
- 2) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”.
- 3) Upon successful completion of the “1. Data Setting during Camera Adj.”, the following message is displayed. Then, set the subject in accordance with the message.



- 4) Click the **[OK]** button, and the “2. Black Defect Adj.” will be executed.
- 5) Upon completion of “2. Black Defect Adj.”, “3. Release of Data Setting during Camera Adj.” is executed.
- 6) Upon successful completion of all items of the CAMERA Adjustment 6, the following message is displayed. Click the **[OK]** button.



1-7. CAMERA SYSTEM ADJUSTMENTS (MEGA model)

1. Function of Each Button on Camera System Adjustment Screen

Click the **CAMERA SYSTEM ADJUSTMENT** button on the Main Menu screen, and the “CAMERA SYSTEM ADJUSTMENT” screen in Fig. 6-1-14 will appear.

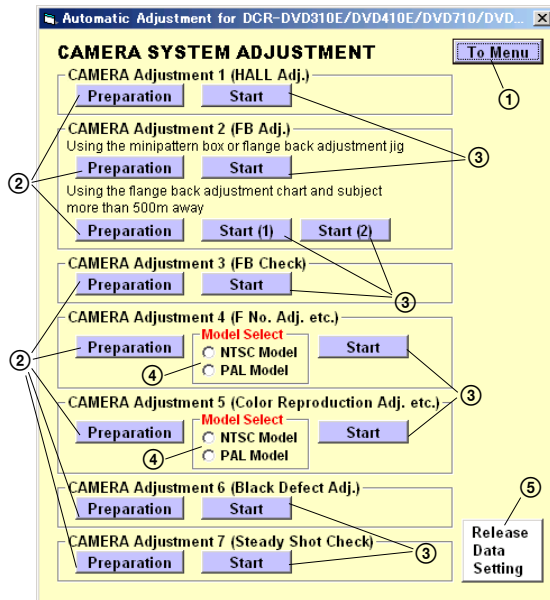


Fig. 6-1-14

- ① **To Menu** button
Return to the main menu.
- ② **Preparation** button
Notes for adjustment or jigs used are displayed.
- ③ **Start** button
Each adjustment from “Camera Adjustment 1” to “Camera Adjustment 7” starts.
- ④ **Model Select** radio button
Selects the model to be adjusted.
Note: NTSC model: DCR-DVD710/DVD810
PAL model: DCR-DVD310E/DVD410E/DVD710E/
DVD810E
- ⑤ **Release Data Setting** button
The data setting at the adjustment is cancelled.
During the data setting, the button color changes from “white” to “red”. When the data setting is cancelled, the button color returns to “white”.
(Use this button when an error occurred in the camera adjustment. If the adjustment completed successfully, the data setting is automatically cancelled and the button color returns to “white”.)

2. Adjustment Items of Camera System Adjustment

The adjustment items of camera system adjustment are as listed in Table 6-1-6. The Automatic Adjustment Program divides the adjustment items into seven, camera adjustment 1-7. Clicking either CAMERA Adjustment Start button allows the adjustment item which corresponds to that button to be executed.

The adjustment conditions of the subject and filter vary depending on which item is adjusted. The Adjustment Program displays an instruction for the subject and filter as a message during the adjustment.

Button Name	Adjustment	Subject	Adjusting Address		
			Block	Page	Address
CAMERA Adjustment 1	HALL Adj.	Not required	11	61	0150 to 0159, 0190 to 019B
CAMERA Adjustment 2	Flange Back Adj.	Siemens star chart with ND filter for minipattern box (Note) or Flange back adjustment jig	11	61	0020 to 0030, 004C, 004D
		Flange back adjustment chart and subject more than 500 m away			
CAMERA Adjustment 3	Flange Back Check	Siemens star chart	-	-	-
CAMERA Adjustment 4	F No. Standard Data Input	Clear chart (Center frame)	11	61	0160 to 017F
	MAX GAIN Adj.		11	61	015C to 015F
	Mechanical Shutter Adj.		11	61	0120 to 0136
CAMERA Adjustment 5	Color Reproduction Adj.	Color bar chart (Color reproduction adjustment frame)	11	61	0060 to 006E
	Color Reproduction Check		-	-	-
	AWB & LV Standard Data Input	Clear chart (All White frame)	11	61	0074 to 007B, 0180 to 018B, 01C0 to 01C3
	AWB Adj.	Clear chart (All White frame) Filter C14 for color temperature correction	11	61	0070 to 0073, 008C to 0093, 01C4 to 01C7
	AWB Check	Clear chart (All White frame) ND filter 1.0, 0.4 and 0.1	-	-	-
CAMERA Adjustment 6	Black Defect Adj.	Clear chart (All White) (Shoot the clear chart with the zoom TELE end.)	11	61	00C0 to 011D, 01A0 to 01B3
CAMERA Adjustment 7	Steady shot Check	Not required	-	-	-

Note: Dark Siemens star chart.

Table 6-1-6

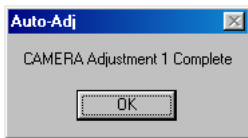
3. CAMERA Adjustment 1

[Automatic Adjustment Program execution items and sequence]

1. Data Setting during Camera Adj.
2. HALL Adj.
3. Release of Data Setting during Camera Adj.

[Adjusting method]

- 1) Click the **[Start]** button of the CAMERA Adjustment 1.
- 2) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”
- 3) If “1. Data Setting during Camera Adj.” completed successfully, and the items “2. HALL Adj.” and “3. Release of Data Setting during Camera Adj.” will be executed.
- 4) Upon successful completion of all items of the CAMERA Adjustment 1, the following message is displayed. Click the **[OK]** button.



4. CAMERA Adjustment 2 (Using the minipattern box or flange back adjustment jig)

[Automatic Adjustment Program execution items and sequence]

1. Data Setting during Camera Adj.
2. Flange Back Adj.
3. Release of Data Setting during Camera Adj.

[Preparation (Using the minipattern box)]

- 1) The minipattern box is installed as shown in the following figure.
Note 1: The attachment lenses are not used.
- 2) Install the minipattern box so that the distance between it and the front of lens of camera is less than 3 cm.
- 3) Make the height of minipattern box and the camera equal.
- 4) Check the output voltage of the regulated power supply is the specified voltage ± 0.01 Vdc.
- 5) Check that the center of Siemens star chart meets the center of shot image screen with the zoom lens at TELE end and WIDE end respectively.

Specified voltage: The specified voltage varies according to the minipattern box, so adjustment the power supply output voltage to the specified voltage written on the sheet which is supplied with the minipattern box.

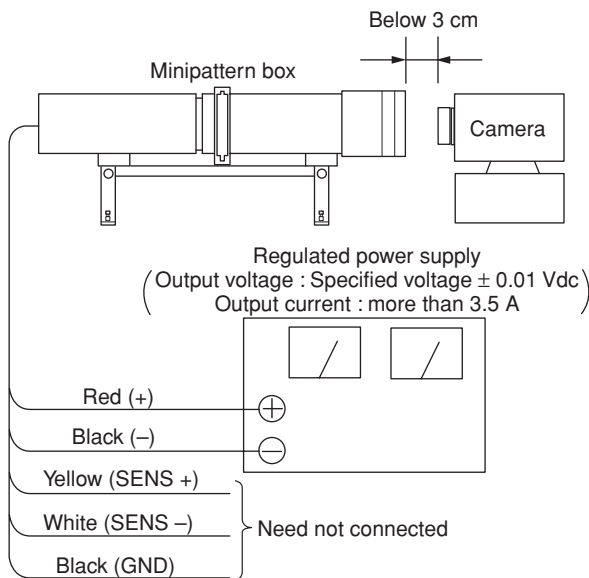


Fig. 6-1-15

[Preparation (Using the flange back adjustment jig)] (Illuminance: 950 to 1050 lux)

Note 2: When using the flange back adjustment jig, take care of the following points:

- For the illumination, use a light source such as an incandescent lamp or inverter type fluorescent light free from flickering.
 - Do not make an adjustment in the environment where fluorescent lamp flickering occurs even if the illuminance can be ensured with the room illumination only. Use an incandescent lamp or inverter type fluorescent light at a place free from the influence of room illumination.
- 1) Install the flange back adjustment jig so that the distance between it and the front of lens of camera is less than 3 cm.
 - 2) Make the height of flange back adjustment jig and the camera equal.
 - 3) Check that the center of chart meets the center of shot image screen with the zoom lens at TELE end and WIDE end respectively.

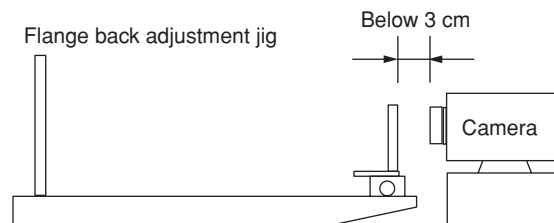
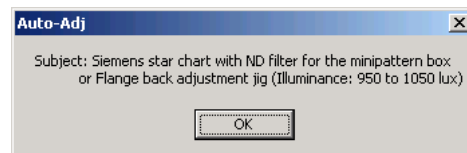


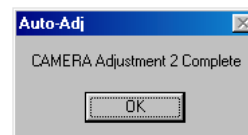
Fig. 6-1-16

[Adjusting method]

- 1) Click the **[Start]** button of the CAMERA Adjustment 2.
- 2) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”.
- 3) Upon successful completion of the “1. Data Setting during Camera Adj.”, the following message is displayed. Set the subject by referring to “Preparation”.



- 4) If the **[OK]** button is clicked, “2. Flange Back Adj.” and “3. Release of Data Setting during Camera Adj.” will be executed.
- 5) Upon successful completion of all items of the CAMERA Adjustment 2, the following message is displayed. Click the **[OK]** button.



**5. CAMERA Adjustment 2
(Using the flange back adjustment chart and subject more than 500 m away)**

5-1. CAMERA Adjustment 2 (1)

[Automatic Adjustment Program execution items and sequence]

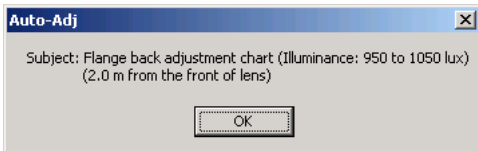
1. Data Setting during Camera Adj.
2. Flange Back (1) Adj.
3. Release of Data Setting during Camera Adj.

[Preparation]

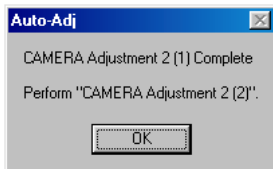
- 1) Place the Flange back adjustment chart at 2 m position away from the lens.
- 2) Check that the center of Flange back adjustment chart meets the center of shot image screen with the zoom lens at TELE end and WIDE end respectively.

[Adjusting method]

- 1) Click the **[Start (1)]** button of the CAMERA Adjustment 2.
- 2) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”.
- 3) Upon successful completion of the “1. Data Setting during Camera Adj.”, the following message is displayed. Set the subject by referring to “Preparation”.



- 4) If the **[OK]** button is clicked, “2. Flange Back (1) Adj.” and “3. Release of Data Setting during Camera Adj.” will be executed.
- 5) Upon successful completion of all items of the CAMERA Adjustment 2 (1), the following message is displayed. Click the **[OK]** button.



- 6) Perform “CAMERA Adjustment 2 (2)”.

5-2. CAMERA Adjustment 2 (2)

[Automatic Adjustment Program execution items and sequence]

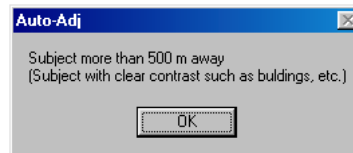
1. Data Setting during Camera Adj.
2. Flange Back (2) Adj.
3. Release of Data Setting during Camera Adj.

