DCR-TRV40/TRV40E/ TRV50/TRV50E

RMT-811

SERVICE MANUAL

LEVEL 3

Ver 1.0 2002. 03

Revision History

Photo: DCR-TRV50E

US Model
Canadian Model
DCR-TRV50
AEP Model
East European Model
DCR-TRV40E/TRV50E
UK Model
Australian Model
DCR-TRV50E
E Model
DCR-TRV40/TRV40E/TRV50/TRV50E
Hong Kong Model
DCR-TRV40/TRV50E
Tourist Model
DCR-TRV40/TRV40E
Korea Model
DCR-TRV40
Chinese Model
DCR-TRV40E

J MECHANISM

Link

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

- For INSTRUCTION MANUAL, refer to separate file (992995171.pdf).
- For MECHANISM ADJUSTMENTS, refer to the “DV MECHANICAL ADJUSTMENT MANUAL VI J MECHANISM” (9-929-807-11).
- HOW TO OPEN THE FLASH WHEN THE FLASH DOESN’T OPEN

Mini DV Digital Video Cassette

DIGITAL VIDEO CAMERA RECORDER

SONY

COVER

Self Diagnosis Supported model

Cassette Memory

InfoLITHIUM M SERIES

MEMORY STICK

Bluetooth

SPECIFICATIONS

Video camera recorder

System

Video recording system
2 rotary heads
Helical scanning system
Audio recording system
Rotary heads, PCM system
Quantization: 12 bits (Fs 32 kHz, stereo 1, stereo 2), 16 bits
(Fs 48 kHz, stereo)
Video signal
DCR-TRV40/TRV50:
NTSC colour, EIA standards
DCR-TRV40E/TRV50E:
PAL colour, CCIR standards
Usable cassette
Mini DV cassette with the Mini DV mark printed
Tape speed
SP: Approx. 18.81 mm/s
LP: Approx. 12.56 mm/s
Recording/playback time (using cassette DVM60)
SP: 1 hour
LP: 1.5 hours
Fastforward/rewind time (using cassette DVM60)
When using the battery pack:
Approx. 2 min. and 30 seconds
When using the AC power adaptor:
Approx. 1 min. and 45 seconds
Viewfinder
Electric viewfinder (colour)
Image device
4.5 mm (1/4 type) CCD (Charge Coupled Device)
Gross: Approx. 1 550 000 pixels
Effective (still):
Approx. 1 390 000 pixels
Effective (moving):
Approx. 970 000 pixels
Lens
Carl Zeiss Vario-Sonnar
Combined power zoom lens
Filter diameter: 37 mm
(1 1/2 in)
10× (Optical), 120× (Digital)
F=1.8~2.2
Focal length
4.2 – 42 mm (3/16 – 1 11/16 in.)
When converted to a 35 mm still camera
In CAMERA:
48 – 480 mm (1 15/16 – 19 in.)
In MEMORY:
40 – 400 mm (1 5/8 – 15 3/4 in.)
Colour temperature
Auto, HOLD (Hold), Indoor (3 200 K), Outdoor (5 800 K)
Minimum illumination
7 lx (lux) (F 1.8)
0 lx (lux) (in the NightShot mode)*
* Objects unable to be seen due to the dark can be shot with infrared lighting.

Input/Output connectors

S video input/output
4-pin mini DIN
Luminance signal: 1 Vp-p, 75 Ω (ohms), unbalanced
DCR-TRV40/TRV50:
Chrominance signal: 0.3 Vp-p,
DCR-TRV40E/TRV50E:
Chrominance signal: 0.3 Vp-p, 75 Ω (ohms), unbalanced
Audio/Video input/output
AV MINI JACK, 1 Vp-p, 75 Ω (ohms), unbalanced, sync negative
327 mV, (at output impedance more than 47 kΩ (kilohms))
Output impedance with less than 2.2 kΩ (kilohms)/Stereo minijack (ø 3.5 mm)
Input impedance more than 47 kΩ (kilohms)
DV input/output
4-pin connector
Headphone jack
Stereo minijack (ø 3.5 mm)
LANC jack
Stereo mini-minijack (ø 2.5 mm)
USB jack
mini-B
MIC jack
Minijack, 0.388 mV low impedance with 2.5 to 3.0 V DC, output impedance 6.8 kΩ (kilohms) (ø 3.5 mm)
Stereo type

LCD screen

Picture
8.8 cm (3.5 type)
72.2 × 50.4 mm (2 4/5 × 2 in.)
Total dot number
246 400 (1 120 × 220)

Wireless communications

(DCR-TRV50/TRV50E only)
Communications system
Bluetooth standard Ver.1.1
Max. baud rate[1) 2)]
Approx. 723 kbps
Output
Bluetooth standard Power Class 2
Communications distance[2)]
Max. wireless distance Approx. 10 m (393 3/4 in.) (When connecting to BTA-NW1)
Compatible Bluetooth profile[3)]
Generic Access Profile
Dial-up Networking Profile
Operating frequency band
2.4 GHz band (2.400 GHz – 2.483 5 GHz)

1) Max. baud rate of Bluetooth standard Ver.1.1
2) Varies according to the distance between communicating devices, presence of obstacles, radiowave conditions, and other factors.
3) This is a specification matched to specific usage requirements between Bluetooth compatible devices. It is laid down in the Bluetooth standards.

General

Power requirements
7.2 V (battery pack)
8.4 V (AC power adaptor)
Average power consumption (when using the battery pack)
During camera recording using LCD
4.4 W
Viewfinder
3.3 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.)
72 × 91 × 168 mm
(2 7/8 × 3 5/8 × 6 5/8 in.) (w/h/d)
Mass (Approx.)
700 g (1 lb 8 oz)
main unit only
800 g (1 lb 12 oz)
including the battery pack NP-FM50, cassette DVM60 and lens cap
Supplied accessories
See page 3.

AC power adaptor

Power requirements
100 – 240 V AC, 50/60 Hz
Power consumption
23 W
Output voltage
DC OUT: 8.4 V, 1.5 A in the operating mode
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.)
125 × 39 × 62 mm
(5 × 1 9/16 × 2 1/2 in.) (w/h/d)
excluding projecting parts
Mass (approx.)
280 g (9.8 oz)
excluding mains lead

Battery pack

Maximum output voltage
DC 8.4 V
Output voltage
DC 7.2 V
Capacity
8.5 Wh (1 180 mAh)
Dimensions (approx.)
38.2 × 20.5 × 55.6 mm
(1 9/16 × 13/16 × 2 1/4 in.)
(w/h/d)
Mass (approx.)
76 g (2.7 oz)
Type
Lithium ion

"Memory Stick"

Memory
Flash memory
8MB: MSA-8A
Operating voltage
2.7 – 3.6 V
Power consumption
Approx. 45 mA in the operating mode
Approx. 130 µA in the standby mode
Dimensions (approx.)
50 × 2.8 × 21.5 mm
(2 × 1/8 × 7/8 in.) (w/h/d)
Mass (approx.)
4 g (0.14 oz)

Design and specifications are subject to change without notice.

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

SAFETY-RELATED COMPONENT WARNING!!

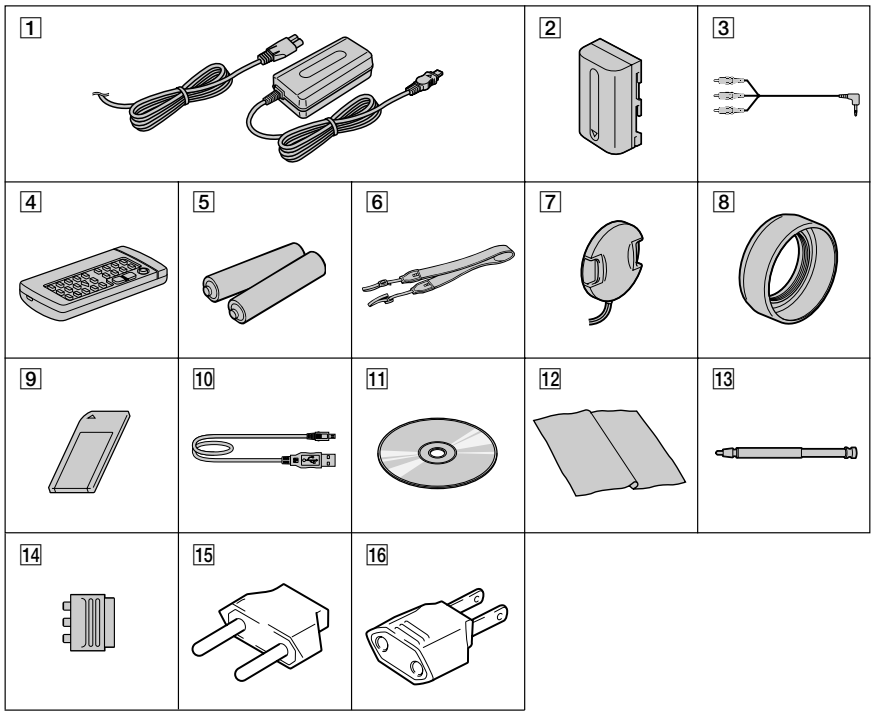
COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

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

• SUPPLIED ACCESSORIES

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



1 **AC-L10A/L10B/L10C AC power adaptor** (1), **mains lead** (1)
2 **NP-FM50 battery pack** (1)
3 **A/V connecting cable** (1)
4 **Wireless Remote Commander** (1)
5 **Size R6 (size AA) battery for Remote Commander** (2)
6 **Shoulder strap** (1)
7 **Lens cap** (1)
8 **Lens hood** (1)
9 **"Memory Stick"** (1)
10 **USB cable** (1)
11 **CD-ROM (USB Driver)** (1)
SPVD-008 (Except US, Canadian model only)
SPVD-008 (I) (US, Canadian model only)
12 **Cleaning cloth** (1)
13 **Stylus** (1) (DCR-TRV50/TRV50E only)
14 **21-pin adaptor** (European models only) (1)
15 **2-pin conversion adaptor** (1)
(Tourist model only)
16 **2-pin conversion adaptor** (1)
(E, Hong Kong model only)

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.

TABLE OF CONTENTS

6. REPAIR PARTS LIST

* Color reproduction frame is shown on page 241.

COVER

SECTION 1
SERVICE NOTE

1-1. SERVICE NOTE

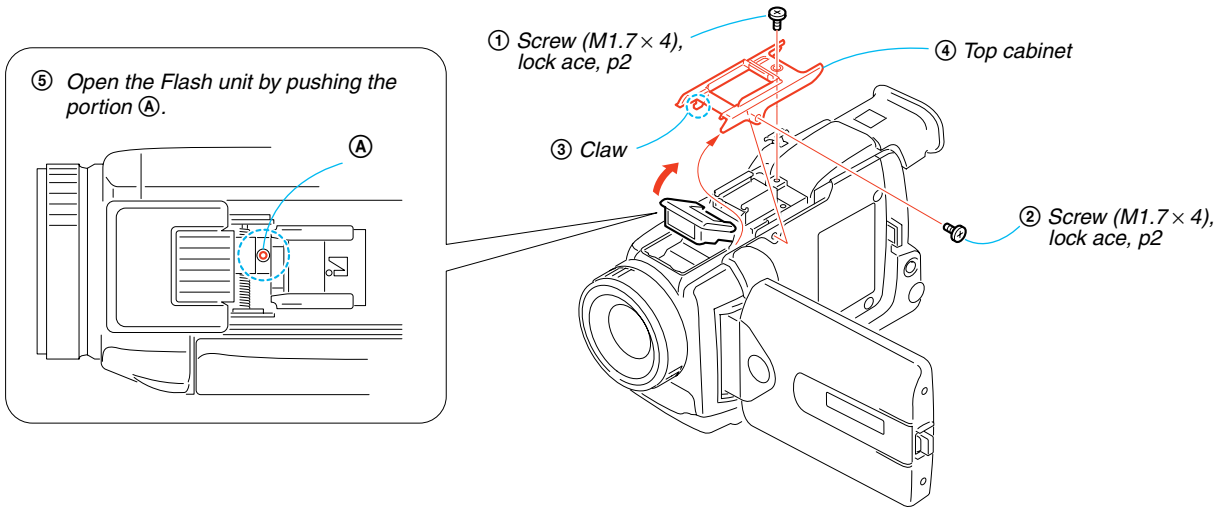
1. POWER SUPPLY DURING REPAIRS

In this unit, about 10 seconds after power is supplied to the battery terminal using the regulated power supply (8.4V), the power is shut off so that the unit cannot operate.
This following two methods are available to prevent this. Take note of which to use during repairs.

Method 1.
Use the AC power adaptor (AC-L10, AC-VQ800 etc.).

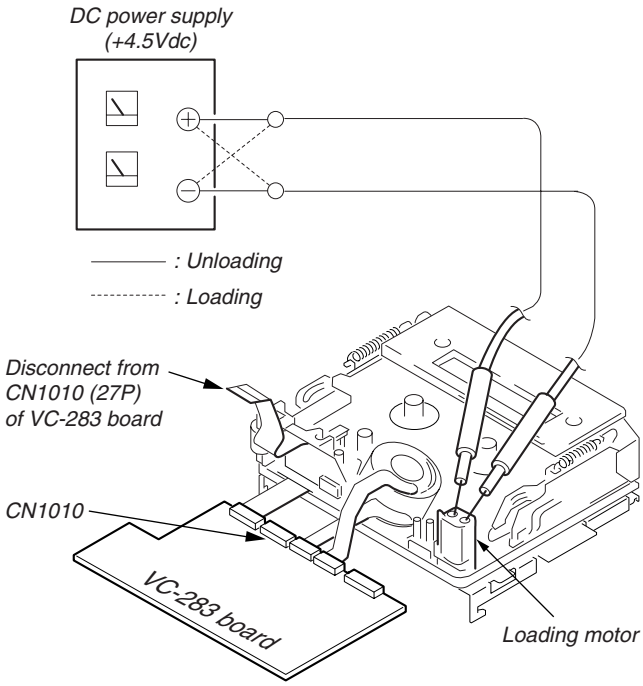
Method 2.
Connect the servicing remote commander RM-95 (J-6082-053-B) to the LANC jack, and set the commander switch to the "ADJ" side.

2. HOW TO OPEN THE FLASH WHEN THE FLASH DOESN'T OPEN



3. TO TAKE OUT A CASSETTE WHEN NOT EJECT (FORCE EJECT)

① Refer to 2-3 to remove the top cabinet section.
② Refer to 2-4 to remove the front panel section.
③ Refer to 2-6, 2-7 to remove the cabinet (R) section.
④ Refer to 2-8 to remove the BT panel assembly.
⑤ Refer to 2-9 to remove the BT-003 board. (DCR-TRV50/TRV50E)
⑥ Refer to 2-10 to remove the external connector and shoe base.
⑦ Refer to 2-11, 2-12 to remove the EVF block.
⑧ Refer to 2-17 to remove the DD-176 board.
⑨ Remove the mechanism deck and VC-283 board.
⑩ Disconnect CN1010 (27P, 0.3mm) of VC-283 board.
⑪ Supply +4.5V from the DC power supply to the loading motor and unload with a pressing the cassette compartment.