[Preparation]

- 1) Set the zoom lens to the TELE end and expose a subject that is more than 500 m away.
(subjects with clear contrast such as building, etc.)
(Nearby subjects less than 500 m away should not be in the screen)

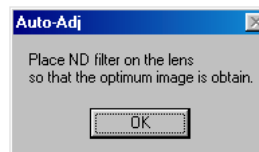
[Adjusting method]

- 1) Click the **[Start (2)]** button of the CAMERA Adjustment 2.
- 2) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”.
- 3) Upon successful completion of the “1. Data Setting during Camera Adj.”, the following message is displayed. Set the subject by referring to “Preparation”.

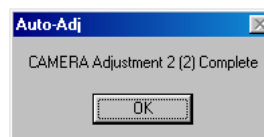


- 4) If the **[OK]** button is clicked, “2. Flange Back (2) Adj.” will be executed.

The following message is displayed during the execution of adjustment, and then place the ND filter on the lens so as to obtain the optimum image.



- 5) If “2. Flange Back Adj.” completed successfully, “3. Release of Data Setting during Camera Adj.” will be executed.
- 6) Upon successful completion of all items of the CAMERA Adjustment 2 (2), the following message is displayed. Click the **[OK]** button.



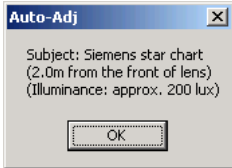
6. CAMERA Adjustment 3

[Automatic Adjustment Program execution items and sequence]

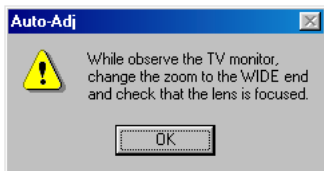
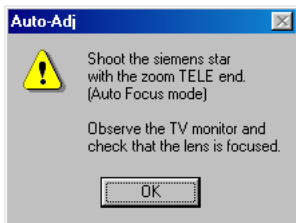
1. Data Setting during Camera Adj.
2. Flange Back Check
3. Release of Data Setting during Camera Adj.

[Adjusting method]

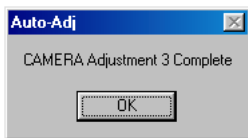
- 1) Click the **[Start]** button of the CAMERA Adjustment 3.
- 2) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”.
- 3) Upon successful completion of the “1. Data Setting during Camera Adj.”, the following message is displayed. Set the subject in accordance with the message.



- 4) If the **[OK]** button is clicked, “2. Flange Back Check” is executed. The following messages are displayed, and then operate the camera to make a check in accordance with the messages.



- 5) Upon completion of “2. Flange Back Check”, “3. Release of Data Setting during Camera Adj.” is executed.
- 6) Upon successful completion of all items of the CAMERA Adjustment 3, the following message is displayed. Click the **[OK]** button.



7. CAMERA Adjustment 4

[Automatic Adjustment Program execution items and sequence]

1. Data Setting during Camera Adj.
2. Picture Frame Setting (Center Frame)
3. F No. Standard Data Input
4. MAX GAIN Adj.
5. Mechanical Shutter Adj.
6. Release of Data Setting during Camera Adj.

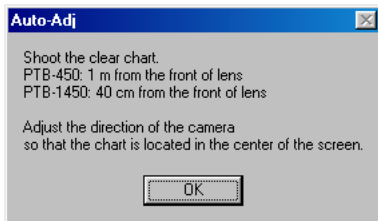
[Adjusting method]

- 1) Select the model (NTSC Model or PAL Model) with the Model Select radio button.

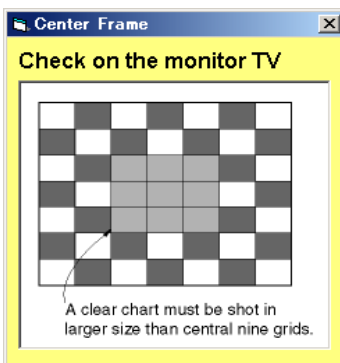
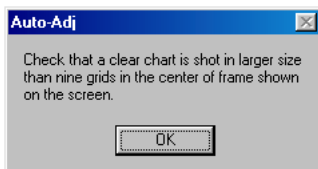
Note: NTSC model: DCR-DVD710/DVD810

PAL model: DCR-DVD310E/DVD410E/DVD710E/
DVD810E

- 2) Click the **[Start]** button of the CAMERA Adjustment 4.
- 3) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”.
- 4) Upon successful completion of the “1. Data Setting during Camera Adj.”, the following message is displayed during the execution of “2. Picture Frame Setting (Center Frame)”. Set the subject in accordance with the message.

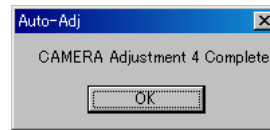


- 5) If the **[OK]** button is clicked, the following message is displayed, and then check the size of clear chart shot on the monitor screen.



- 6) After the checking, if the **[OK]** button in the message window is clicked, the adjustment items from “3. F No. Standard Data Input” to “5. Mechanical Shutter Adj.” are executed.
- 7) Upon successful completion of the “5. Mechanical Shutter Adj.”, “6. Release of Data Setting during Camera Adj.” is executed.

- 8) Upon successful completion of all items of the CAMERA Adjustment 4, the following message is displayed. Click the **[OK]** button.



8. CAMERA Adjustment 5

[Automatic Adjustment Program execution items and sequence]

1. Data Setting during Camera Adj.
2. Picture Frame Setting (Color Reproduction Adjustment Frame)
3. Color Reproduction Adj.
4. Color Reproduction Check
5. Picture Frame Setting (AWB Adjustment Frame)
6. AWB & LV Standard Data Input
7. AWB Adj.
8. AWB Check
9. Release of Data Setting during Camera Adj.

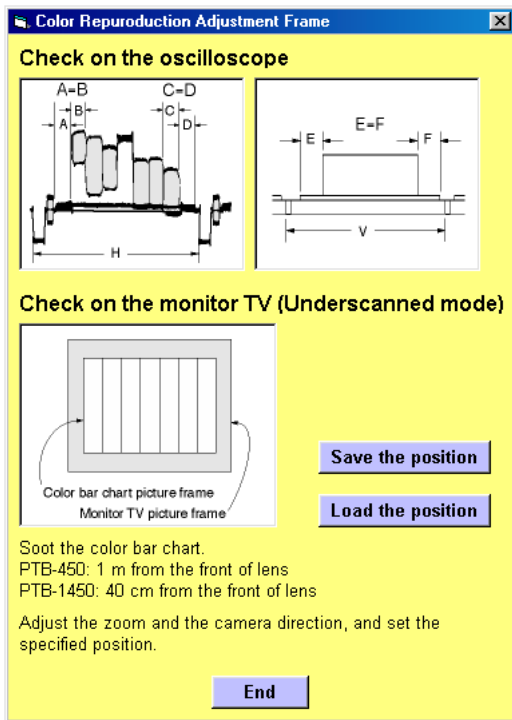
[Adjusting method]

- 1) Select the model (NTSC Model or PAL Model) with the Model Select radio button.

Note: NTSC model: DCR-DVD710/DVD810

PAL model: DCR-DVD310E/DVD410E/DVD710E/DVD810E

- 2) Click the **[Start]** button of the CAMERA Adjustment 5.
- 3) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”.
- 4) Upon successful completion of the “1. Data Setting during Camera Adj.”, “2. Picture Frame Setting (Color Reproduction Adjustment Frame)” is executed and the following message is displayed. Adjust the zoom and camera direction and then set the picture frame. After the setting finished, click the **[End]** button.



The buttons on this screen provide the following functions:

[Save the position] button

Saves the camera zoom and focus position data.

[Load the position] button

Reads the camera zoom and focus position data saved last and moves the camera zoom and focus to that position.

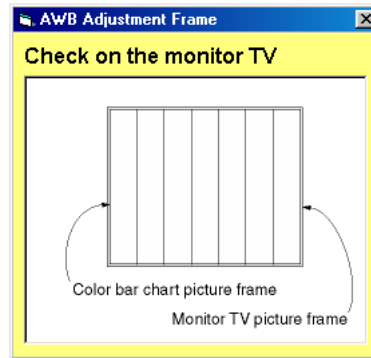
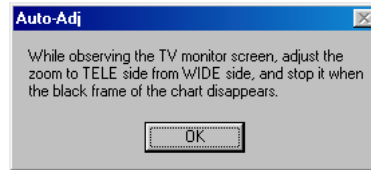
Note 1: The zoom and focus position data are saved with “DCR_DVD710_ZoomFocusData.txt” file name in the same holder as the Automatic Adjustment Program. No position data can be read if this file is moved or deleted.

Note 2: Only the latest position data can be saved. If the **[Save the position]** button is clicked, the latest data are saved overwriting the previous data.

- 5) After setting the picture frame, if the **[End]** button is clicked, “3. Color Reproduction Adj.” and the adjustment items of “4. Color Reproduction Check” are executed. The following messages are displayed in the order given below during the execution. Then, change the chart in accordance with the messages.



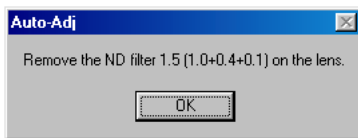
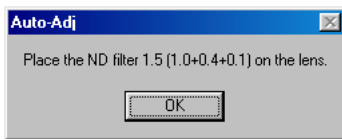
- 6) Upon successful completion of the “4. Color Reproduction Check”, the following message is displayed. Then, set the picture frame in accordance with the message.



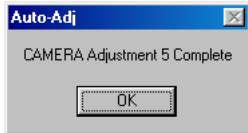
- 7) If the **[OK]** button is clicked, “5. Picture Frame Setting (AWB Adjustment Frame)” is executed. The following messages are displayed in the order given below during the execution. Then, change the chart in accordance with the messages.



- 8) After the setting, if the button is clicked, the adjustment items from “6. AWB Standard Data Input” to “8. AWB Check” are executed. During the execution, the following messages are displayed in the order given below. Place or remove the filters on the lens in accordance with the messages.



- 9) Upon completion of “8. AWB Check”, “9. Release of Data Setting during Camera Adj.” is executed
- 10) Upon successful completion of all items of the CAMERA Adjustment 5, the following message is displayed. Click the button.



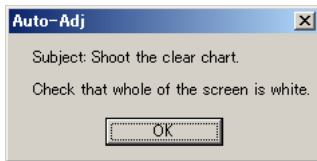
9. CAMERA Adjustment 6

[Automatic Adjustment Program execution items and sequence]

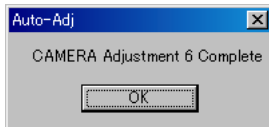
1. Data Setting during Camera Adj.
2. Black Defect Adj.
3. Release of Data Setting during Camera Adj.

[Adjusting method]

- 1) Click the **[Start]** button of the CAMERA Adjustment 6.
- 2) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”.
- 3) Upon successful completion of the “1. Data Setting during Camera Adj.”, the following message is displayed. Then, set the subject in accordance with the message.



- 4) Click the **[OK]** button, and the “2. Black Defect Adj.” will be executed.
- 5) Upon completion of “2. Black Defect Adj.”, “3. Release of Data Setting during Camera Adj.” is executed.
- 6) Upon successful completion of all items of the CAMERA Adjustment 6, the following message is displayed. Click the **[OK]** button.



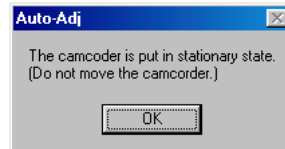
10. CAMERA Adjustment 7

[Automatic Adjustment Program execution items and sequence]

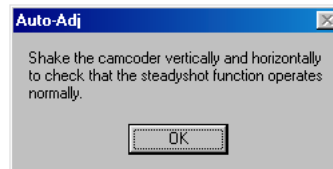
1. Data Setting during Camera Adj.
2. Steady Shot Check
3. Release of Data Setting during Camera Adj.

[Adjusting method]

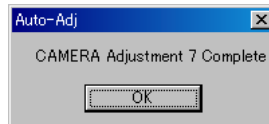
- 1) Click the **[Start]** button of the CAMERA Adjustment 7.
- 2) The Automatic Adjustment Program executes “1. Data Setting during Camera Adj.”.
- 3) Upon successful completion of the “1. Data Setting during Camera Adj.”, the following message is displayed. With the camcorder in stationary state, click the **[OK]** button.



- 4) If the **[OK]** button is clicked, “2. Steady Shot Check” is executed. Upon successful completion of the “2. Steady Shot Check”, the following message is displayed. Check that the steadyspot function operates normally in accordance with the message.



- 5) If the **[OK]** button is clicked, “3. Release of Data Setting during Camera Adj.” is executed.
- 6) Upon successful completion of all items of the CAMERA Adjustment 7, the following message is displayed. Click the **[OK]** button.



1-8. LCD/EVF SYSTEM ADJUSTMENTS

1. Function of Each Button on LCD/EVF System Adjustment Screen

Click the **LCD/EVF SYSTEM ADJUSTMENT** button on the Main Menu screen, and the “LCD/EVF SYSTEM ADJUSTMENT” screen in Fig. 6-1-17 will appear.

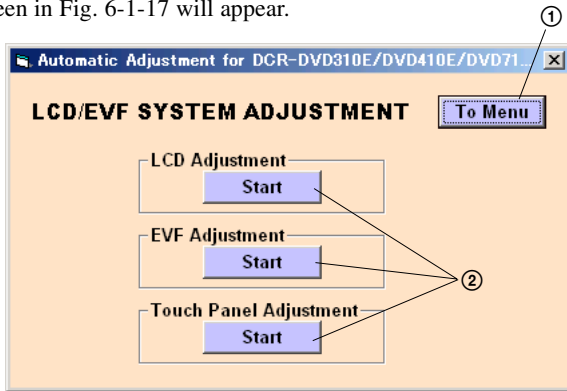


Fig. 6-1-17

① **To Menu** button

Return to the main menu.

② **Start** button

Each adjustment “LCD Adjustment”, “EVF Adjustment” or “Touch Panel Adjustment” starts.

2. Adjustment Items of LCD/EVF System Adjustment

The adjustment items of LCD/EVF system adjustment are as listed in Table 6-1-7. The Automatic Adjustment Program executes the adjustment items if the LCD/EVF Adjustment Start button is clicked.

Button Name	Adjustment	Adjusting Address		
		Block	Page	Address
LCD Adjustment	VCO Adj.	10	60	1050 (NTSC model), 1051 (PAL model)
	Contrast Adj.	10	60	1058
	V-COM Adj.	10	60	1052
	Transmissive Mode White Balance Adj.	10	60	1056, 1057
	Reflective Mode White Balance Adj.	10	60	107B, 107C
EVF Adjustment	VCO Adj.	10	60	103F (NTSC model), 1040 (PAL model)
	Contrast Adj.	10	60	1047
	White Balance Adj.	10	60	1045, 1046
Touch Panel Adjustment	Touch Panel Adj.	(Note)		

Note: The adjustment data cannot be read or written from the SeusEX.

Table 6-1-7

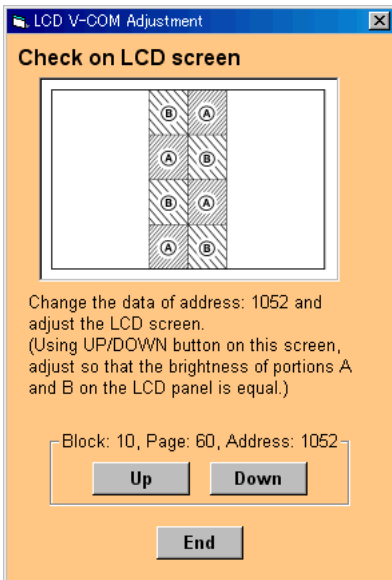
3. LCD Adjustment

[Automatic Adjustment Program execution items and sequence]

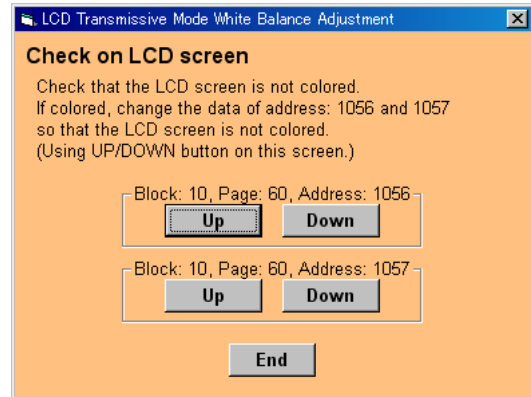
1. Data Setting during LCD/EVF Adj.
2. LCD Automatic Adj.
(VCO Adj., Contrast Adj.)
3. V-COM Adj.
4. Transmissive Mode White Balance Adj.
5. Reflective Mode White Balance Adj.

[Adjusting method]

- 1) Click the **[Start]** button of the LCD Adjustment.
- 2) The Automatic Adjustment Program executes the “1. Data Setting during LCD/EVF Adj.” and “2. LCD Automatic Adj.”.
- 3) After that, the following screen is displayed during the execution of “3. V-COM Adj.”. Using the **[Up]**/**[Down]** button on the screen, adjust so that the brightness of portions A and B on the LCD panel is equal. After the adjustment, click the **[End]** button in the screen.



- 4) If the **[End]** button is clicked, the following screen is displayed during the execution of “4. Transmissive Mode White Balance Adj.”. Check that the LCD screen is not colored. If colored, using the **[Up]**/**[Down]** button on the screen, adjust so that the LCD screen is not colored. After the adjustment, click the **[End]** button in the screen.



- 5) If the **[End]** button is clicked, “5. Reflective Mode White Balance Adj.” will be executed.
- 6) Upon successful completion of all item the LCD Adjustment, the following message is displayed. Click the **[OK]** button.



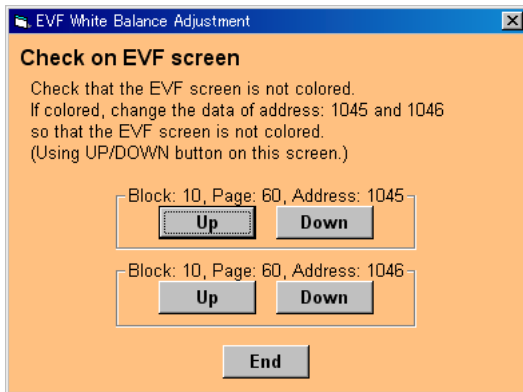
4. EVF Adjustment

[Automatic Adjustment Program execution items and sequence]

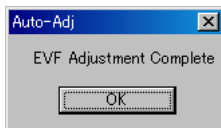
1. Data Setting during LCD/EVF Adj.
2. EVF Automatic Adj.
(VCO Adj., Contrast Adj.)
3. White Balance Adj.

[Adjusting method]

- 1) Click the **[Start]** button of the EVF Adjustment.
- 2) The Automatic Adjustment Program executes the "1. Data Setting during LCD/EVF Adj." and "2. EVF Automatic Adj.".
- 3) After that, the following screen is displayed during the execution of "3. White Balance Adj.". Check that the EVF screen is not colored. If colored, using the **[Up]/[Down]** button on the screen, adjust so that the EVF screen is not colored. After the adjustment, click the **[End]** button in the screen.



- 4) Upon successful completion of all item the EVF Adjustment, the following message is displayed. Click the **[OK]** button.



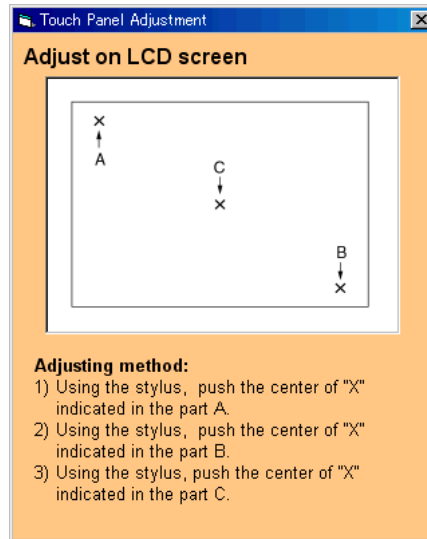
5. Touch Panel Adjustment

[Automatic Adjustment Program execution items and sequence]

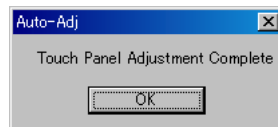
1. Touch Panel Adj.

[Adjusting method]

- 1) Click the **[Start]** button of the Touch Panel Adjustment.
- 2) The Automatic Adjustment Program executes the "1. Touch Panel Adj.1". The following message is displayed, and then adjust the LCD screen in accordance with the instructions given on the screen. After the adjustment, click the **[OK]** button in the message window.



- 3) Upon successful completion of all item the Touch Panel Adjustment, the following message is displayed. Click the **[OK]** button.



1-9. AUDIO SYSTEM ADJUSTMENTS (DCR-DVD115E/DVD310E/DVD410E/DVD710/ DVD710E/DVD810/DVD810E)

1. Function of Each Button on Audio System Adjustment Screen

Click the **AUDIO SYSTEM ADJUSTMENT** button on the Main Menu screen, and the “AUDIO SYSTEM ADJUSTMENT” screen in Fig. 6-1-18 will appear.

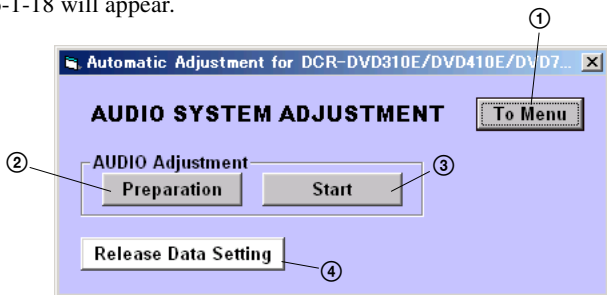


Fig. 6-1-18

- ① **To Menu** button
Return to the main menu.
- ② **Preparation** button
Notes for adjustment or jigs used are displayed.
- ③ **Start** button
“Audio Adjustment” starts.
- ④ **Release Data Setting** button
The data setting at the adjustment is cancelled.
During the data setting, the button color changes from “white” to “red”.
When the data setting is cancelled, the button color returns to “white”. (Use this button when an error occurred in the audio adjustment. If the adjustment completed successfully, the data setting is automatically cancelled and the button color returns to “white”.)

2. Adjustment Items of AUDIO System Adjustment

The adjustment items of audio system adjustment are as listed in Table 6-1-8. The Automatic Adjustment Program executes the adjustment items when the AUDIO Adjustment Start button is clicked.

Button Name	Adjustment	Adjusting Address		
		Block	Page	Address
AUDIO Adjustment	Internal 3ch Microphone Sensitivity Adj.	10	60	0104 to 013F

Table 6-1-8

3. AUDIO Adjustment

Note 1: Perform “AUDIO Adjustment” without inserting disc.

Note 2: AUDIO Adjustment is available only once after the power is turned on. If the adjustment is retried, turn off the power and turn on again.

[Automatic Adjustment Program execution items and sequence]

1. Data Setting during AUDIO Adj.
2. Internal 3ch microphone Adj.
3. Release of Data Setting during Audio Adj.

[Preparation]

Prepare an amplifier built-in speaker for PC and arrange it above the internal 3ch microphone of the camcorder.

- Adjust the speaker position so that it is within ± 3 cm from the center of camcorder internal 3ch microphone at the height of 40 cm.
- The diaphragm of speaker position should be set face down toward the internal 3ch microphone.
- The speaker may be held by hand if it is hard to secure.