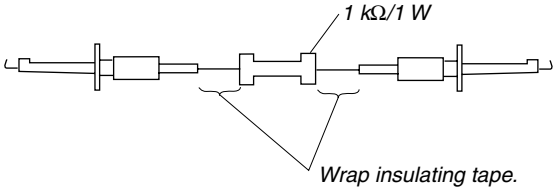


4. DISCHARGING OF THE FLASHLIGHT POWER SUPPLY CAPACITOR

The power supply capacitor of the flash unit is charged up to the maximum 300V potential.
There is a danger of electric shock by this high voltage when the capacitor is handled by hand. The electric shock is caused by the charged voltage which is kept without discharging when the main power of the unit is simply turned off. Therefore, the remaining voltage must be discharged as described below.

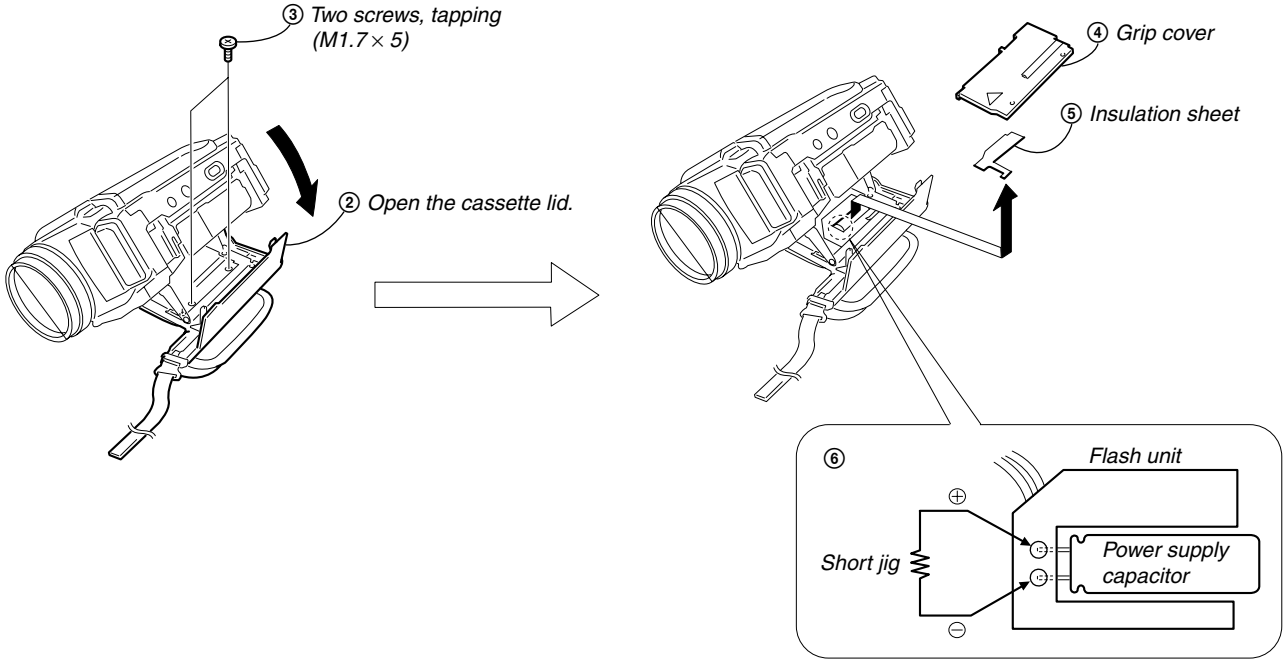
4-1. PREPARING THE SHORT JIG

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



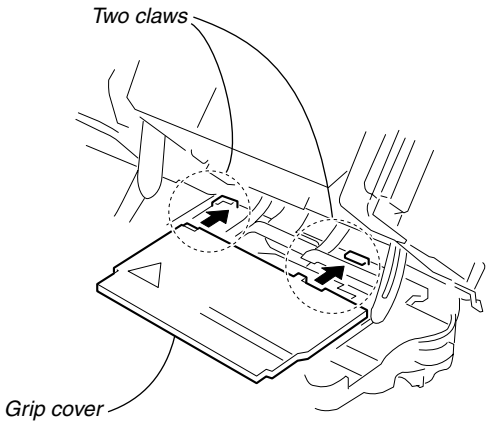
4-2. DISCHARGING THE CAPACITOR

① Remove the power supply (Battery or AC power adaptor).
② Open the cassette lid (grip cabinet).
③ Remove the two screws with which the grip cover is fixed.
④ Remove the grip cover.
⑤ Remove the insulation sheet.
⑥ Short circuit between ⊕ and ⊖ terminal of the capacitor with the short jig about 10 seconds.



Note for installing the grip cover

When installing the grip cover, insert it in the claws of the grip cabinet.



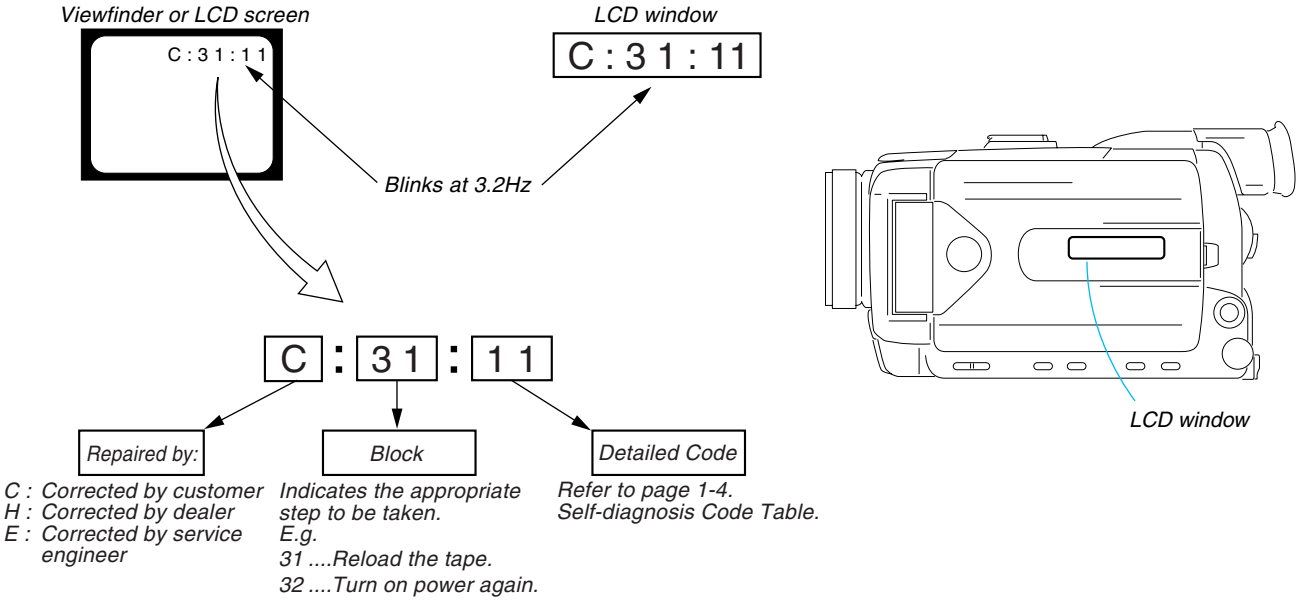
1-2. SELF-DIAGNOSIS FUNCTION

1. SELF-DIAGNOSIS FUNCTION

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

2. SELF-DIAGNOSIS DISPLAY

When problems occur while the unit is operating, the counter of the viewfinder, LCD screen or LCD window consists of an alphabet and 4-digit 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.

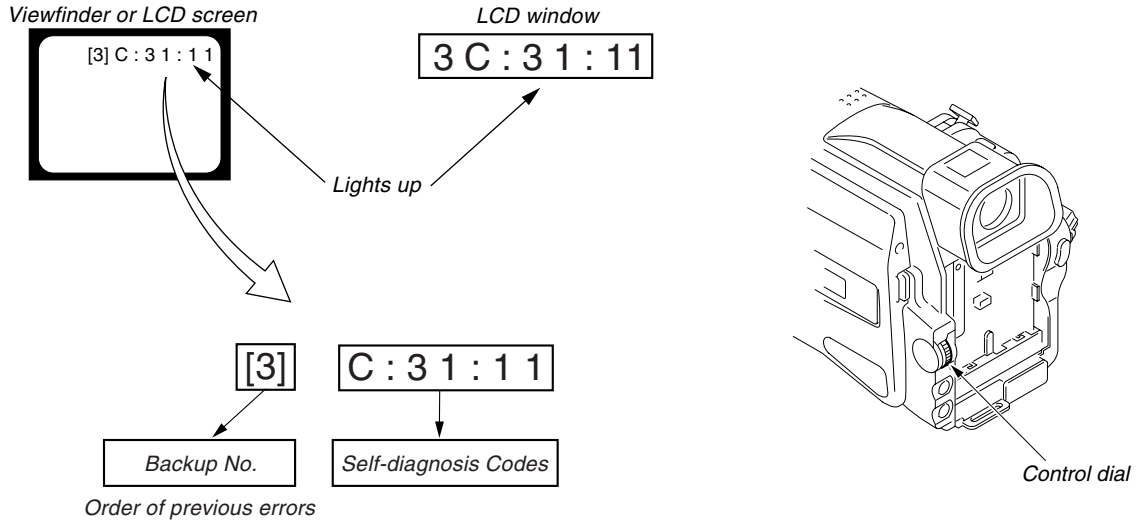


3. SERVICE MODE DISPLAY

The service mode display shows up to six self-diagnosis codes shown in the past.

3-1. Display Method

While pressing the "STOP" key, set the switch from OFF to "VCR", and continue pressing the "STOP" key for 5 seconds continuously. The service mode will be displayed, and the counter will show the backup No. and the 5-character self-diagnosis codes.



3-2. Switching of Backup No.

By rotating the control dial, past self-diagnosis codes will be shown in order. The backup No. in the [ ] indicates the order in which the problem occurred. (If the number of problems which occurred is less than 6, only the number of problems which occurred will be shown.)
[1] : Occurred first time [4] : Occurred fourth time
[2] : Occurred second time [5] : Occurred fifth time
[3] : Occurred third time [6] : Occurred the last time

3-3. End of Display

Turning OFF the power supply will end the service mode display.

Note: The "self-diagnosis display" data will be kept even if the lithium battery (CK-115 board BT5201 of the cabinet (R) assembly) is removed.

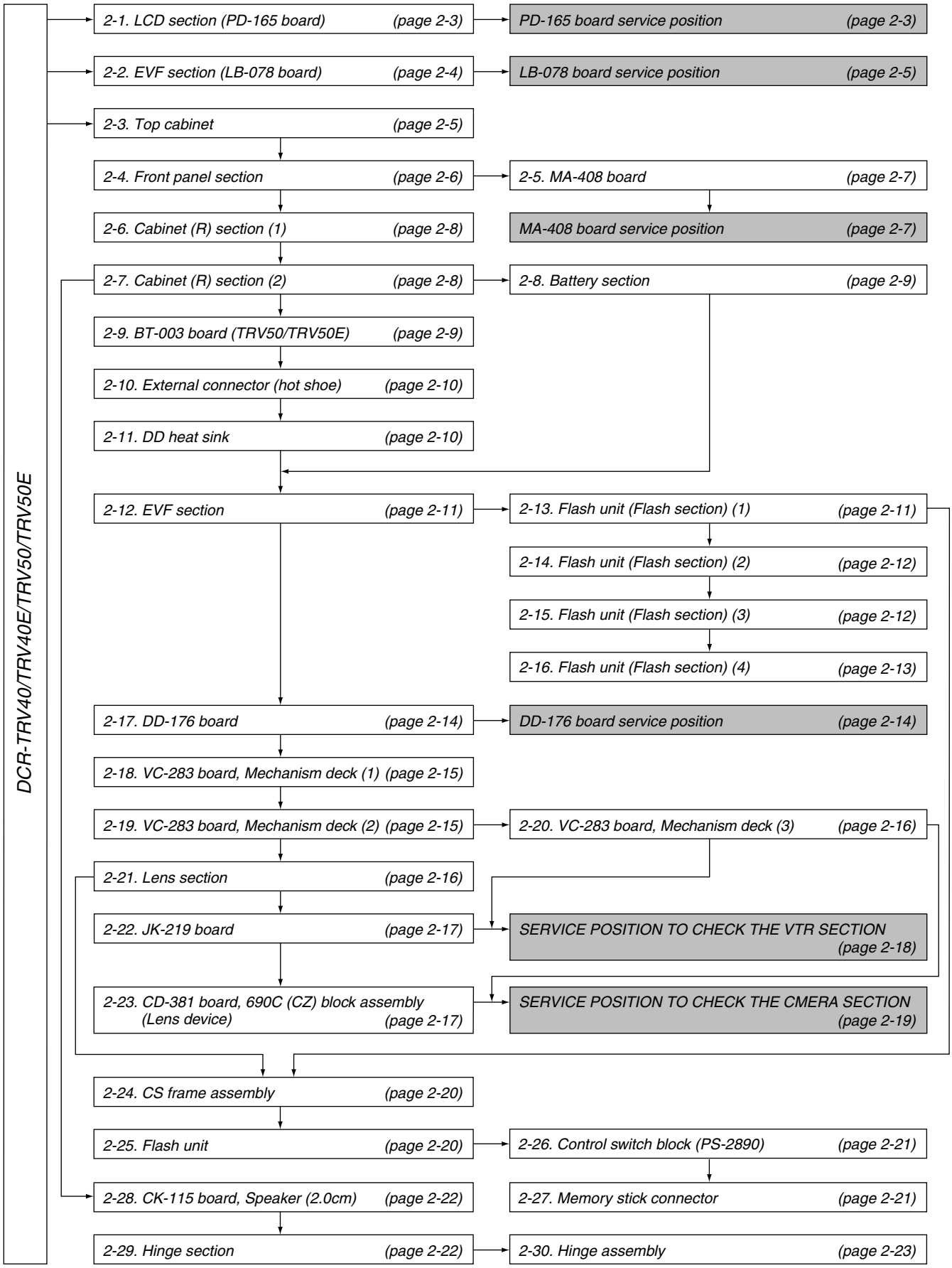
4. SELF-DIAGNOSIS CODE TABLE

Self-diagnosis Code					Symptom/State	Correction
Repaired by:	Block Function		Detailed Code			
C	0	4	0	0	Non-standard battery is used.	Use the info LITHIUM battery.
C	2	1	0	0	Condensation.	Remove the cassette, and insert it again after one hour.
C	2	2	0	0	Video head is dirty.	Clean with the optional cleaning cassette.
C	3	1	1	0	LOAD direction. Loading does not complete within specified time	Load the tape again, and perform operations from the beginning.
C	3	1	1	1	UNLOAD direction. Loading does not complete within specified time	Load the tape again, and perform operations from the beginning.
C	3	1	2	0	T reel side tape slacking when unloading.	Load the tape again, and perform operations from the beginning.
C	3	1	2	1	Winding S reel fault when counting the rest of tape.	Load the tape again, and perform operations from the beginning.
C	3	1	2	2	T reel fault.	Load the tape again, and perform operations from the beginning.
C	3	1	2	3	S reel fault.	Load the tape again, and perform operations from the beginning.
C	3	1	2	4	T reel fault.	Load the tape again, and perform operations from the beginning.
C	3	1	3	0	FG fault when starting capstan.	Load the tape again, and perform operations from the beginning.
C	3	1	4	0	FG fault when starting drum.	Load the tape again, and perform operations from the beginning.
C	3	1	4	2	FG fault during normal drum operations.	Load the tape again, and perform operations from the beginning.
C	3	1	1	0	LOAD direction loading motor time-out.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	1	1	1	UNLOAD direction loading motor time-out.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	2	0	T reel side tape slacking when unloading.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	2	1	Winding S reel fault when counting the rest of tape.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	2	2	T reel fault.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	2	3	S reel fault.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	2	4	T reel fault.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	3	0	FG fault when starting capstan.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	4	0	FG fault when starting drum	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3	2	4	2	FG fault during normal drum operations	Remove the battery or power cable, connect, and perform operations from the beginning.
E	6	1	0	0	Difficult to adjust focus (Cannot initialize focus.)	Inspect the lens block focus MR sensor (Pin ⑧,⑨ of CN1301 of VC-283 board) when focusing is performed when the focus ring is rotated in the focus manual mode, and the focus motor drive circuit (IC1302 of VC-283 board) when the focusing is not performed.
E	6	1	1	0	Zoom operations fault (Cannot initialize zoom lens.)	Inspect the lens block zoom MR sensor (Pin ⑲,⑳ of CN1301 of VC-283 board) when zooming is performed when the zoom lens is operated and the zoom motor drive circuit (IC1302 of VC-283 board) when zooming is not performed.
E	6	2	0	0	Steadyshot function does not work well. (With pitch angular velocity sensor output stopped.)	Inspect pitch angular velocity sensor (SE5351 of JK-219 board) peripheral circuits.
E	6	2	0	1	Steadyshot function does not work well. (With yaw angular velocity sensor output stopped.)	Inspect yaw angular velocity sensor (SE5352 of JK-219 board) peripheral circuits.