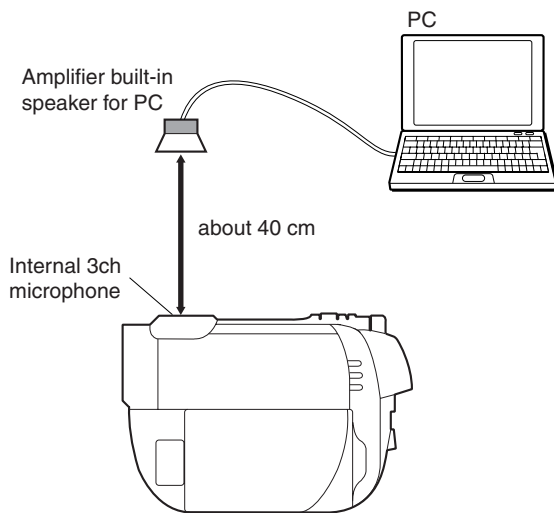
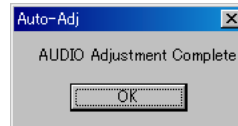


Fig. 6-1-19

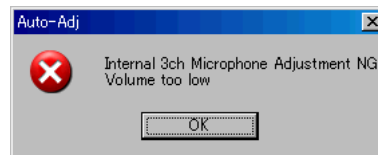
[Adjusting method]

- 1) Play back the adjustment sound source file on the PC.
- 2) Set the speaker volume so that the adjustment signal sound is heard to the extent of the loudness of talking voices.
- 3) Click the **[Start]** button of the AUDIO Adjustment.
- 4) The Automatic Adjustment Program executes “1. Data Setting during Audio Adj.”.
- 5) When “1. Data Setting during Audio Adj.” completed successfully, and the items “2. Internal 3ch microphone Adj.” and “3. Release of Data Setting during Audio Adj.” will be executed.
- 6) Upon successful completion of all items of the AUDIO Adjustment, the following message is displayed. Click the **[OK]** button.



In case of adjustment NG, reduce or increase the speaker volume, and then retry adjustment.

If the Adjustment Program displays a message “Volume too loud” or “Volume too low”, adjust the speaker volume following the message.



1-10. ERROR

In the case of an error during the execution of adjustment, the Automatic Adjustment Program interrupts the processing at that point, and displays an error message, and then terminates the program execution there.

1-10-1. Error Message

When an error message is displayed, perform the remedy given below, and then retry adjustment. If the error message is displayed though the remedy was performed, the circuits will be faulty.

1. Connect Error, Adjust Control Error

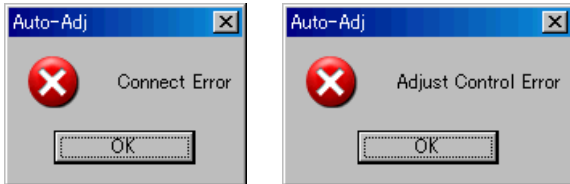


Fig. 6-1-20

Symptom	USB communication with the set is abnormal.
Cause	<ul style="list-style-type: none"> • USB cable is not inserted tightly. • Power supply is not installed correctly. • Communication with SeusEX is abnormal.
Remedy	<ul style="list-style-type: none"> • Disconnect the USB cable once, and then reconnect it tightly and check that the set is in "USB Mode". • Install the power supply correctly. • Start the SeusEX and click the Connect to check that the connection state is established.

2. RESET the CAMERA and Try Again



Fig. 6-1-21

Symptom	The camera is not ready for adjustment.
Cause	Data error exists in the camera.
Remedy	Reset the camera.

3. Adjustment Time Out

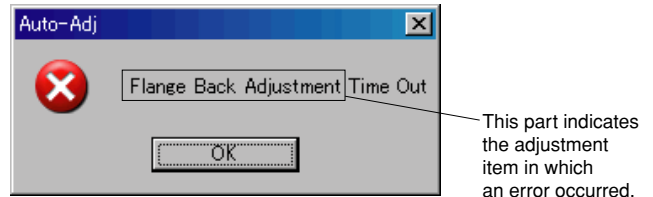


Fig. 6-1-22

Symptom	Adjustment does not finish within the specified time.
Cause	<ul style="list-style-type: none"> • Adjustment conditions are wrong. • Data error exists in the camera.
Remedy	<ul style="list-style-type: none"> • Check that the conditions such as a subject are correct. • Reset the camera.

4. Adjustment NG

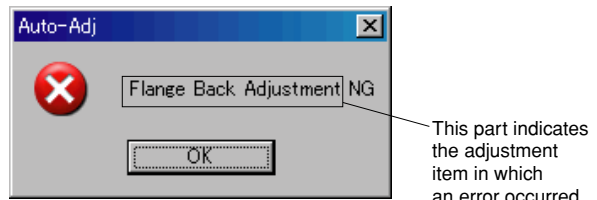


Fig. 6-1-23

Symptom	The adjusted data does not become the specified value.
Cause	<ul style="list-style-type: none"> • Adjustment conditions are wrong. • Data error exists in the camera.
Remedy	<ul style="list-style-type: none"> • Check that the conditions such as a subject are correct. • Reset the camera.

1-10-2. Precautions When an Error Occurred

The Automatic Adjustment Program sets the data for adjustment before the adjustment starts. Accordingly, if the adjustment terminates by an error, the data during the adjustment may be left in the camera.

Note: With this data left in the camera, the camera will not operate normally.

In this case, the **Release Data Setting** button is displayed in “red” on the screen as shown figures below. Click the **Release Data Setting** button to cancel the data setting. When the data setting is cancelled, the button color becomes “white”.

Camera System Adjustment screen

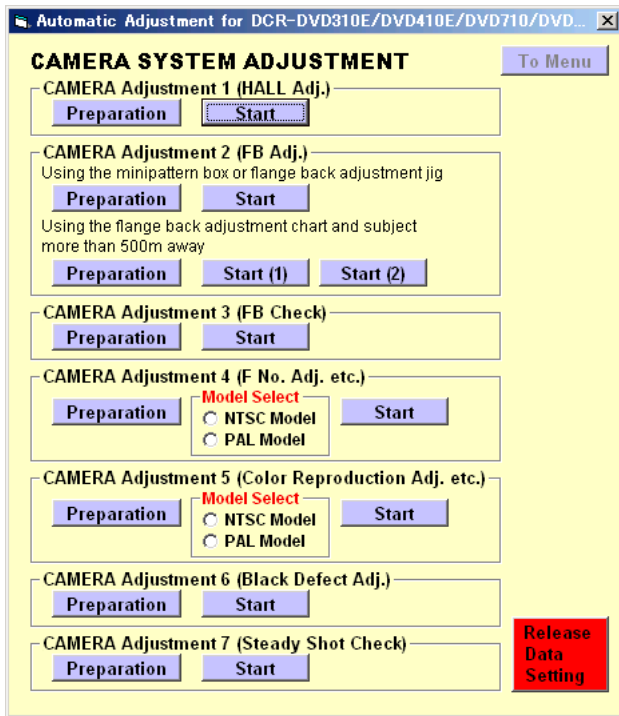


Fig. 6-1-24

Audio System Adjustment screen

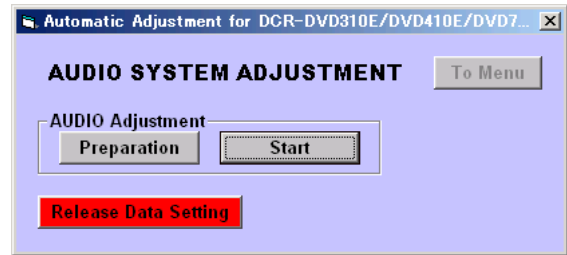


Fig. 6-1-25

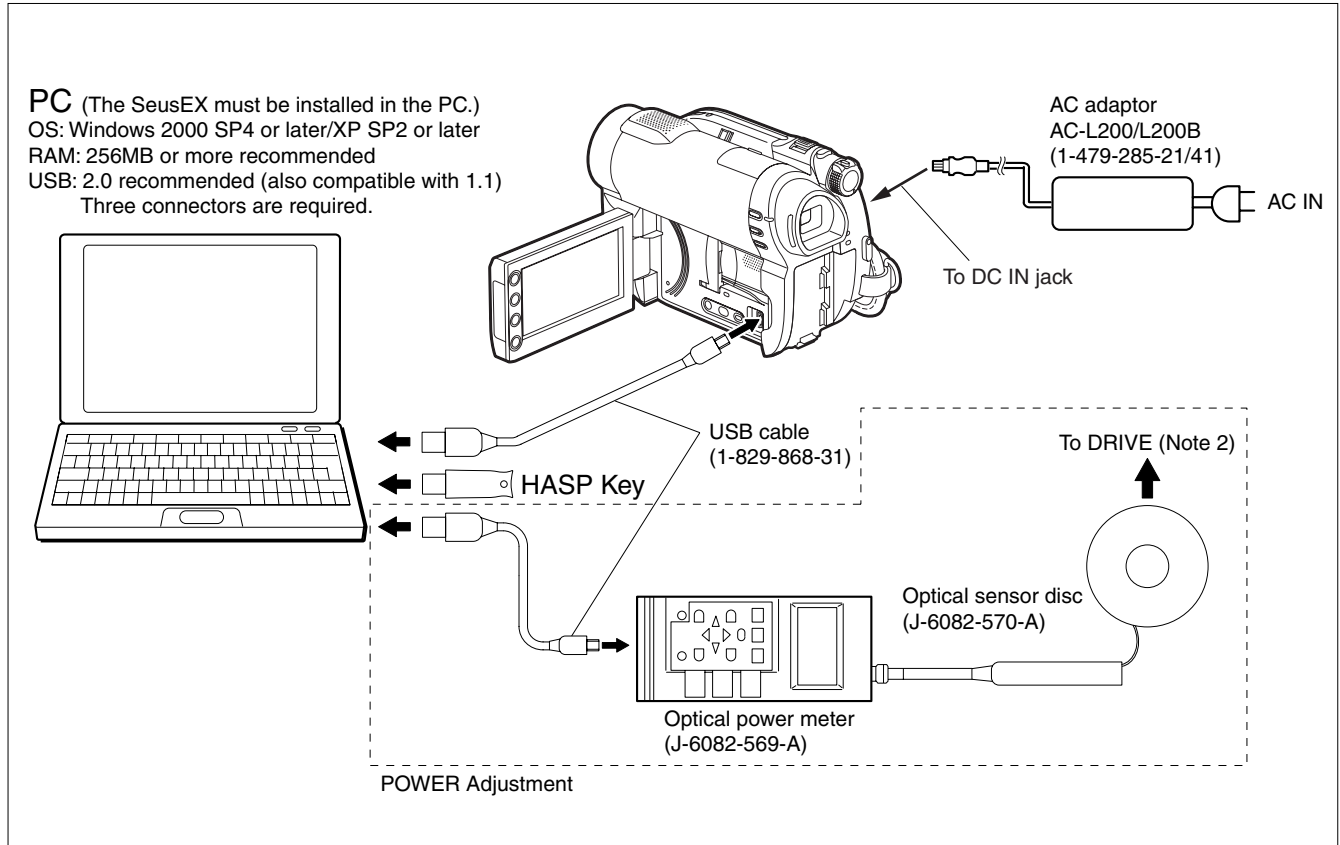
6-2. DRIVE SECTION ADJUSTMENTS

2-1. PREPARATIONS BEFORE ADJUSTMENTS (DRIVE SECTION)

2-1-1. Connection

1) Connect the apparatuses as shown below, and perform adjustment.

Note 1: Before starting the adjustment, remove the disc from the camcorder.



Note 2: Refer to “How to Set the Optical Sensor Disc”.

Fig. 6-2-1

[Connecting method]

- 1) Connect the Camcorder to the PC with a USB cable, and turn on the power switch.
- 2) The USB SELECT menu will appear on the LCD screen of the Camcorder, and then select “USB CONNECT (Memory Stick)” to establish the connection.

Note 3: Don't select “USB CONNECT (Disc)”.



2-1-2. How to Set Optical Sensor Disc

- 1) Before setting the optical sensor disc, remove a lug on the sensor side of the disc.

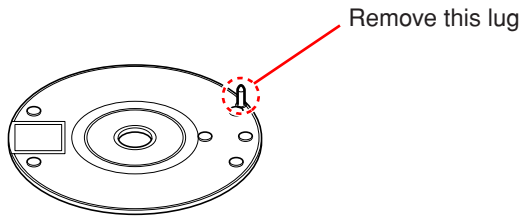


Fig. 6-2-2

- 2) Push in the optical sensor disc until it clicks same as when a disc is set, and adjust the position so that the cable from the sensor comes just above the pickup lens, as shown below. After positioning, fix the disc with a tape so that it does not rotate.

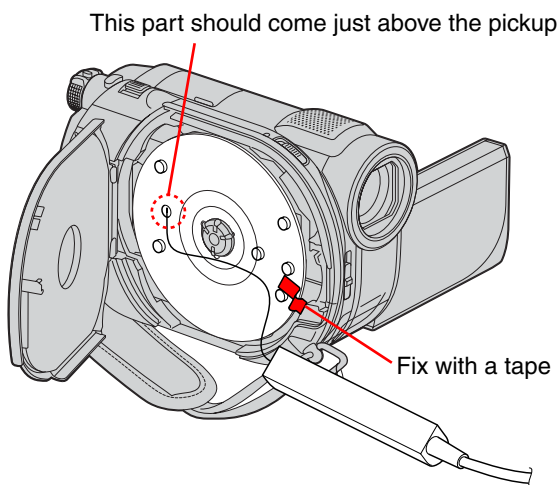


Fig. 6-2-3

2-1-3. Precautions on Adjustment

1. Adjustment data

The adjustment data for the drive block are recorded to the IC4302 on the VC-520 board.

These data cannot be read or written from the adjustment remote commander or SeusCam, unlike the camera and LCD adjustment data.

Accordingly, be sure to adjust all items of the drive adjustment when the following parts were replaced:

- Drive block
- Mounted VC-520 board
- IC4101 (RF process) on the VC-520 board
- IC4201 (DVD DSP) on the VC-520 board
- IC4401 (DVD mecha drive) on the VC-520 board

2. Order of adjustment

Adjust the drive block in the following order:

- 1) POWER Adjustment
- 2) SERVO Adjustment

3. Precaution on the laser diode

In the POWER Adjustment, operate the drive with the disc cover left open. During the adjustment, be sure to observe the following precautions:

- 1) Set the optical sensor disc correctly.
- 2) Keep the distance of more than 30 cm apart from the camcorder.
- 3) Work on the LCD screen side of the camcorder (opposite side of the drive).

Note: 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.

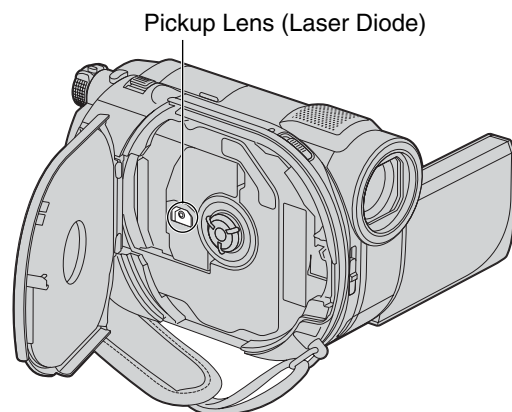


Fig. 6-2-4

2-1-4. Alignment disc

To diagnose and adjust the drive block, the discs listed in the following table are used.

Note 1: Use the specified disc that matches each diagnostic and adjustment item. (A message is displayed by the AUDIT)

If a wrong disc is used, the disc could be destroyed and could not be reused.

Note 2: Handle the disc with care, and before use, check if the disc is scratched or dirty.

Name	Use	Remark
DVD-R Disc for Self Jitter	Diagnosis and adjustment of DVD-R	This disc can be used about 78 times (min. 22 times) for the diagnosis and adjustment. (Note 3)
DVD-RW Reference + DOW Disc	Diagnosis and adjustment of DVD-RW	This disc can be used about 1174 times for the diagnosis and adjustment. (Note 3)
DVD+RDL Self Disc	Diagnosis and adjustment of DVD+RDL	This disc can be used about 38 times (min. 9 times) for the diagnosis and adjustment. (Note 3)

Table 6-2-1

Note 3: If the use counts of the DVD-R Disc for Self Jitter, DVD-RW Reference + DOW Disc, or DVD+RDL Disc for Self Jitter exceed respective limits, the following message will be displayed. Replace it with a new disc and click the **[OK]** button in the message window.

The disc use counts are saved in the PC. Accordingly, the disc used for diagnosis and adjustment, PC and drive adjustment program (AUDIT for 2008) must always be controlled in the same combination.

If the disc is used with another PC or other versions (AUDIT for Service, AUDIT for UX1, etc.), the diagnosis and adjustment will fail and that disc will no longer be able to use.

For reference (Note 3 in Japanese)

注3：DVD-Rセルフジッターディスク、DVD-RWリファレンス+DOWディスクとDVD+RDLセルフジッターディスクは、使用限度を超えると次のメッセージが表示されます。新しいディスクと交換して、メッセージの**[OK]**ボタンをクリックしてください。

ディスクの使用回数は、PC内部に保存されます。このため、診断・調整で使用するディスクとPCおよびドライブ調整プログラム（AUDIT for 2008）の組み合わせには制限があります。（2-1-5. Unique disc IDを参照）

別のPCや他のバージョン（AUDIT for Service, AUDIT for UX1等）でディスクを使用すると、診断・調整が正常に行われずNGとなってしまい、そのディスクが使用不可能になってしまう場合があります。



Fig. 6-2-5

2-1-5. Unique disc ID (For all kind, DVD-RW, DVD-R, DVD+RDL)

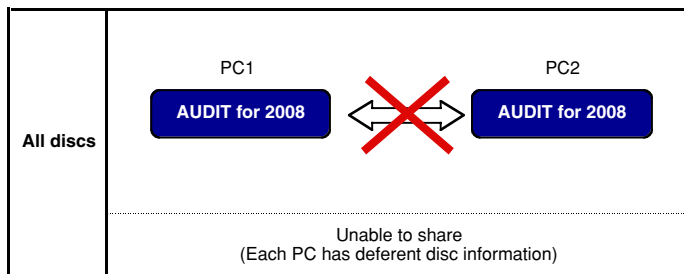
Unique disc ID will be written on the disc which is used first time for AUDIT for 2008.
 At the same time, same disc ID will be stored in the install folder of AUDIT for 2008.
 AUDIT is checking whether these ID is same or not. Thus, the PC and the adj disc must be managed together.
 In fact, adjustment discs can not be swapped between the PC which AUDIT for 2008 is installed each other.

The disk which ID is not stored is considered as new disc (not recorded at all).
 When you use the disc used halfway, it might be possible cause of some error.

1. Disc sharing between the previous AUDIT and AUDIT for 2008

	Start using disc first time is AUDIT for 2008	Start using disc first time is previous AUDIT
DVD-RW	<p>Able to share</p>	<p>Able to share</p>
DVD-R	<p>It is able to use on previous AUDIT but it is unable to use on AUDIT for 2008 again. Due to address mismatch of file management.</p>	<p>Unable to share (AUDIT 2008 detect the disc as new one due to missing disc ID.)</p>
DVD+RDL	<p>It is able to use on previous AUDIT but it is unable to use on AUDIT for 2008 again. Due to address mismatch of file management.</p>	<p>Unable to share AUDIT 2008 detect the disc as new one due to missing disc ID.</p>

2. Disc sharing between the PC which is installed AUDIT for 2008



2-1-6. Installation method for “Audit for 2008”

Support environment: Windows 2000 SP4 or later, Windows XP SP2 or later
(.NET Framework which used in this program may not be installed on previous version of Windows.)

“Audit for 2008” supports all functions of “Audit for 2007”.

It is not necessary to use “Audit for 2007” any more.

Disc set for adjustment which used on “Audit for 2007” can be used on “Audit for 2008” if they aren't used on other PCs before installing “Audit for 2008”.

- 1) Uninstall “Audit for 2007”.
Control Panel → Add or Remove Programs
- 2) Uninstall “Audit for 2008” (If it is already installed).
Control Panel → Add or Remove Programs
- 3) Install .NET Framework 2.0 (only for the first time installation).
Download “dotnetfx.exe” as suitable for your PC environment from Microsoft Web site and install it.
(We confirmed normal operation just on .NET Framework 2.0.
Therefore, we can not guarantee on the other version (over ver. 3.0) of .NET Framework.)
- 4) Install “Audit for 2008”.
Double click Auditfor2008.exe and follow installer.

Note: If it is first time to install .NET Framework 2.0, we recommend to check the security patch by Windows Update, etc. and to install if necessary.

Perform just step 2 and 4 from second installation.

2-2. AUDIT (Drive Adjustment Program)

2-2-1. AUDIT Starting Method

Click the [Start] button on the task bar, and from the [Programs], click [AUDIT for Service] – [AUDIT for 2008], and the AUDIT will start. The SeusEX starts simultaneously with the start of AUDIT, and the operation screen appears only for a moment. Again, the SeusEX starts and the operation screen is displayed, and after it is minimized for display at the lower left of the desktop, the AUDIT operation screen appears. If the SeusEX cannot start (because, for instance, the HASP key is not connected to the PC), the AUDIT also does not start.

2-2-2. Description of Screen

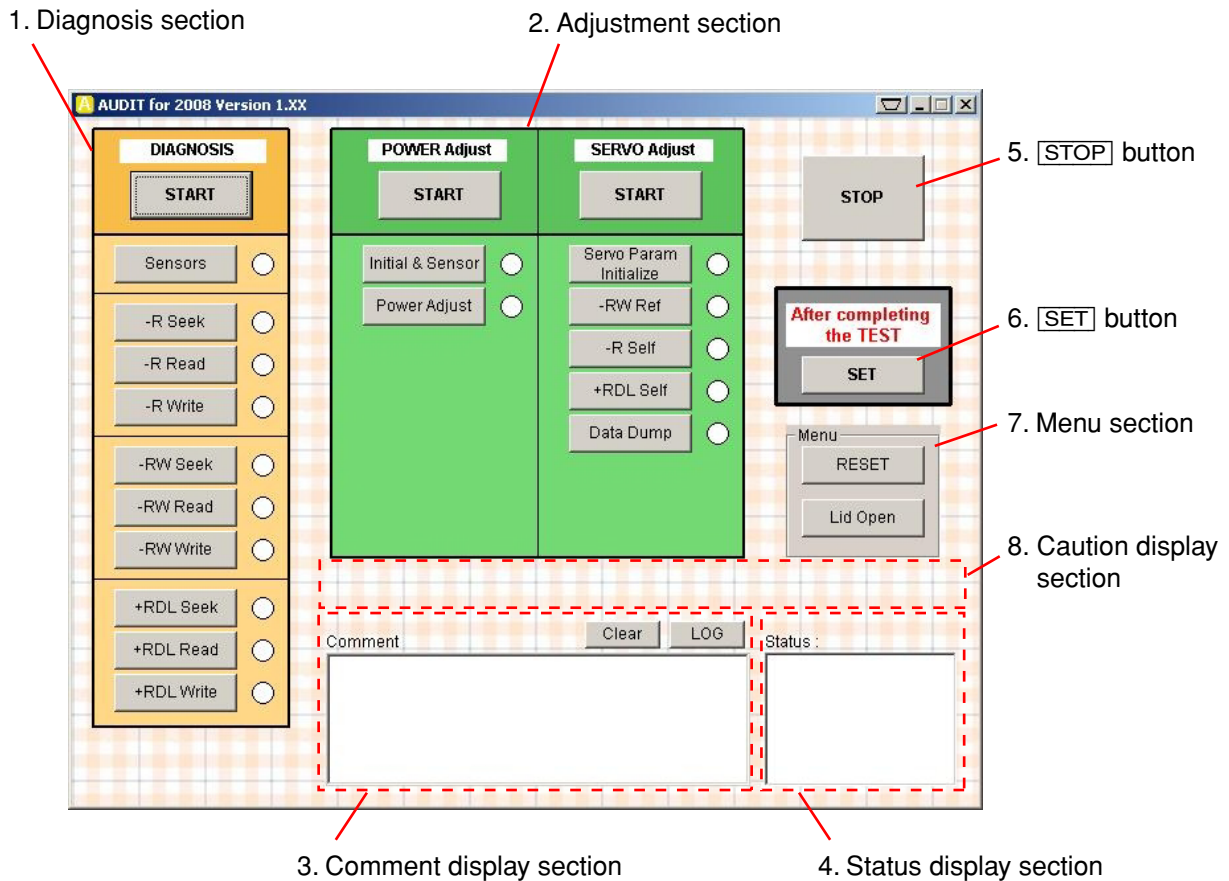


Fig. 6-2-6

1. Diagnosis section

Use these buttons when diagnosing the drive block.