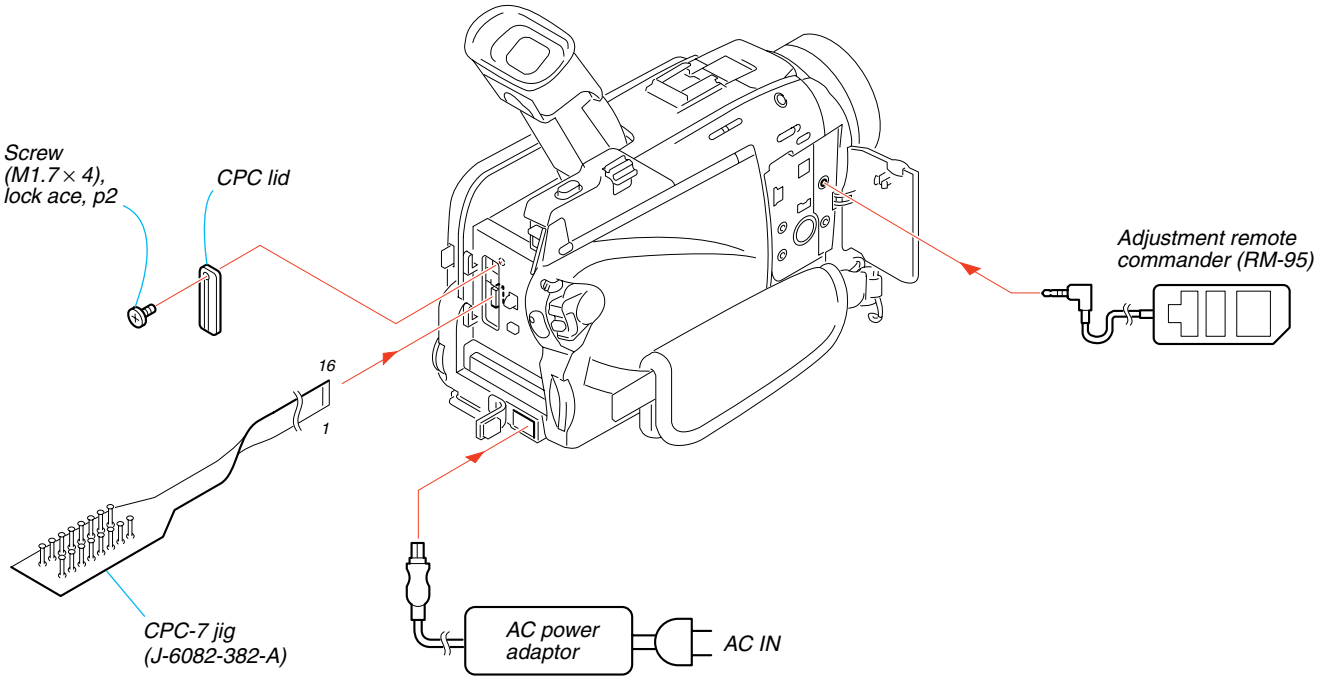
COVER

SECTION 2
DISASSEMBLY

The following flow chart shows the disassembly procedure.

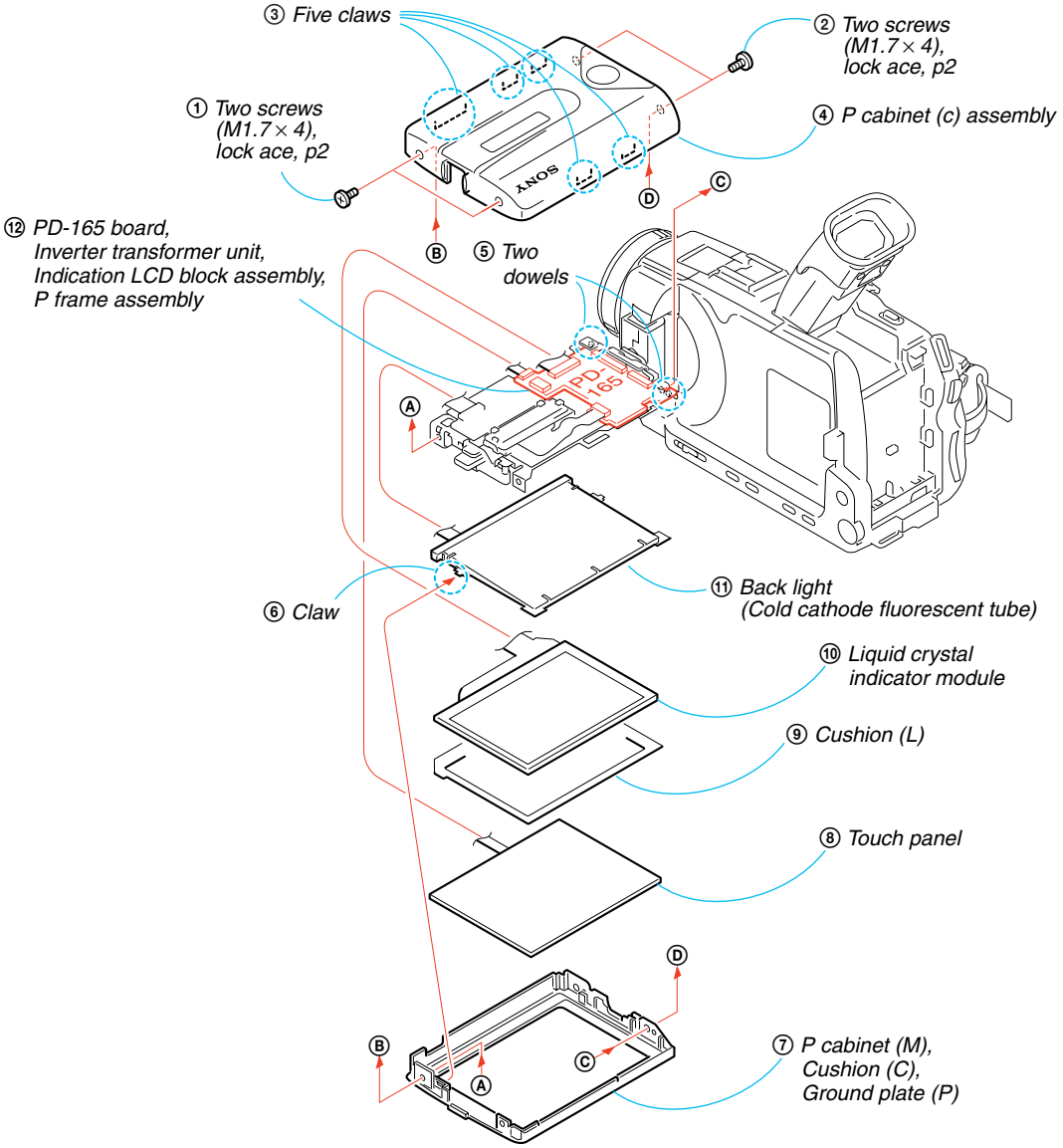


[CONNECTION OF EQUIPMENT]

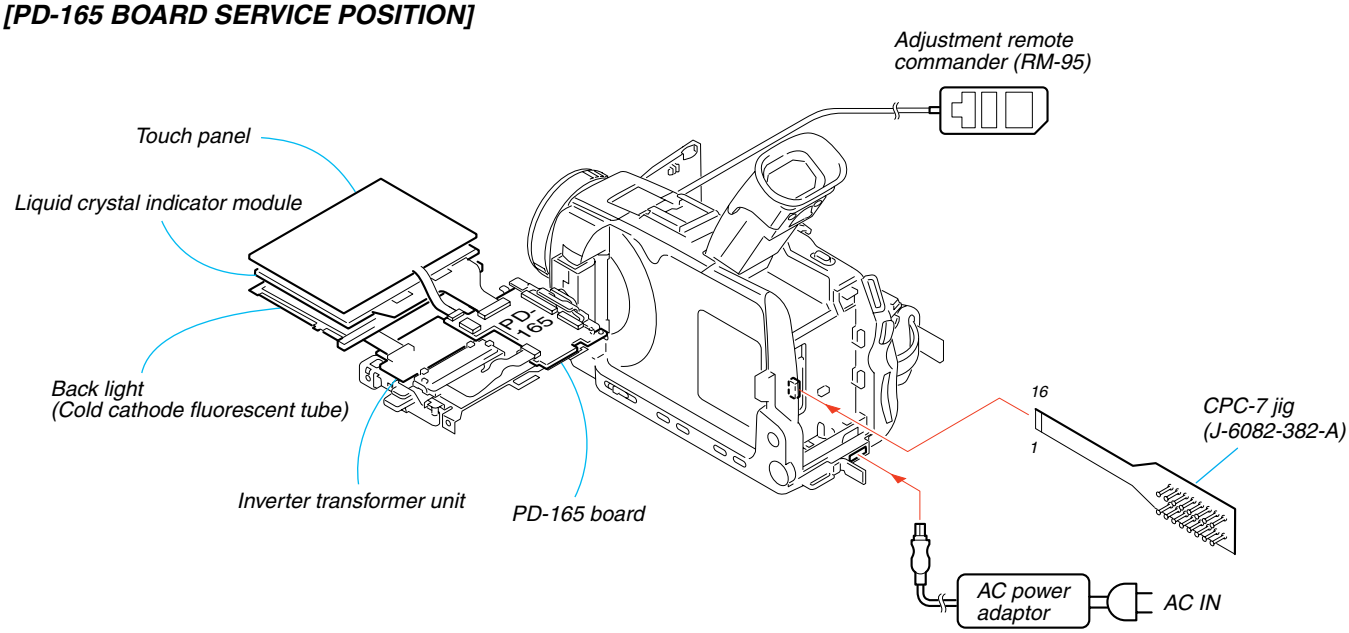


NOTE: Follow the disassembly procedure in the numerical order given.

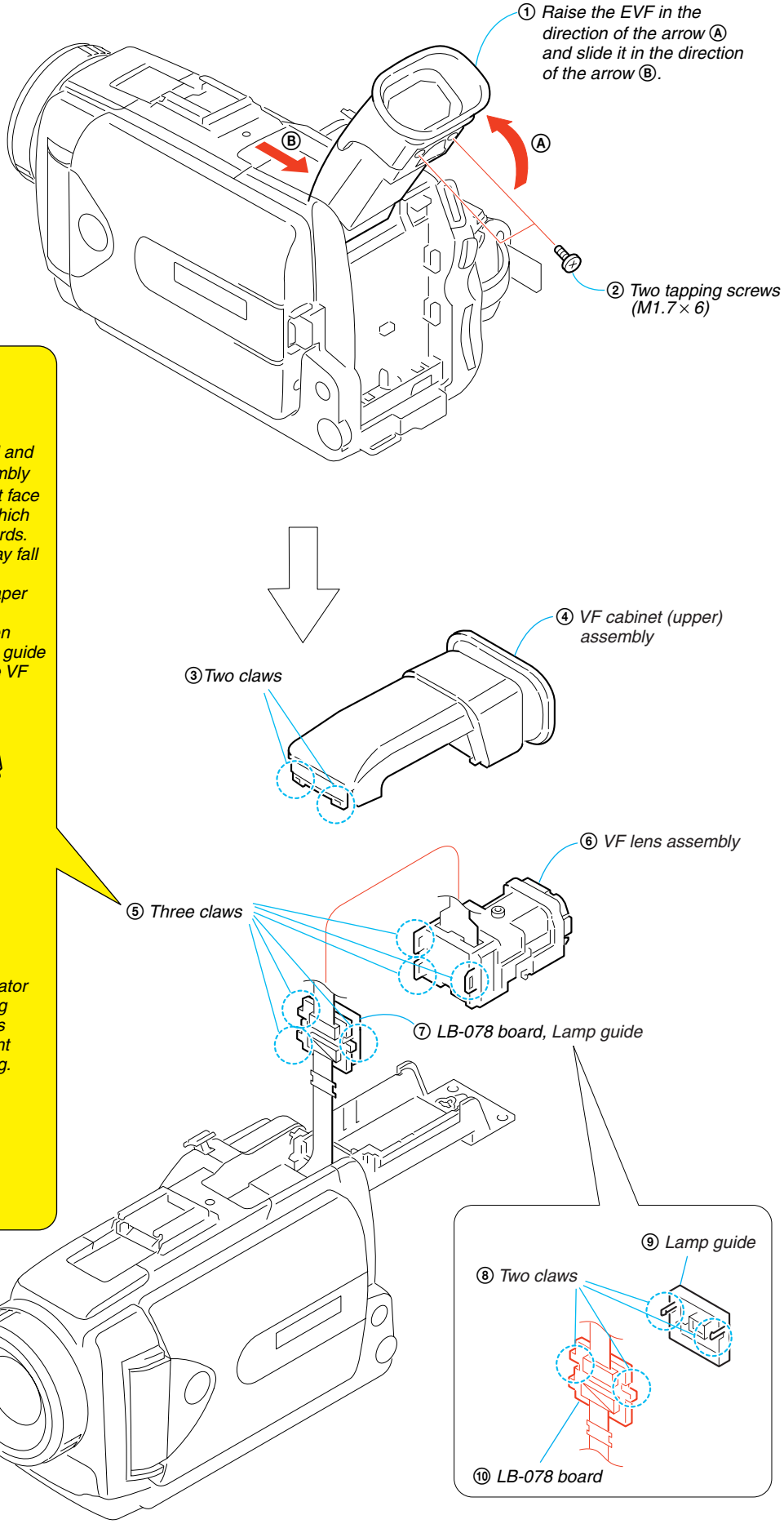
2-1. LCD SECTION (PD-165 BOARD)



[PD-165 BOARD SERVICE POSITION]

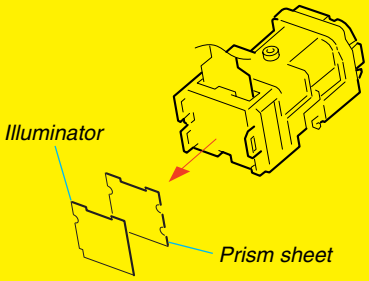


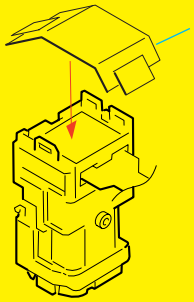
2-2. EVF SECTION (LB-078 BOARD)



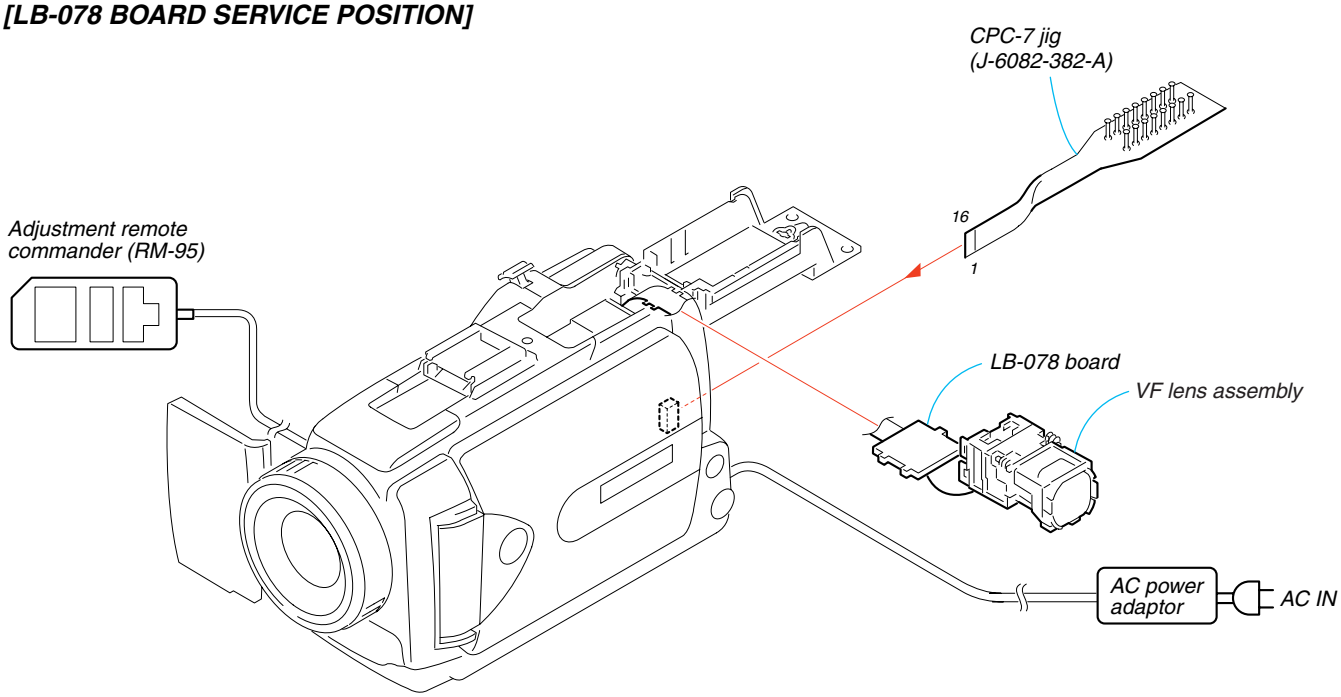
Caution

When separating the ⑦ LB-078 board and Lamp guide from the ⑥ VF lens assembly by removing the three ⑤ claws, do not face the side of the VF lens assembly on which the LB-078 board is installed, downwards. Because the Illuminator and others may fall out of the VF lens assembly, hold the illuminator and others using tape or paper as shown to prevent them from falling. Be careful on this point especially when removing the LB-078 board and Lamp guide because the three claws located in the VF lens assembly are easy to break.

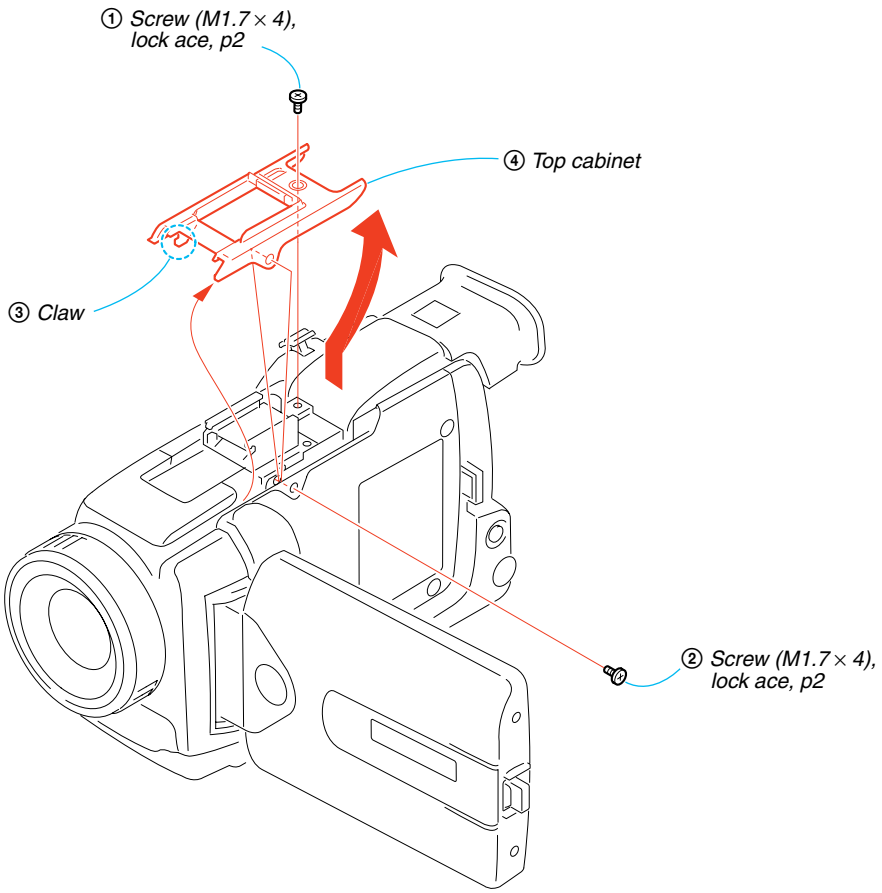




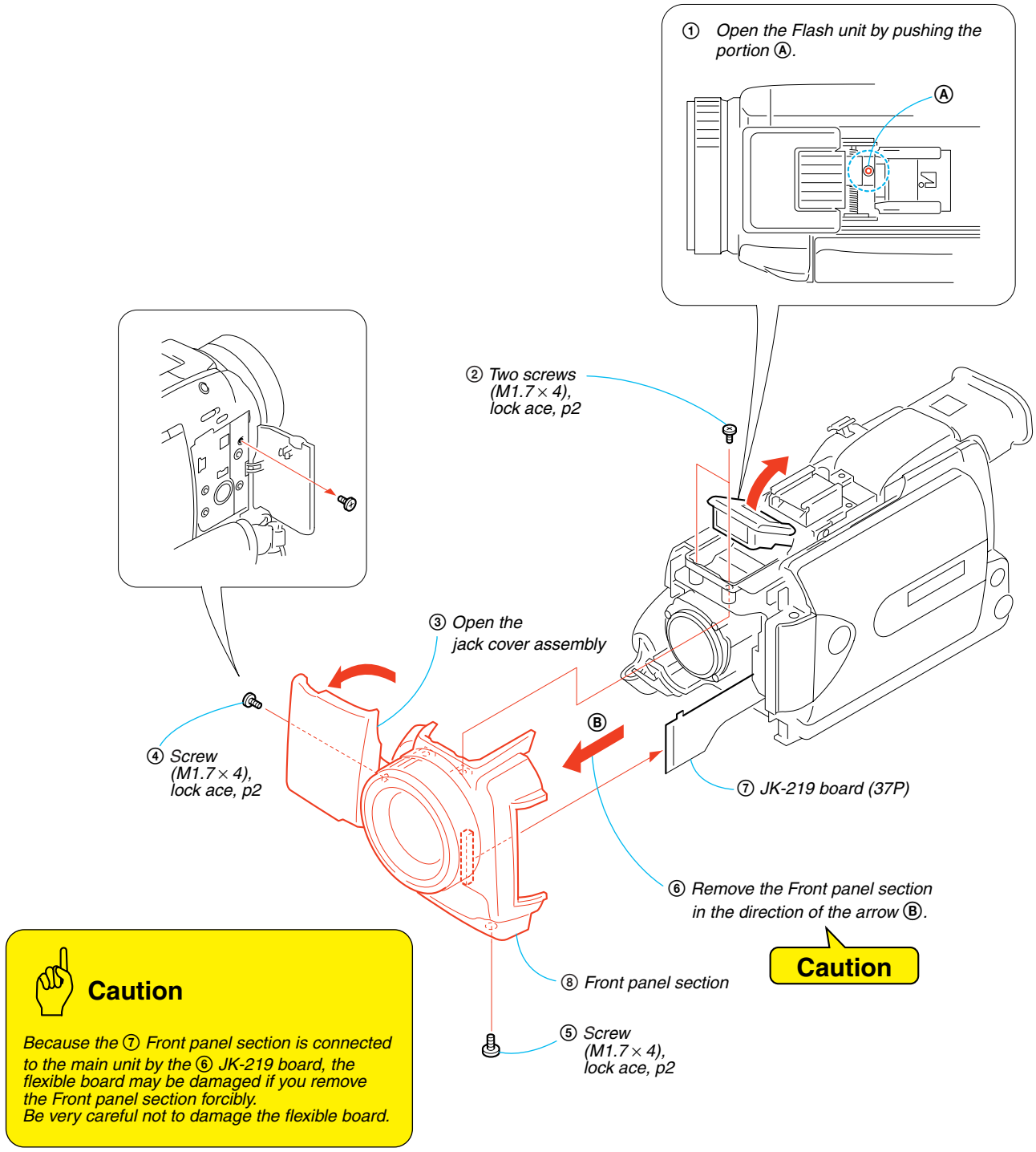
[LB-078 BOARD SERVICE POSITION]



2-3. TOP CABINET



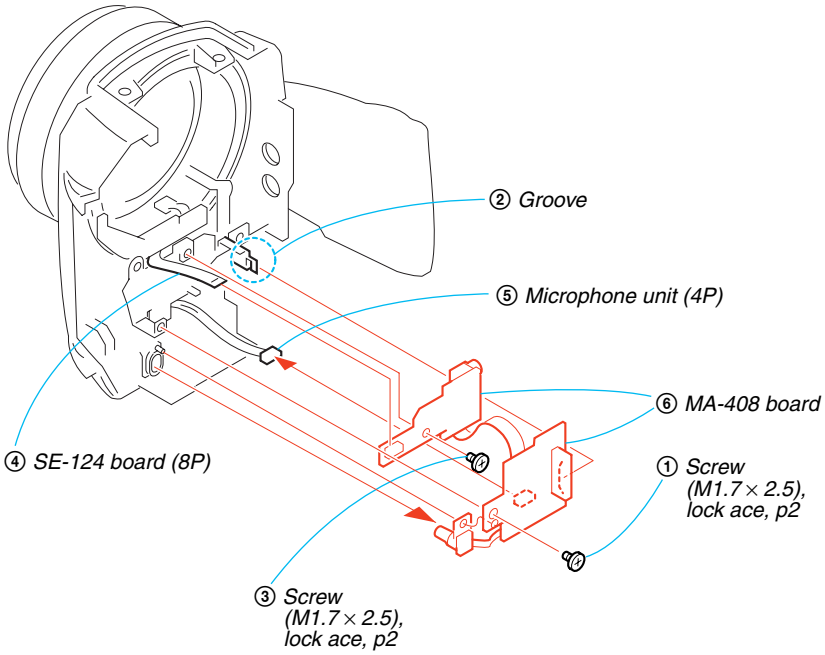
2-4. FRONT PANEL SECTION



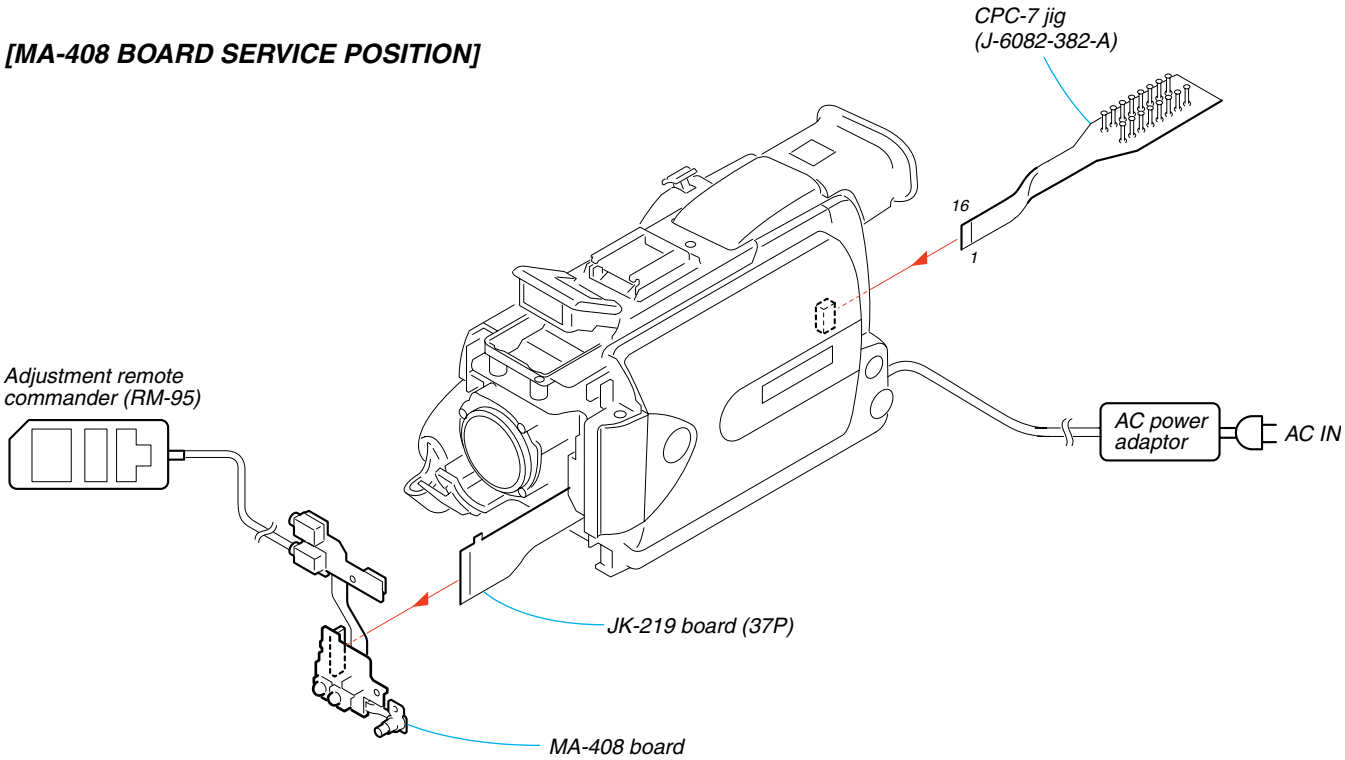
Caution

Because the ⑦ Front panel section is connected to the main unit by the ⑥ JK-219 board, the flexible board may be damaged if you remove the Front panel section forcibly.
Be very careful not to damage the flexible board.