2. Adjustment section

Use these buttons when adjusting the drive block.

3. Comment display section

At the execution of diagnosis and adjustment, its progress situation is displayed.

- 1) **Clear** button

This button clears the comment in the display section.

- 2) **LOG** button

This button saves the comment in the display section as a log file.

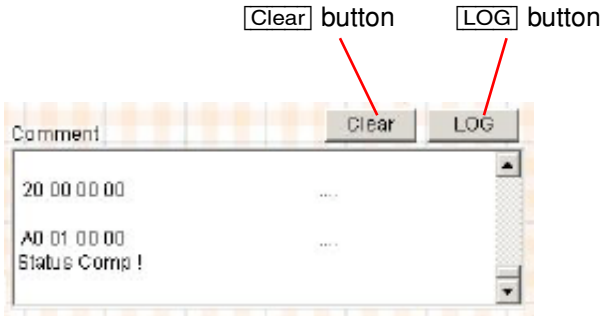


Fig. 6-2-7

4. Status display section

The result of diagnosis and adjustment is displayed.

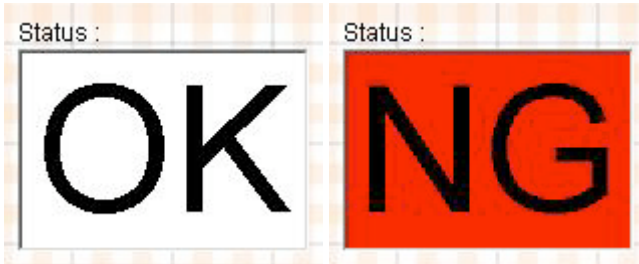


Fig. 6-2-8

5. STOP button

This button stops the diagnosis and adjustment in the midway.

6. SET button (After completing the TEST)

This button cancels the TEST mode set to the cam coder during the diagnosis and adjustment. If the TEST mode is cancelled successfully, the following message is displayed.

Note: Before exiting the AUDIT, be sure to cancel the TEST mode by clicking the SET button of "After completing the TEST". Unless the TEST mode is cancelled, the drive may not operate normally, such that "disc cover does not open", "drive error is displayed", etc..

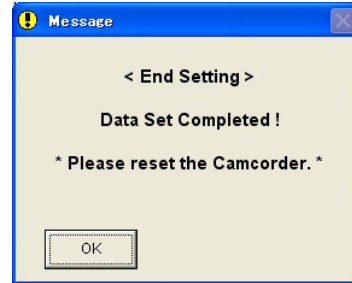


Fig. 6-2-9

7. Menu section

- 1) **RESET** button

This button resets internal register.

(Use this button to interrupt the work so far when diagnosis and adjustment stopped and no response is returned. The work terminates with the previous adjustment data written to the camcoder.)

- 2) **Lid Open** button

This button opens the disc cover.

8. Caution display section

At the execution of POWER Adjustment, the caution of POWER Adjustment is displayed.

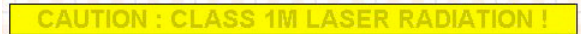
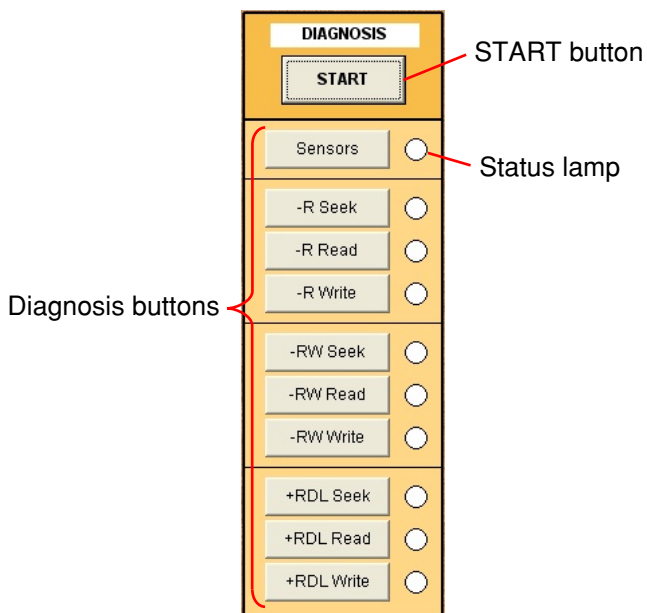


Fig. 6-2-10

2-3. DIAGNOSIS

2-3-1. Menu in Diagnosis Section



START button: All items of diagnosis buttons are executed in the descending order.

Diagnosis button: Only the diagnostic item assigned to the button name is executed.

Status lamp: Diagnosis status is displayed with color.
 White Not diagnosed
 Red blinking Diagnosis in progress
 Green Diagnosis OK
 Red Diagnosis NG


Fig. 6-2-11

2-3-2. Diagnosing Method

Order	Diagnostic item	Message	Disc	Operation
1			No Disc	Click the START button of "DIAGNOSIS".
2	Sensors		No Disc	Check the movement of the pickup lens (Focus direction/Tracking direction), and click the OK button in the message window.
3			No Disc	Check the movement of the sled, and click the OK button in the message window.
4			No Disc	Check the rotation of the spindle, and click the OK button in the message window.

Order	Diagnostic item	Message	Disc	Operation
5	Sensors		No Disc	Set the Optical sensor disc. (At this time, when the Shock Sensor senses a shock normally, this message disappears.)
6		 	Optical Sensor Disc	Set the Optical sensor disc, and with the disc cover left open, click the <input type="button" value="OK"/> button in the message window. (Note 1)
7			DVD-R Disc for Self Jitter	Set the DVD-R Disc for Self Jitter, and then close the disc cover and click the <input type="button" value="OK"/> button in the message window.
8	-R Read			(If the diagnosis result of previous item is OK, this item is executed successively.)
9	-R Write			(If the diagnosis result of previous item is OK, this item is executed successively.)
10	-RW Seek		DVD-RW Reference + DOW Disc	Remove the DVD-R Disc for Self Jitter, and set the DVD-RW Reference + DOW Disc, and then close the disc cover and click the <input type="button" value="OK"/> button in the message window.
11	-RW Read			(If the diagnosis result of previous item is OK, this item is executed successively.)
12	-RW Write			(If the diagnosis result of previous item is OK, this item is executed successively.)

Note 1: In the process of checking optical power, CLASS 1M laser optical radiates.
So do not remove the Optical sensor disc.

Order	Diagnostic item	Message	Disc	Operation
13	+RDL Seek		DVD+RDL Self Disc	Remove the DVD-RW Reference + DOW Disc, and set the DVD+RDL Self Disc, and then close the disc cover and click the OK button in the message window.
14	+RDL Read			(If the diagnosis result of previous item is OK, this item is executed successively.)
15	+RDL Write			(If the diagnosis result of previous item is OK, this item is executed successively.)
16			No Disc	Remove the DVD+RDL Self Disc. (On the AUDIT screen, if the status lamps of respective diagnosis buttons are all lit in green, the diagnosis is over.)

Note 2: Before exiting the AUDIT, click the **SET** button of “After completing the TEST” to cancel the TEST mode.

2-4. POWER ADJUSTMENT

In the POWER Adjustment, operate the drive with the disc cover left open. During the adjustment, be sure to observe the following precautions:

- 1) Set the optical sensor disc correctly.
- 2) Keep the distance of more than 30 cm apart from the camcorder.
- 3) Work on the LCD screen side of the camcorder (opposite side of the drive).

2-4-1. Menu in POWER Adjustment Section

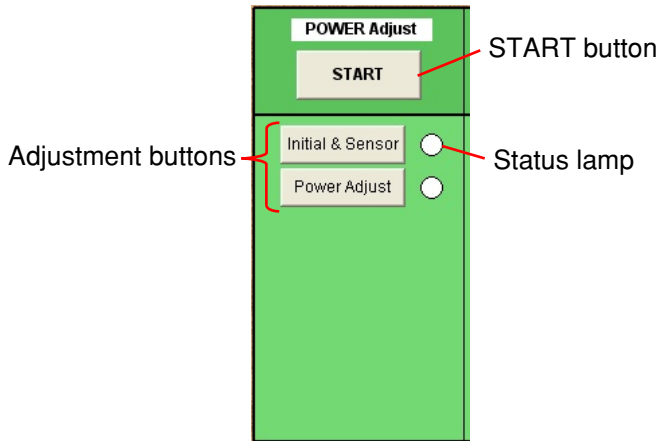


Fig. 6-2-12


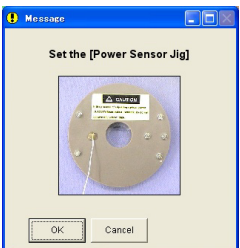
START button: All items of adjustment buttons are executed in the descending order.

Adjustment button: Only the adjustment item assigned to the button name is executed.

Status lamp: Adjustment status is displayed with color.

White	Not adjusted
Red blinking	Adjustment in progress
Green	Adjustment OK
Red	Adjustment NG

2-4-2. Adjusting Method

Order	Adjustment item	Message	Disc	Operation
1			No Disc	Click the [START] button of “POWER Adjustment”.
2	Initial & Sensor		No Disc	Set the Optical sensor disc. (At this time, when the Shock Sensor senses a shock normally, this message disappears.)
3			Optical Sensor Disc	Set the Optical sensor disc, and with the disc cover left open, click the [OK] button in the message window. (Note 1)
4		Power Adjust		(If the adjustment result of previous item is OK, this item is executed successively.)
5			No Disc	Remove the Optical Sensor Disc. (On the AUDIT screen, if the status lamps of respective adjustment buttons are all lit in green, the adjustment is over.)

Note 1: In the process of adjusting optical power, CLASS 1M laser optical radiates.
So do not remove the Optical sensor disc.

Note 2: Before exiting the AUDIT, click the **[SET]** button of “After completing the TEST” to cancel the TEST mode.

2-5. SERVO ADJUSTMENT

2-5-1. Menu in SERVO Adjustment Section

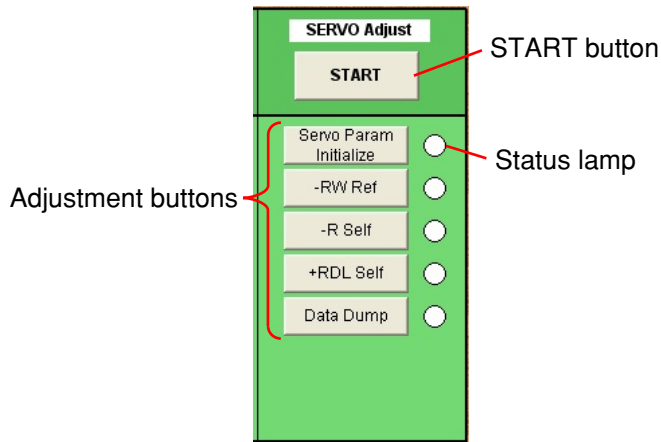


Fig. 6-2-13

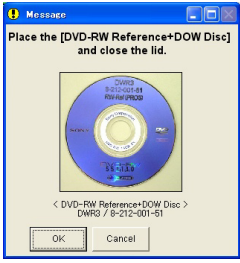
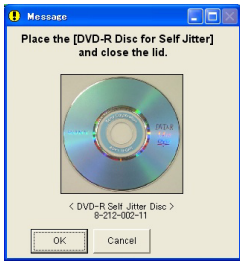

START button: All items of adjustment buttons are executed in the descending order.

Adjustment button: Only the adjustment item assigned to the button name is executed.

Status lamp: Adjustment status is displayed with color.