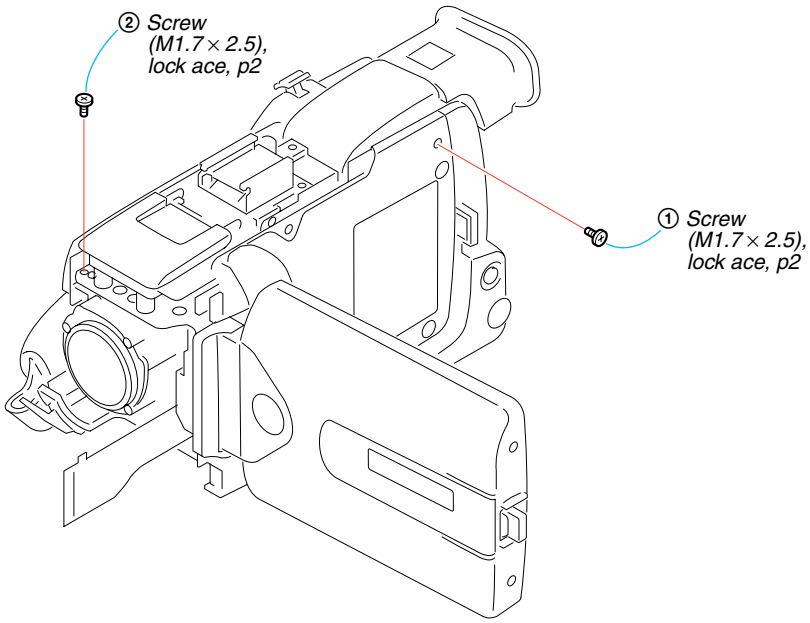
2-5. MA-408 BOARD



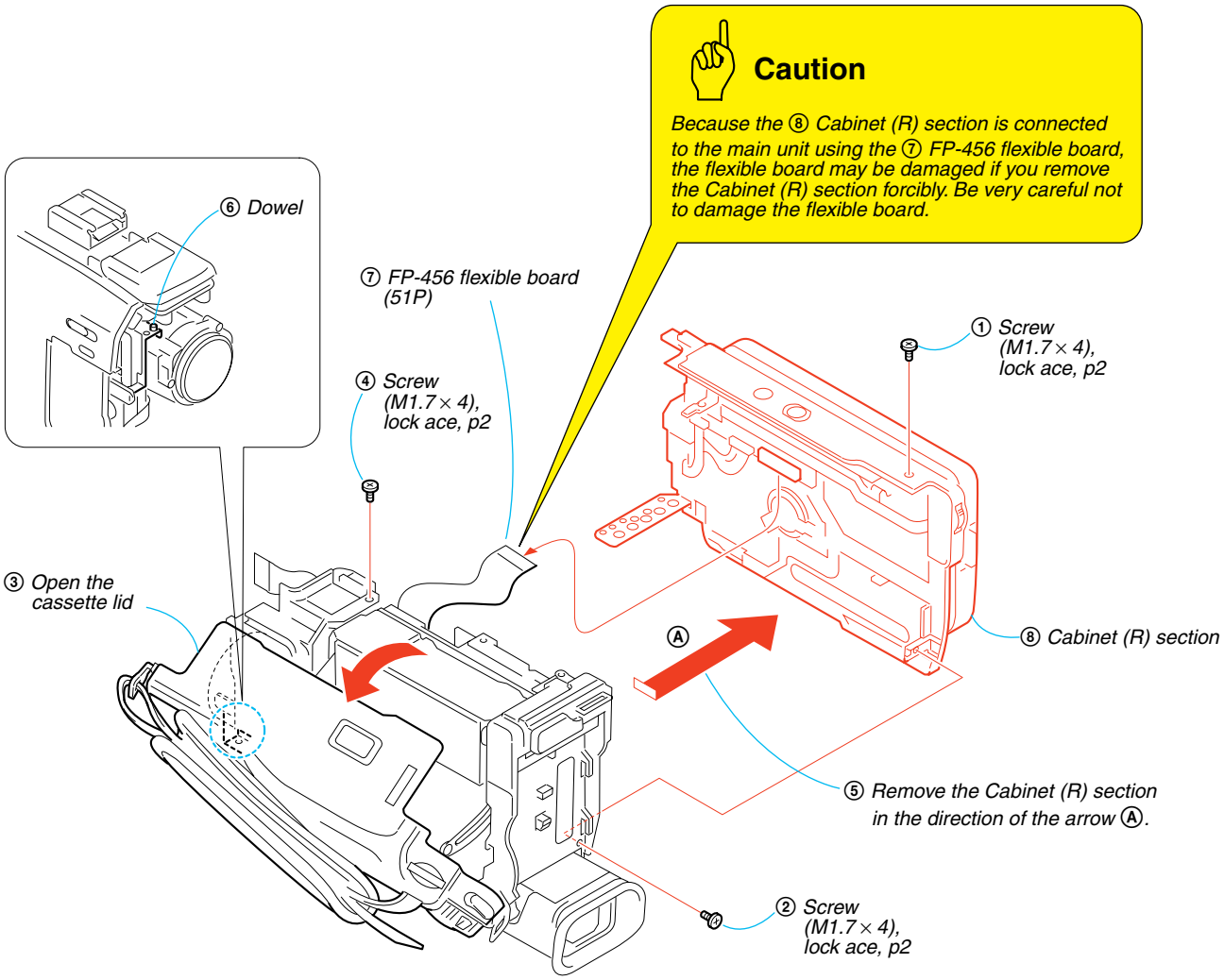
[MA-408 BOARD SERVICE POSITION]



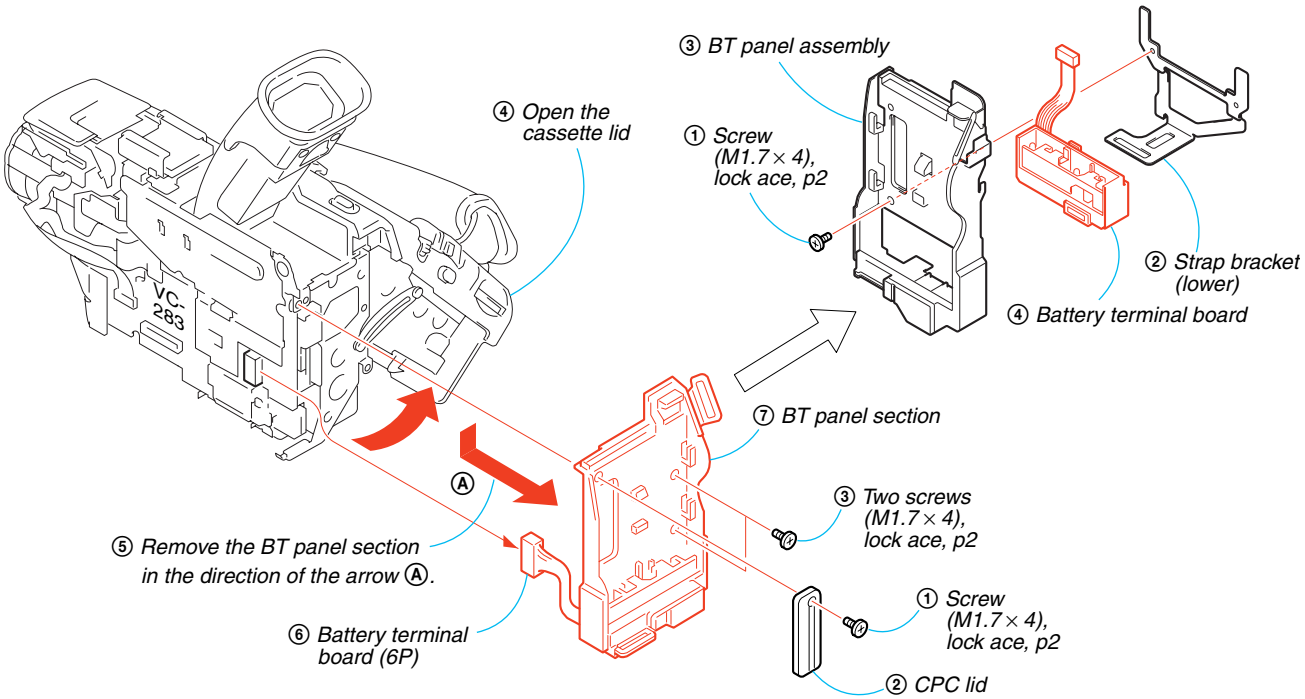
2-6. CABINET (R) SECTION (1)



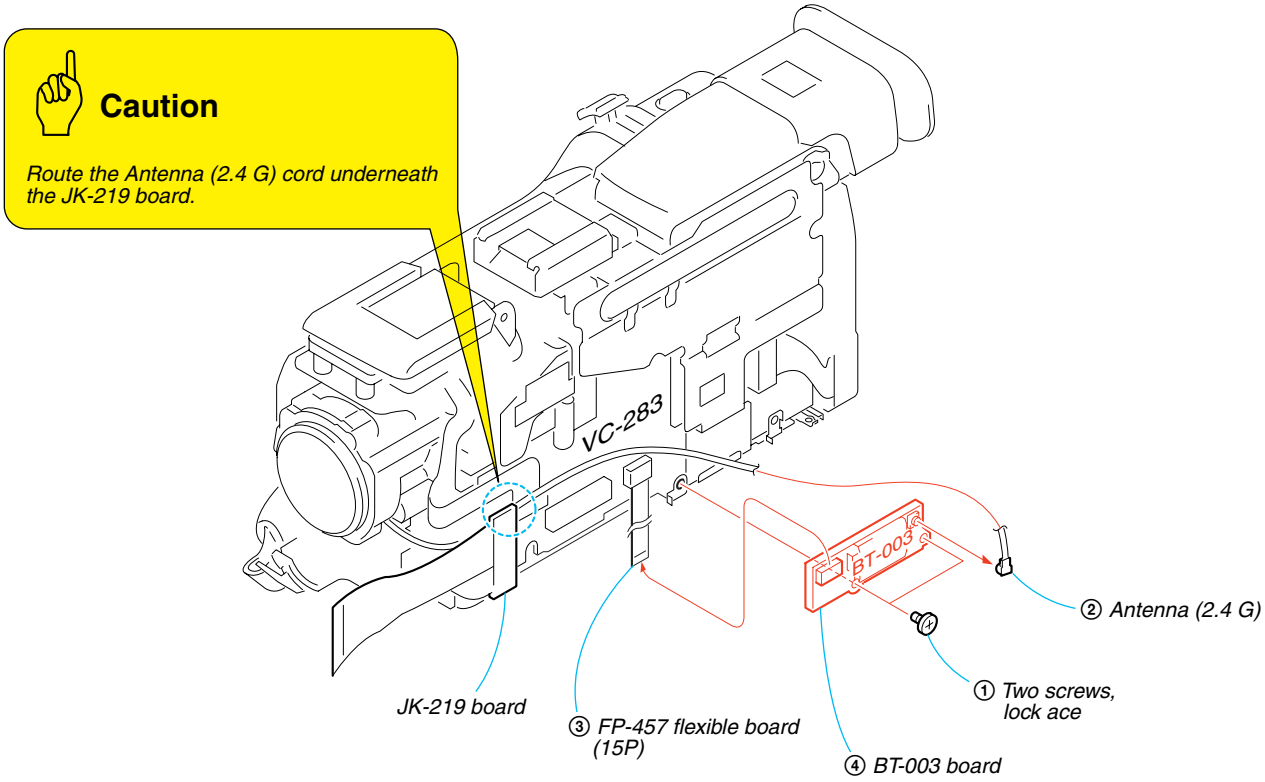
2-7. CABINET (R) SECTION (2)



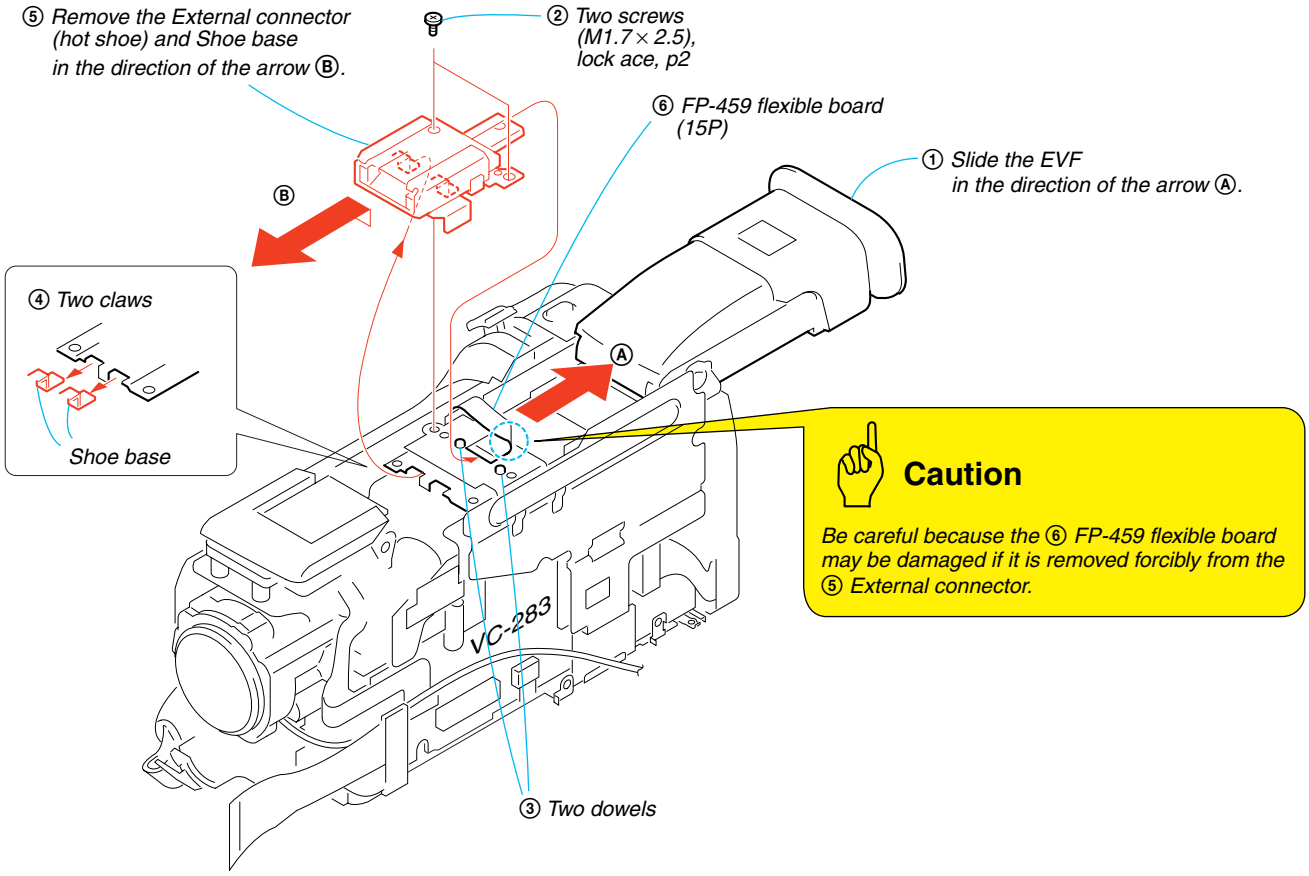
2-8. BATTERY SECTION



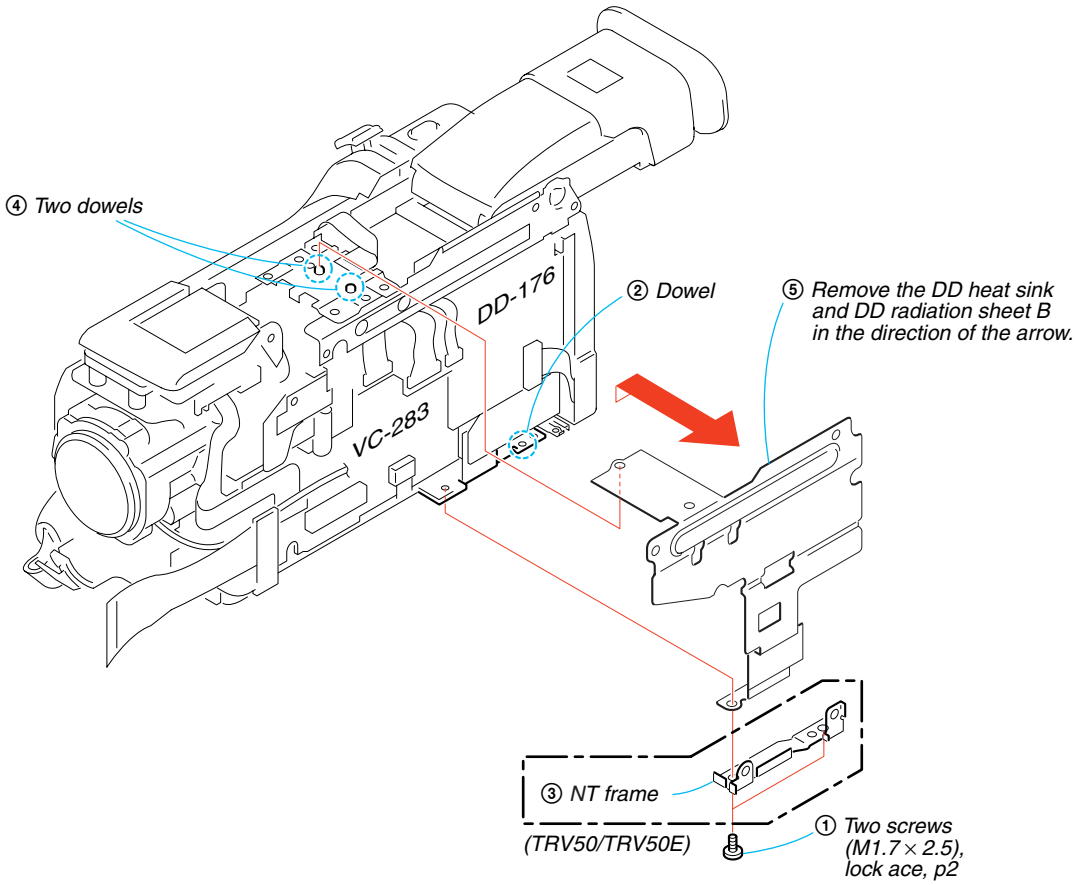
2-9. BT-003 BOARD (TRV50/TRV50E)



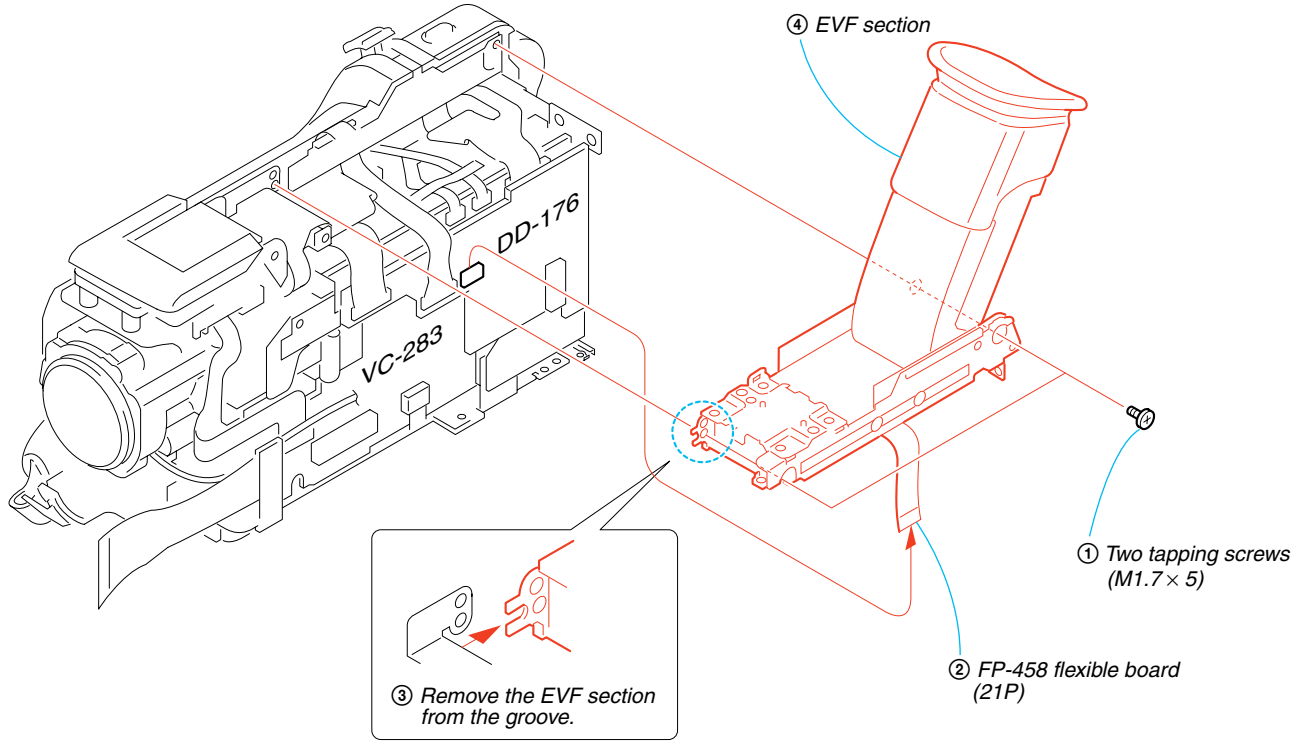
2-10. EXTERNAL CONNECTOR (HOT SHOE)



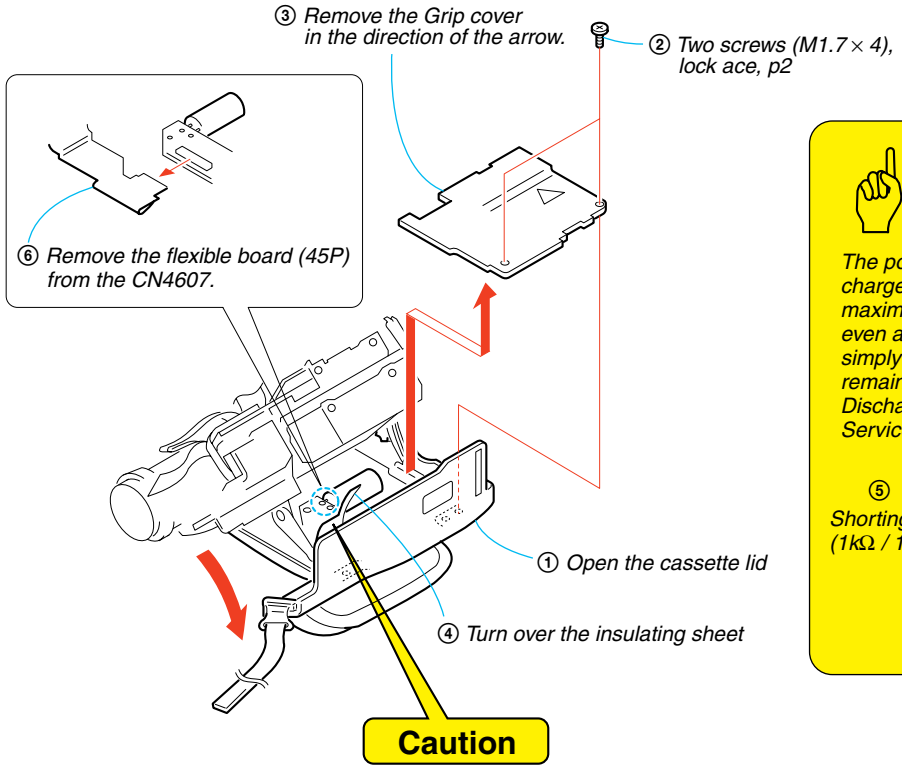
2-11. DD HEAT SINK



2-12. EVF SECTION

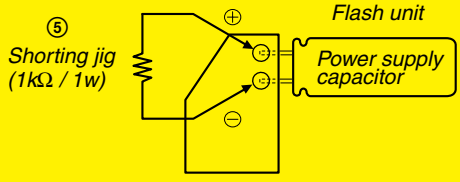


2-13. FLASH UNIT (FLASH SECTION) (1)

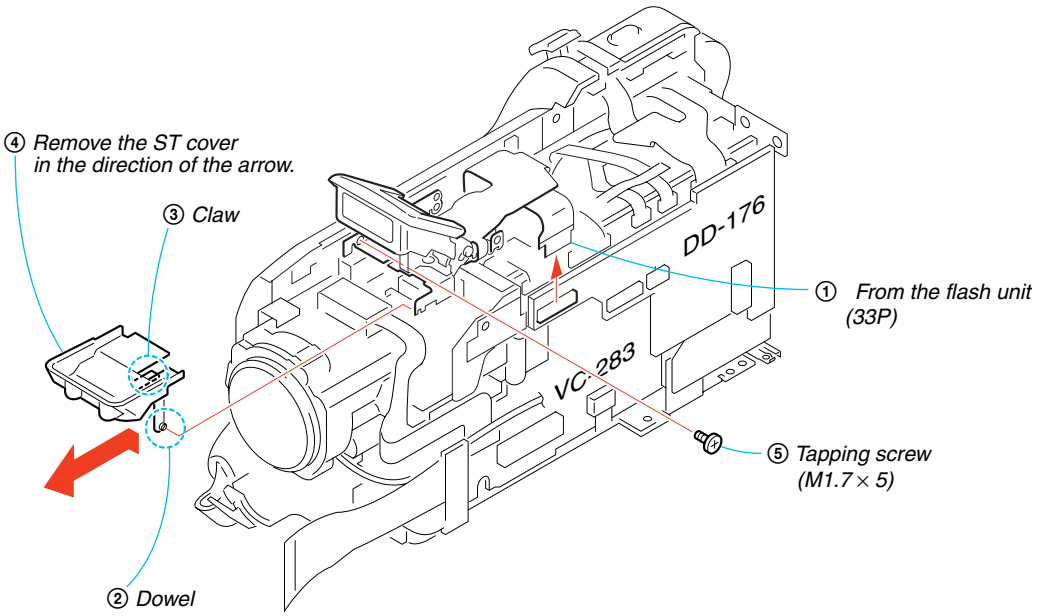


Caution

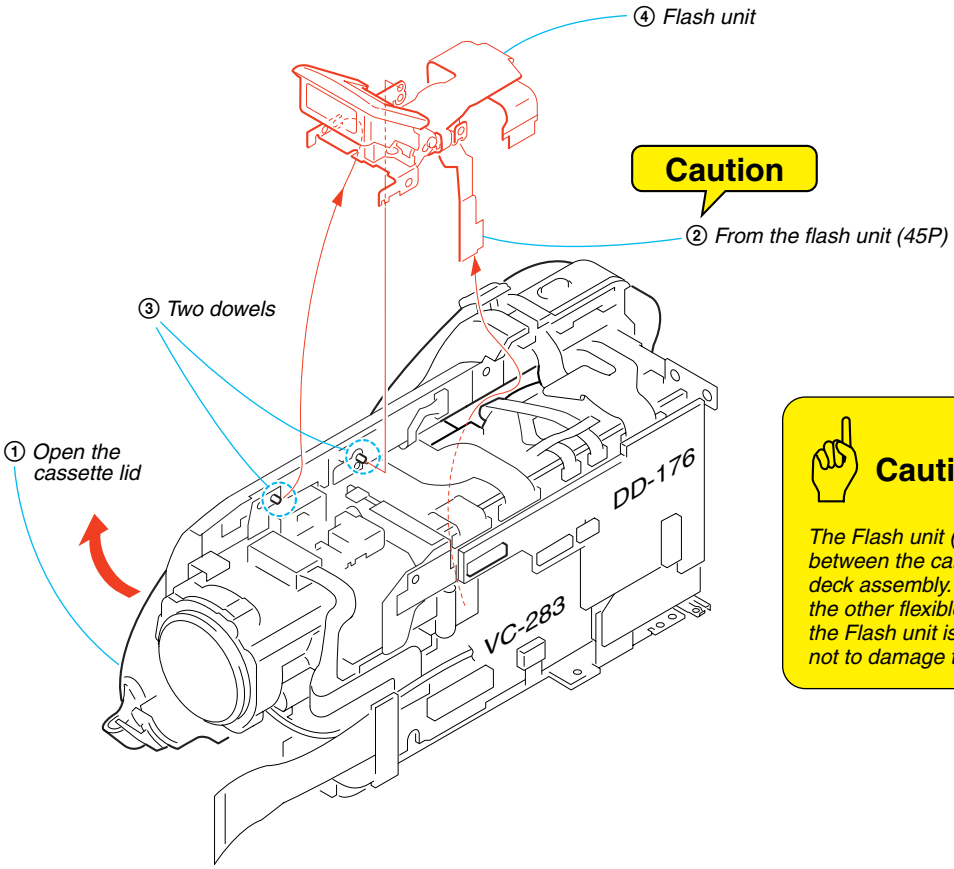
The power supply capacitor of the Flash unit is charged to the voltage as high as 300 V at a maximum. The high voltage is not discharged even after the main power of the machine is simply turned off and the charged potential still remains.
Discharge the residual voltage by referring to Service Note (page 1-2).