White	Not adjusted
Red blinking	Adjustment in progress
Green	Adjustment OK
Red	Adjustment NG

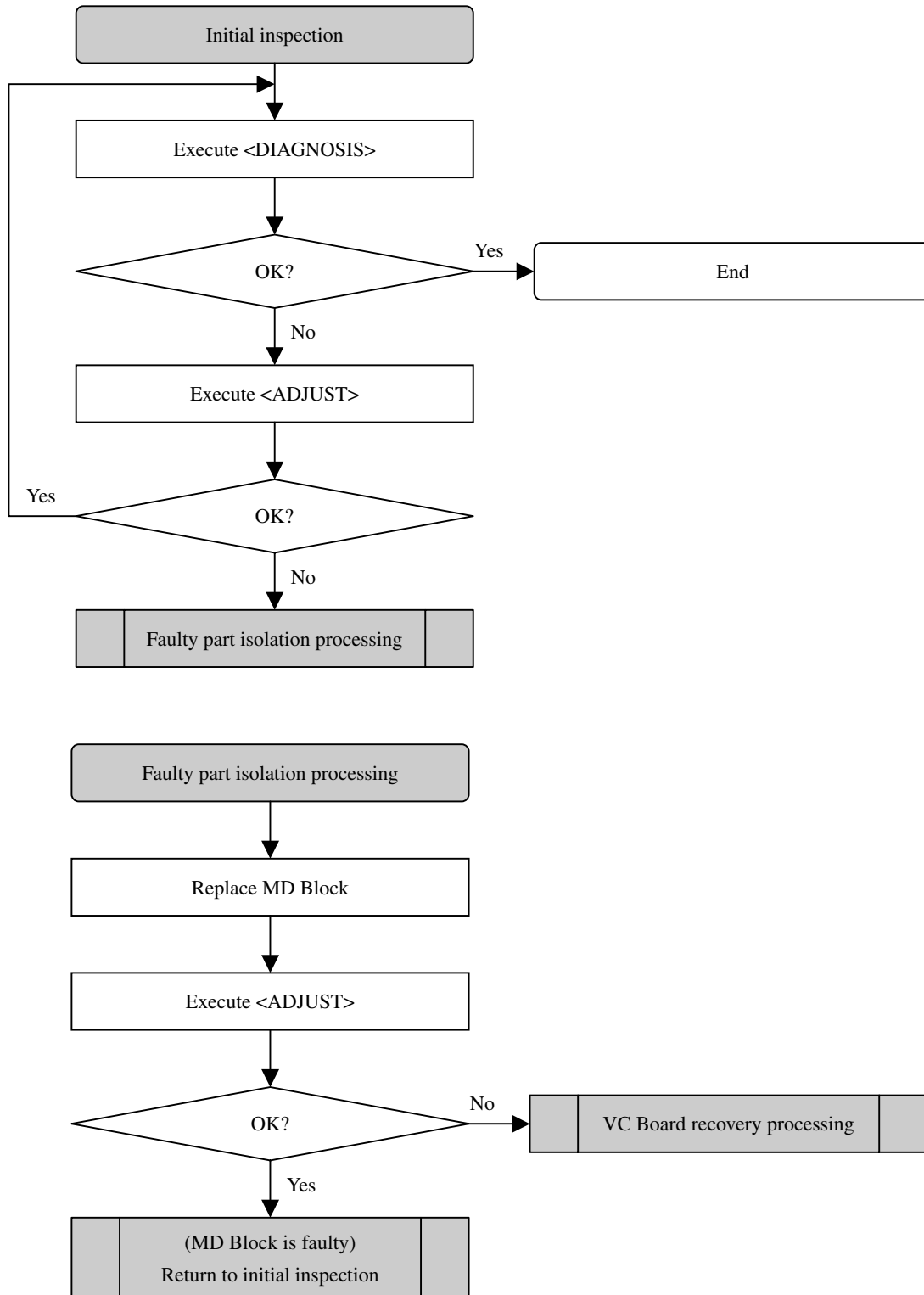
2-5-2. Adjusting Method

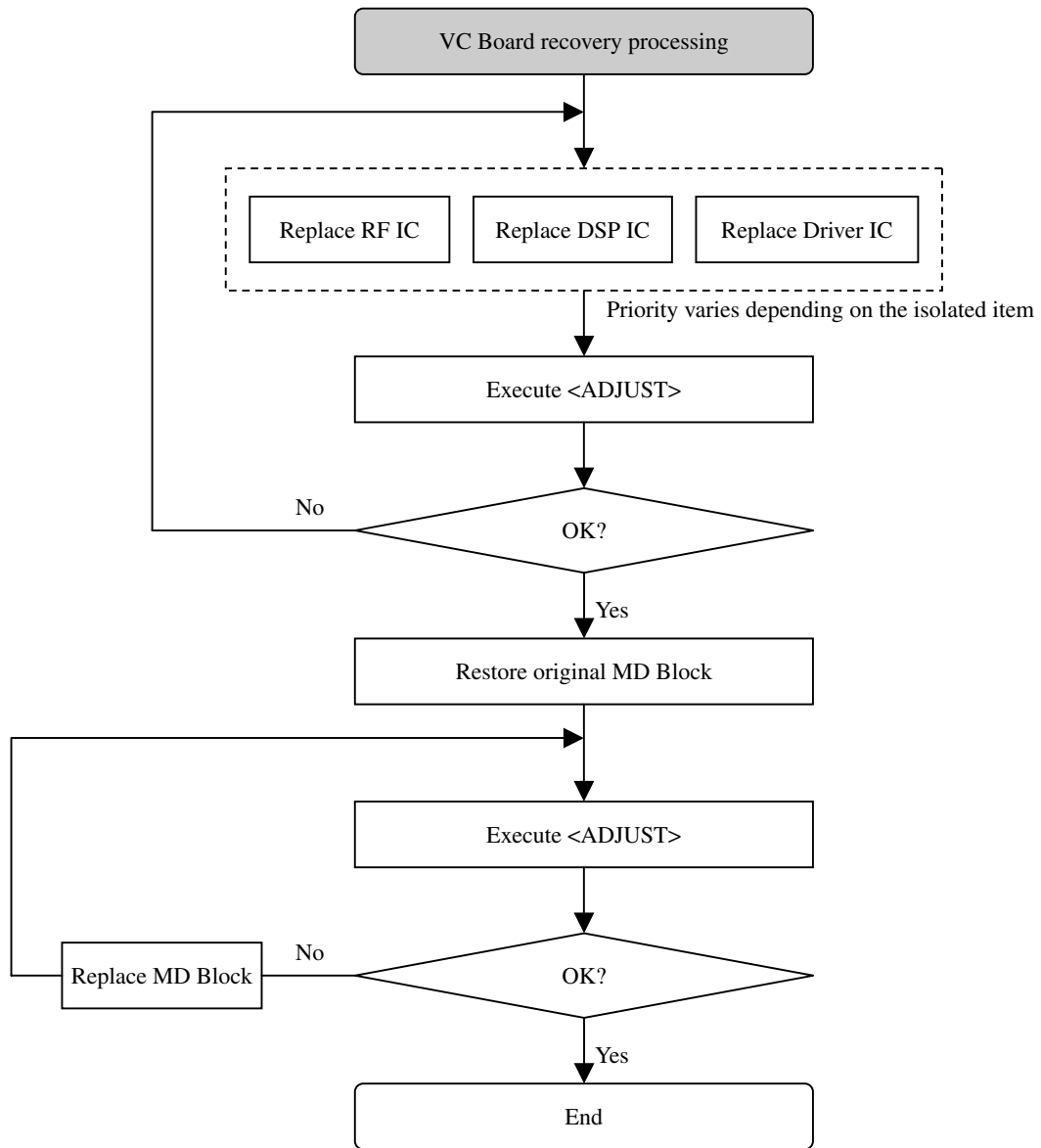
Order	Adjustment item	Message	Disc	Operation
1			No Disc	Click the [START] button of “SERVO Adjustment”.
2	Servo Param Initialize		DVD-RW Reference + DOW Disc	Set the DVD-RW Reference + DOW Disc, and with the disc cover left open, click the [OK] button in the message window.
3	-RW Ref			(If the adjustment result of previous item is OK, this item is executed successively.)
4	-RW Self			(If the adjustment result of previous item is OK, this item is executed successively.)
5	-R Self		DVD-R Disc for Self Jitter	Remove the DVD-RW Reference + DOW Disc, and set the DVD-R Disc for Self Jitter, and then close the disc cover and click the [OK] button in the message window.
6	+RDL Self		DVD+RDL Self Disc	Remove the DVD-R Disc for Self Jitter, and set the DVD+RDL Self Disc, and then close the disc cover and click the [OK] button in the message window.
7	Data Dump			(If the adjustment result of previous item is OK, this item is executed successively.)
8			No Disc	Remove the DVD+RDL Self Disc. (On the AUDIT screen, if the status lamps of respective adjustment buttons are all lit in green, the adjustment is over.)

Note: Before exiting the AUDIT, click the **[SET]** button of “After completing the TEST” to cancel the TEST mode.

2-6. TROUBLESHOOTING

2-6-1. Fundamental Troubleshooting Flow





2-6-2. Diagnosis

Sensor

Purpose	Trouble Symptom	Cause	Repair
Check operation of OP (Focus, Tracking, Sled, Spindle)		Faulty OP Faulty Driver IC	Replace the MD block Replace the VC board
Check the emission of laser diode		Faulty connection of flexible board	Check flexible board
Check various sensors (Dew sensor, Temperature sensor, Shock sensor)		Faulty OP Faulty sensor, Faulty connection of flexible board	Replace the MD block Temperature sensor → Replace the MD block Dew sensor → Check flexible board Shock sensor → Replace the VC board
Disc type check (only DVD-R)		OP age-based change Faulty operation of mechanism Faulty DSP IC Faulty RF IC	Replace the MD block Replace the MD block Replace the VC board Replace the VC board

The following diagnosis is performed with DVD-R, DVD-RW and DVD+DLR

The diagnosis of DVD+RDL is performed with L0/L1 layer each layer.

Seek

Purpose	Trouble Symptom	Cause	Repair
Check the seek performance (Seek between 2 points) x5 x2 patterns → Calculation of average time		OP age-based change Faulty mechanism Faulty DSP IC Faulty RF IC	Readjust Replace the MD block Replace the VC board Replace the VC board

Read

Purpose	Trouble Symptom	Cause	Repair
Check the read performance LPP Error Rate, RF Jitter		OP age-based change Faulty mechanism Faulty DSP IC Faulty RF IC	Readjust Replace the MD block Replace the VC board Replace the VC board

Write

Purpose	Trouble Symptom	Cause	Repair
Check the write performance During LPP/ADIP Error Rate, RF Jitter		OP age-based change Faulty mechanism Faulty DSP IC Faulty RF IC	Readjust Replace the MD block Replace the VC board Replace the VC board

2-6-3. Power Adjust

Prepare, Sensor

Purpose	Trouble Symptom	Cause	Repair
Initialization of all data at adjustment area		Faulty Flash IC	Replace the VC board
Check operation of Shock sensor		Faulty shock sensor	Replace the VC board

Laser Power Adjustment

Purpose	Trouble Symptom	Cause	Repair
Adjust the Laser power		Faulty connection to power meter	Check connection to power meter, Check power supply
		Faulty installation of power sensor jig	Check installation of power sensor jig
		Faulty lighting of LD	Check flexible board, Replace the MD block
		Faulty operation of mechanism	Replace the MD block
		Faulty RF IC	Replace the VC board
		Faulty DSP IC	Replace the VC board
		Faulty SDRAM IC	Replace the VC board
		Faulty Flash IC	Replace the VC board

2-6-4. Servo Adjust

Servo Parameter Initialize

Purpose	Trouble Symptom	Cause	Repair
Initialization of servo-related adjustment data		Faulty Flash IC Faulty DSP IC	Replace the VC board Replace the VC board

DVD-RW Reference Disc Adjustment

Purpose	Trouble Symptom	Cause	Repair
Adjust the servo with DVD-RW		The disc is dirty or has scratches on it Faulty OP Faulty DSP IC Faulty RF IC	Check disc Replace the MD block Replace the VC board Replace the VC board

DVD-RW Self Jitter

Purpose	Trouble Symptom	Cause	Repair
Adjust the recording with DVD-RW Check the self recording with DVD-RW		The disc is dirty or has scratches on it Faulty OP Faulty DSP IC Faulty RF IC	Check disc Replace the MD block Replace the VC board Replace the VC board

DVD-R Self Jitter

Purpose	Trouble Symptom	Cause	Repair
Adjust the servo with DVD-R Adjust the recording with DVD-R Check the self recording with DVD-R		The disc is dirty or has scratches on it Faulty OP Faulty DSP IC Faulty RF IC	Check disc Replace the MD block Replace the VC board Replace the VC board

DVD+RDL Self Jitter

Purpose	Trouble Symptom	Cause	Repair
Adjust the servo with DVD+RDL Adjust the recording with DVD+RDL Check the self recording with DVD+RDL		The disc is dirty or has scratches on it Faulty OP Faulty DSP IC Faulty RF IC	Check disc Replace the MD block Replace the VC board Replace the VC board

Data Dump

Purpose	Trouble Symptom	Cause	Repair
The adjustment value is dumped		Faulty DSP IC Faulty RF IC	Replace the VC board Replace the VC board

6-3. SERVICE MODE

3-1. APPLICATION FOR ADJUSTMENT (SeusEX)

The adjustment software (SeusEX) can change operational coefficients of signal processing, EVR data, etc. same as the adjustment remote commander. The SeusEX performs two-way communication between PC and camcorder using the USB terminal. The two-way communication result data can be written in the nonvolatile memory.