2-14. FLASH UNIT (FLASH SECTION) (2)



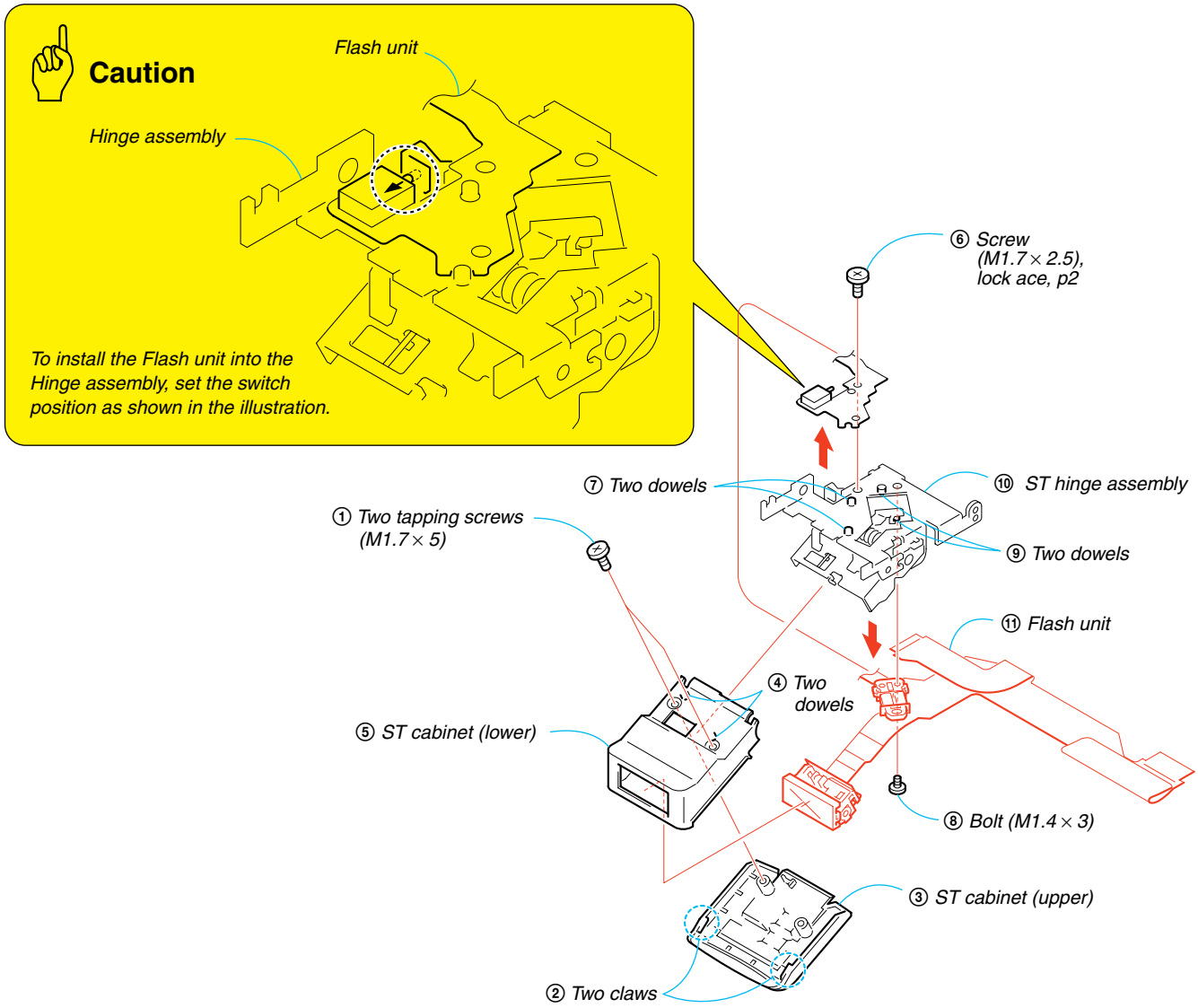
2-15. FLASH UNIT (FLASH SECTION) (3)



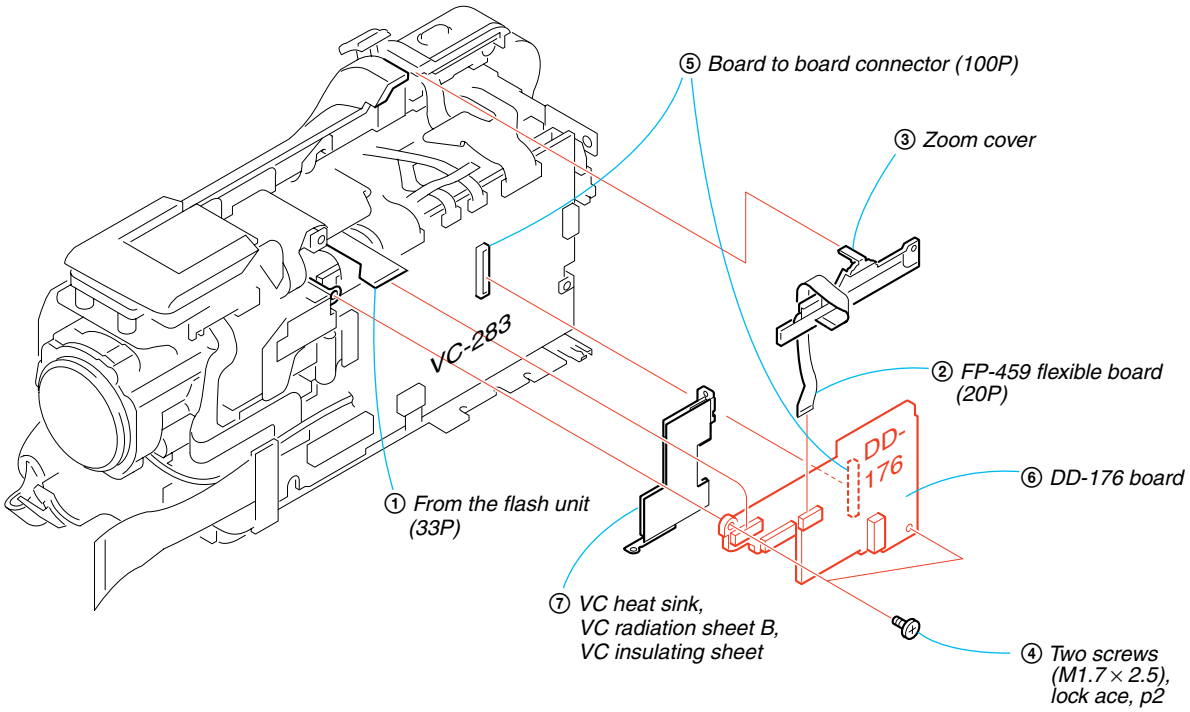
Caution

The Flash unit (45P) ② is routed through the gap between the cabinet L section and the mechanism deck assembly. If the Flash unit is removed forcibly, the other flexible boards may be damaged because the Flash unit is removed from the gap. Be careful not to damage the flexible board.

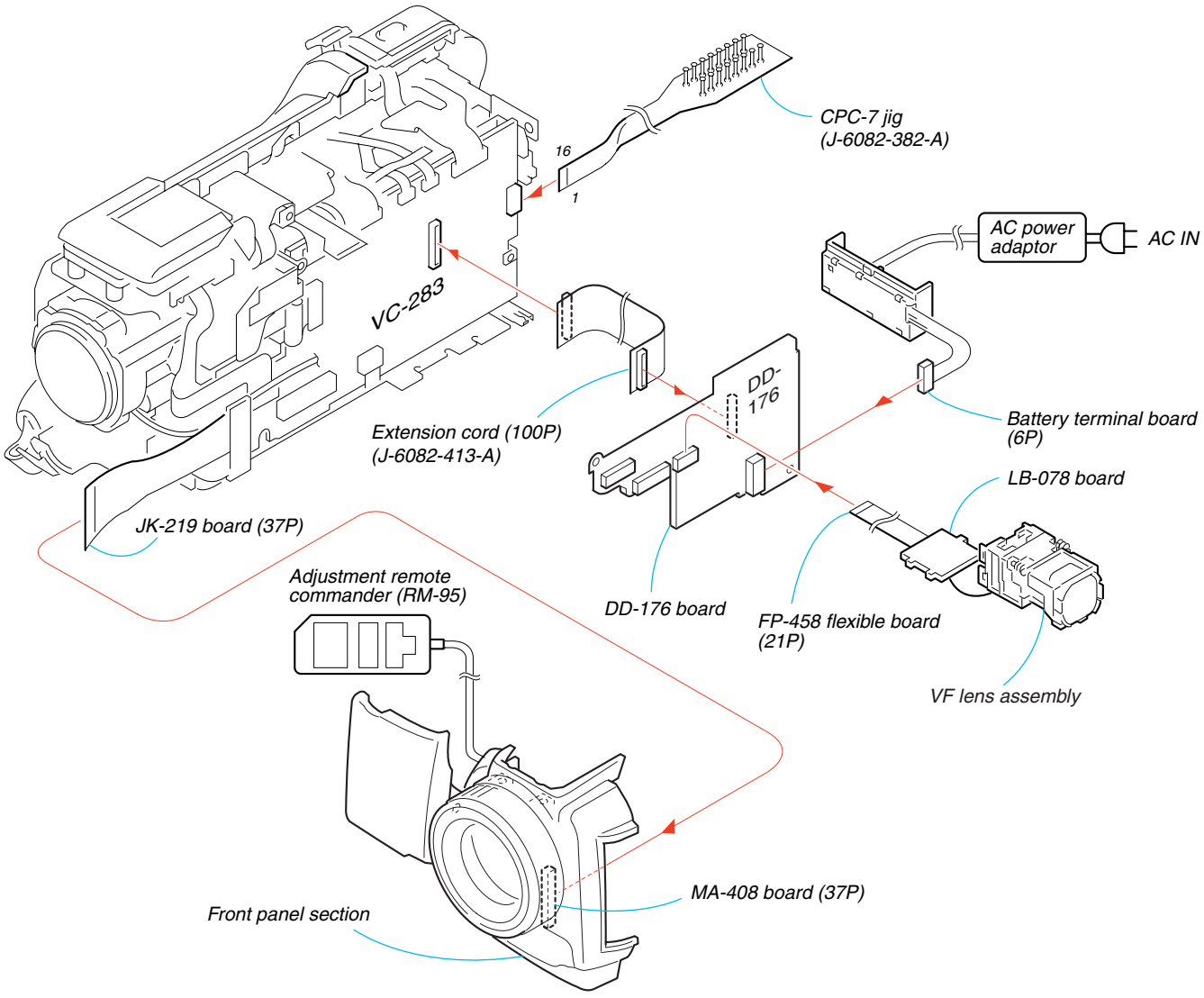
2-16. FLASH UNIT (FLASH SECTION) (4)



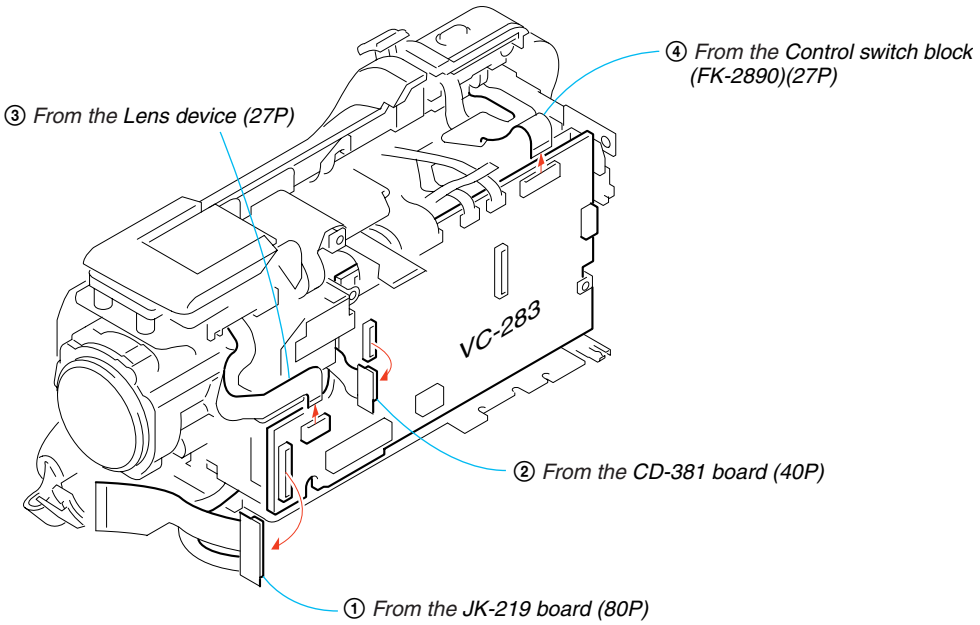
2-17. DD-176 BOARD



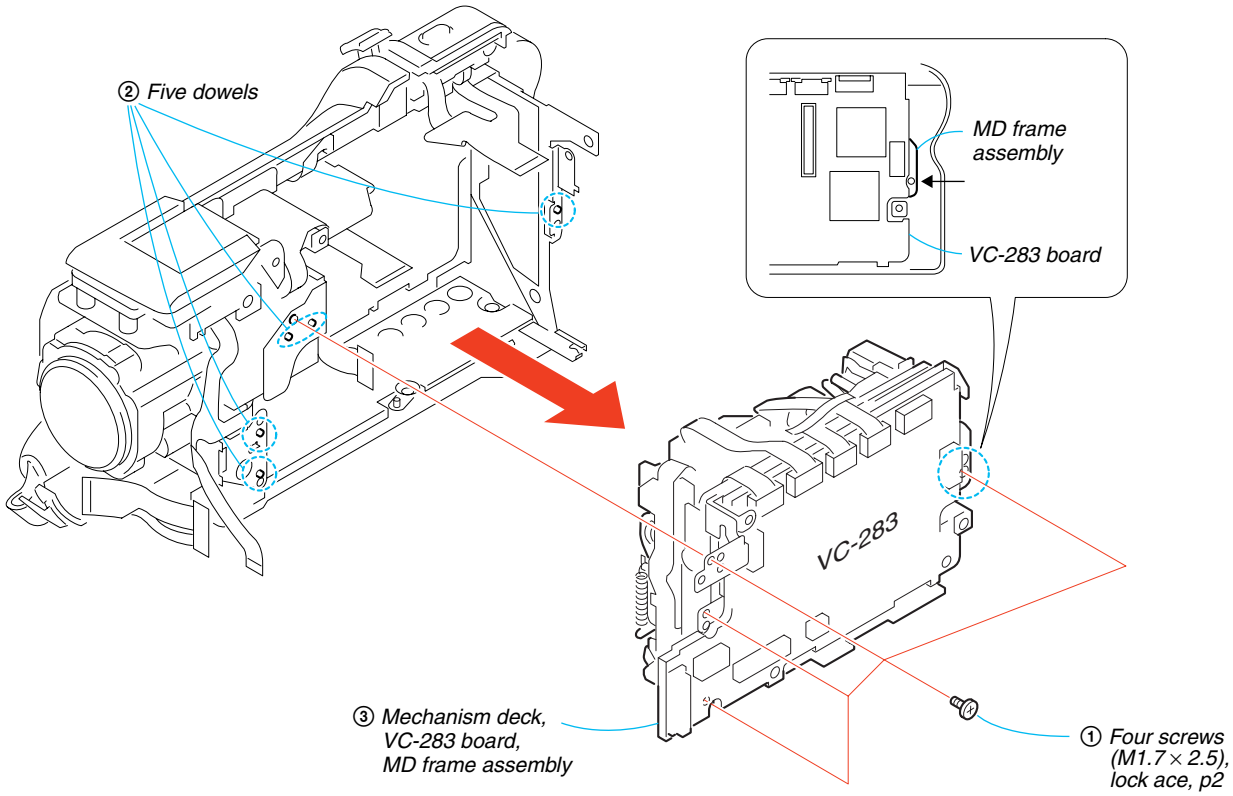
[DD-176 BOARD SERVICE POSITION]