1. Connection

- 1) Connect the HASP key to the USB terminal of the PC.
- 2) Connect the PC and camcorder with the USB cable.
- 3) Start the SeusEX on the PC.
- 4) Click **Connect** on the SeusEX screen. If the connection is normal, the SeusEX screen will be as shown in Fig. 6-3-1, indicating the “connected” state.

Note: The SeusEX will go in “disconnect” state, if the camcorder is turned off (for instance, by resetting the set). In such a case, click **Connect** on the SeusEX screen to restore the “connected” state.

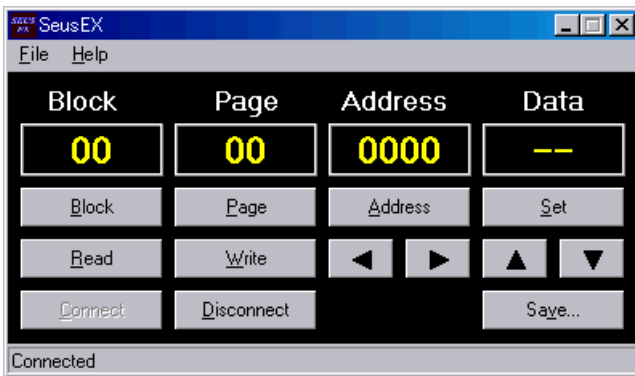


Fig. 6-3-1

2. Operation

- Block change
To change the block, click **Block** on the SeusEX screen and enter the block to be changed. The block is displayed in hexadecimal notation.
- Page change
To change the page, click **Page** on the SeusEX screen and enter the page to be changed. The page is displayed in hexadecimal notation.
- Address change
To change the address, click **Address** on the SeusEX screen and enter the address to be changed. The address is displayed in hexadecimal notation.
- Data change
To change the data, click **Set** on the SeusEX screen and enter the data. The data is displayed in hexadecimal notation. This operation does not write the data to the nonvolatile memory.
- Data writing
To write the data to the EEPROM, click **Write** on the SeusEX screen and enter the data value to be written. To write the data to the flash memory, change the data value using the **Set** on the SeusEX screen and then click **Save** to save the data.
- Data reading
The data displayed on the SeusEX screen are the data values at the time when the pages and addresses were set, and they are not updated automatically. To check the data change, click **Read** on the SeusEX screen and update the displayed data.

3-2. SERVICE MODE

1. Function of Each Button on Service Mode Screen

Click the **[SERVICE MODE]** button on the Main Menu screen, and the “SERVICE MODE” screen in Fig. 6-3-2 will appear.

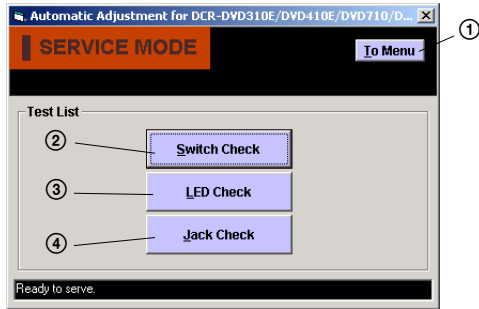
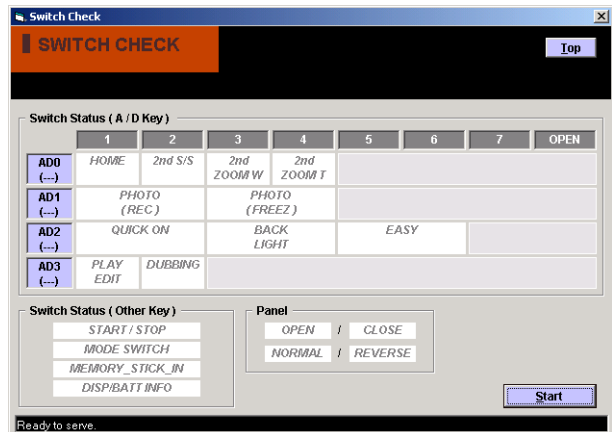


Fig. 6-3-2

- ① **[To Menu]** button
Return to the main menu.
- ② **[Switch Check]** button
“SWITCH CHECK” screen appears.
- ③ **[LED Check]** button
“LED CHECK” screen appears.
- ④ **[Jack Check]** button
“JACK CHECK” screen appears.

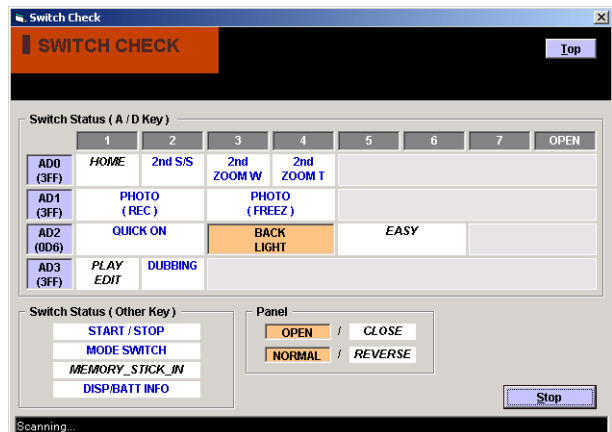
2. Switch Check

Click the **[Switch Check]** button on the SERVICE MODE screen, and the “SWITCH CHECK” screen will appear.



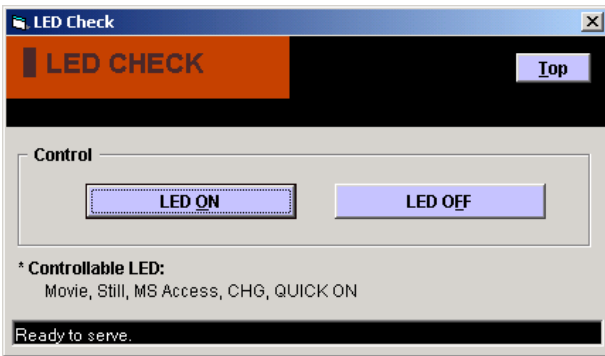
Using method:

Click the **[Start]** button, and the switch check will start. During execution of switch check, the pressed switch is displayed in orange. Also, once the switch was pressed, its name characters change to blue in color.



3. LED Check

Click the **LED Check** button on the SERVICE MODE screen, and the “LED CHECK” screen will appear.

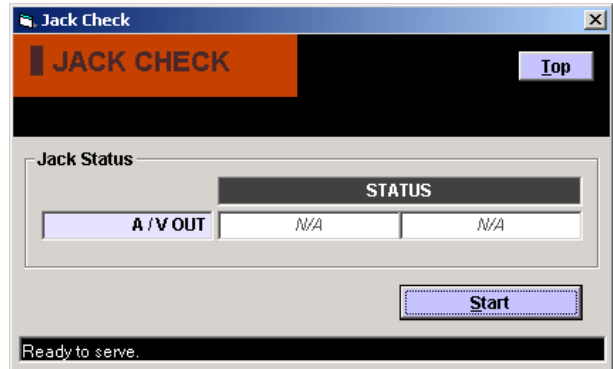


Using method:

LED ON or OFF can be controlled with **LED ON** or **LED OFF** button on the screen.

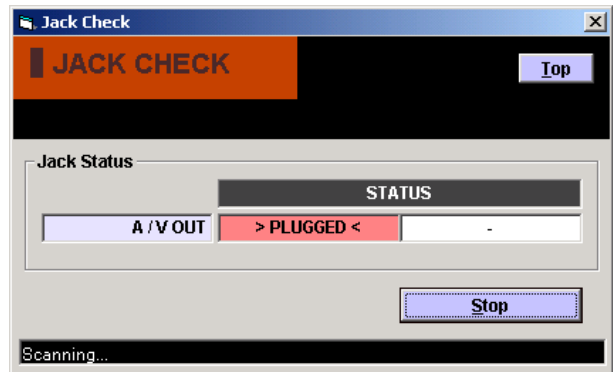
4. Jack Check

Click the **Jack Check** button on the SERVICE MODE screen, and the “JACK CHECK” screen will appear.



Using method:

Click the **Start** button, and the jack check will start. During execution of jack check, the connected jack is displayed in orange.



3-3. DATA BACKUP

With the “DATA BACKUP”, the adjustment data in the camcorder can be backed up in the PC as a file.

The adjustment data that can be backed up are as follows.

- 1) Video System Adjustments
- 2) Camera System Adjustments
- 3) LCD/EVF System Adjustments
- 4) Audio System Adjustments

Note: The adjustment data for the drive cannot be backed up.

1. Function of Each Button on Data Backup Screen

Click the **DATA BACKUP** button on the Main Menu screen, and the “DATA BACKUP” screen in Fig. 6-3-3 will appear.

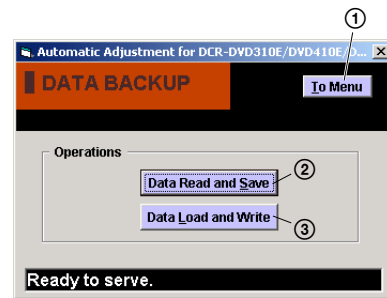


Fig. 6-3-3

- ① **To Menu** button
Return to the main menu.
- ② **Data Read and Save** button
Read the adjustment data from the camcorder and save them in PC as a file.
Default file name is as follows:
(Example: MEGA model)
DCR-DVD710_MEM_XXXXXXXX_YYMMDD.dat
Date
USB serial number
Data name
- ③ **Data Load and Write** button
Load the adjustment data from the file saved in PC and write them to the camcorder.

Revision History

Ver.	Date	History	Contents	S.M. Rev. issued
1.0	2007.12	Official Release	—	—
1.1	2008.01	Revised-1 (A1 DI07-262)	Replace the previously issued SERVICE MANUAL 9-852-249-51 with this Manual. <ul style="list-style-type: none"> • Change of Automatic Adjustment Program Version of Automatic Adjustment Program has been changed from Ver_1.0r01 into Ver_1.1r02. • Correction of adjustment condition. • Change of System requirements for using AUDIT. • Addition of Installation method for “Audit for 2008”. • Deletion of Installation Method. S.M. revised: Page 6-3 , Page 6-7 , Page 6-18 , Page 6-19 , Page 6-20 , Page 6-27 , Page 6-28 , Page 6-29 , Page 6-41 , Page 6-45 , Page 6-46	Yes
1.2	2008.03	Revised-2 (A2 DI07-300)	Replace the previously issued SERVICE MANUAL 9-852-249-52 with this Manual. <ul style="list-style-type: none"> • Change of Automatic Adjustment Program Version of Automatic Adjustment Program has been changed from Ver_1.1r02 into Ver_1.2r03. S.M. revised: Page 6-7	Yes