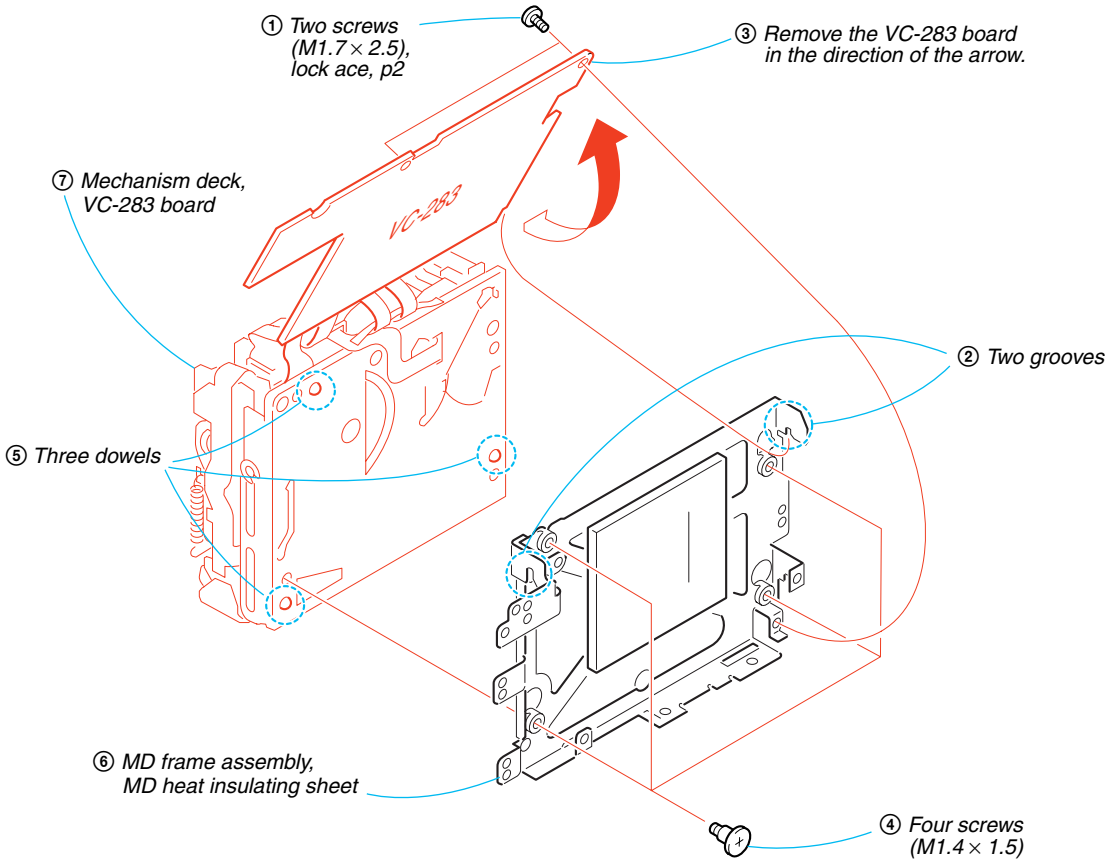
2-18. VC-283 BOARD, MECHANISM DECK (1)



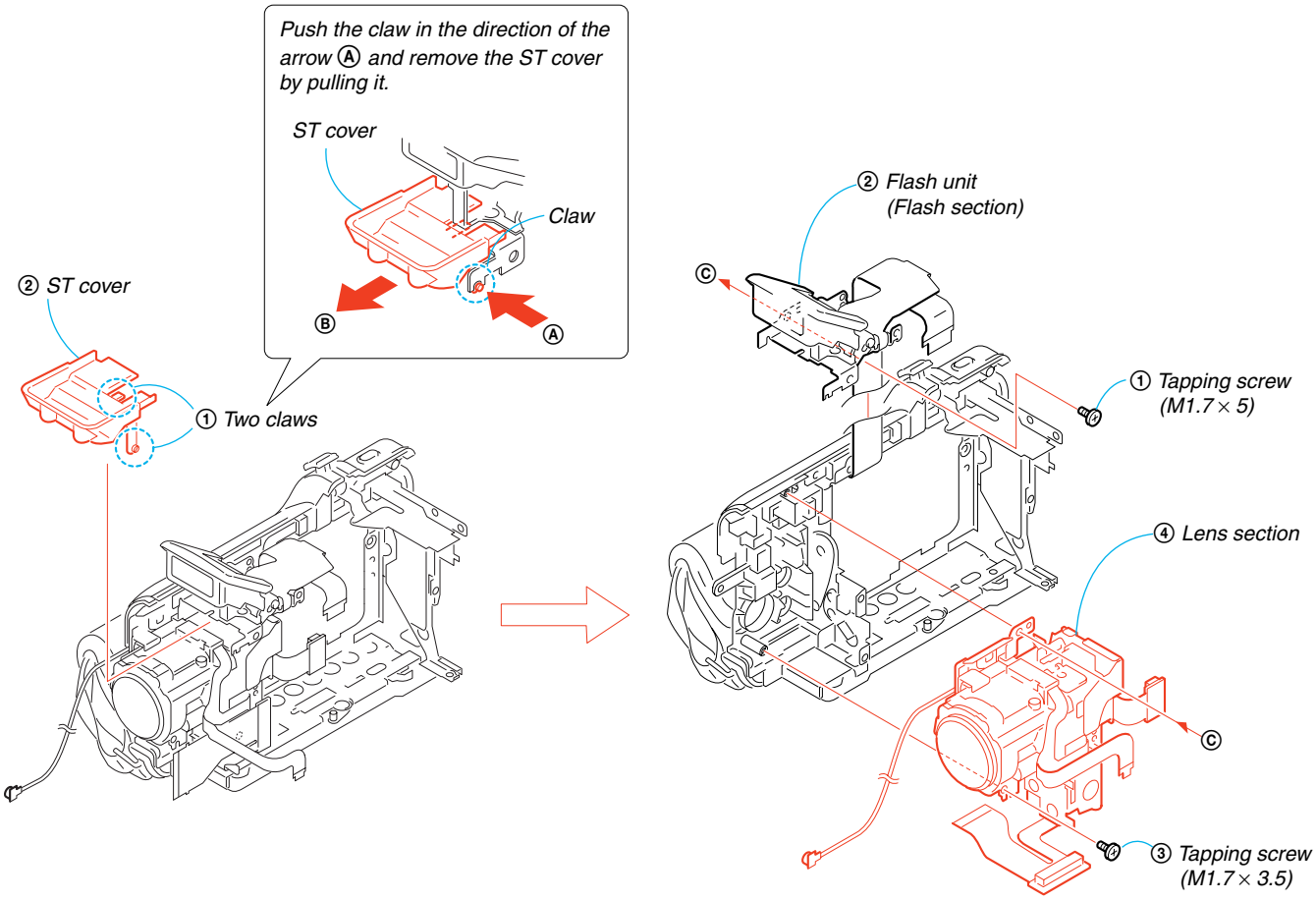
2-19. VC-283 BOARD, MECHANISM DECK (2)



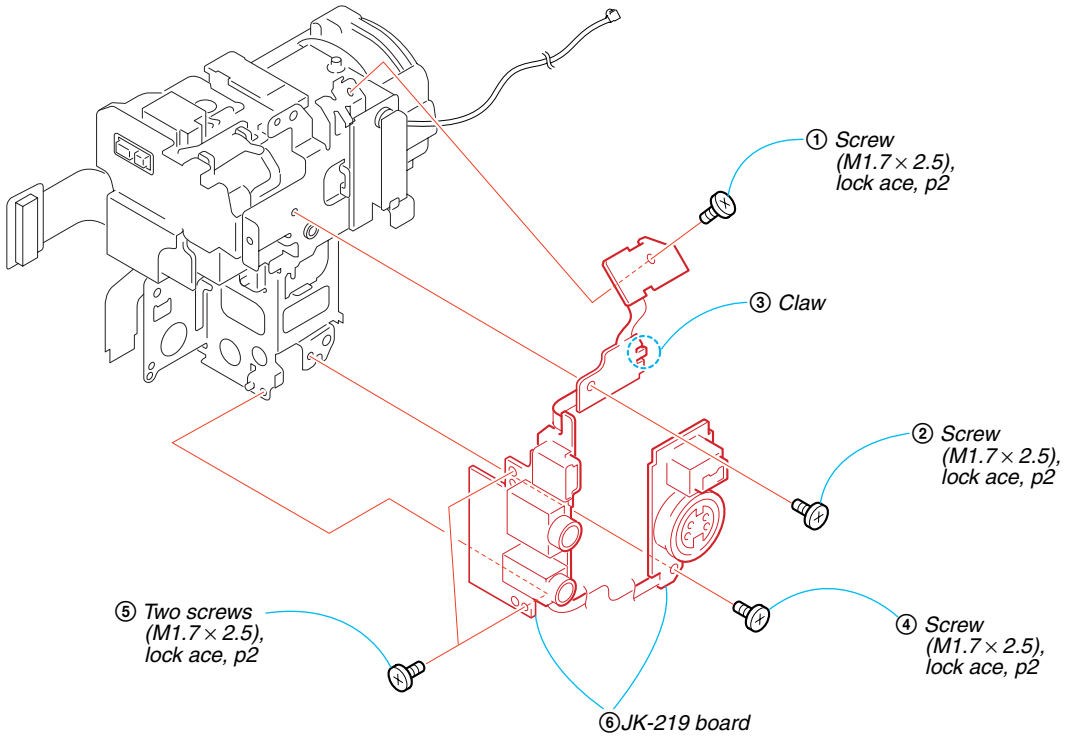
2-20. VC-283 BOARD, MECHANISM DECK (3)



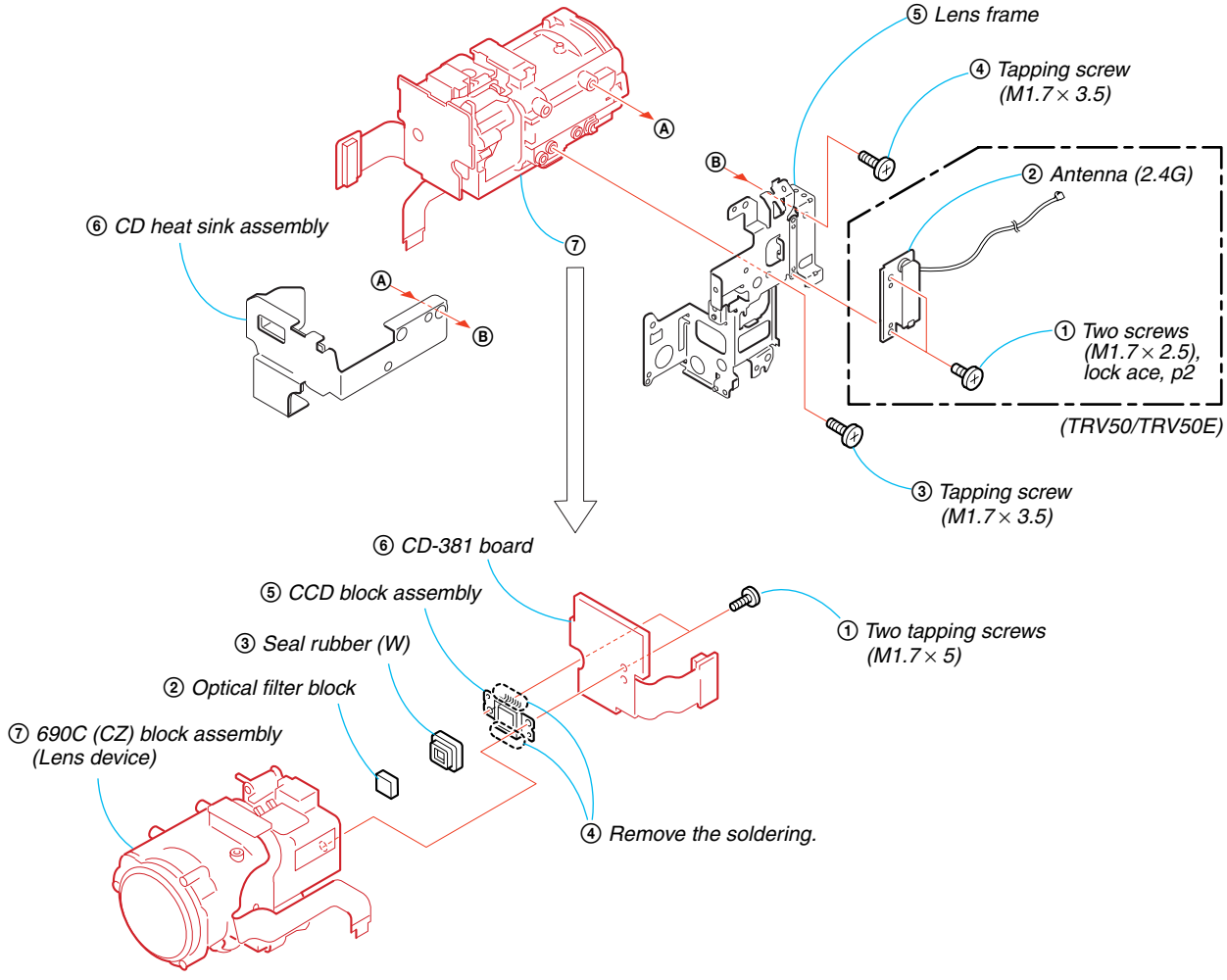
2-21. LENS SECTION



2-22. JK-219 BOARD



2-23. CD-381 BOARD, 690C (CZ) BLOCK ASSEMBLY (LENS DEVICE)



[SERVICE POSITION TO CHECK THE VTR SECTION]

Connection to Check the VTR Section

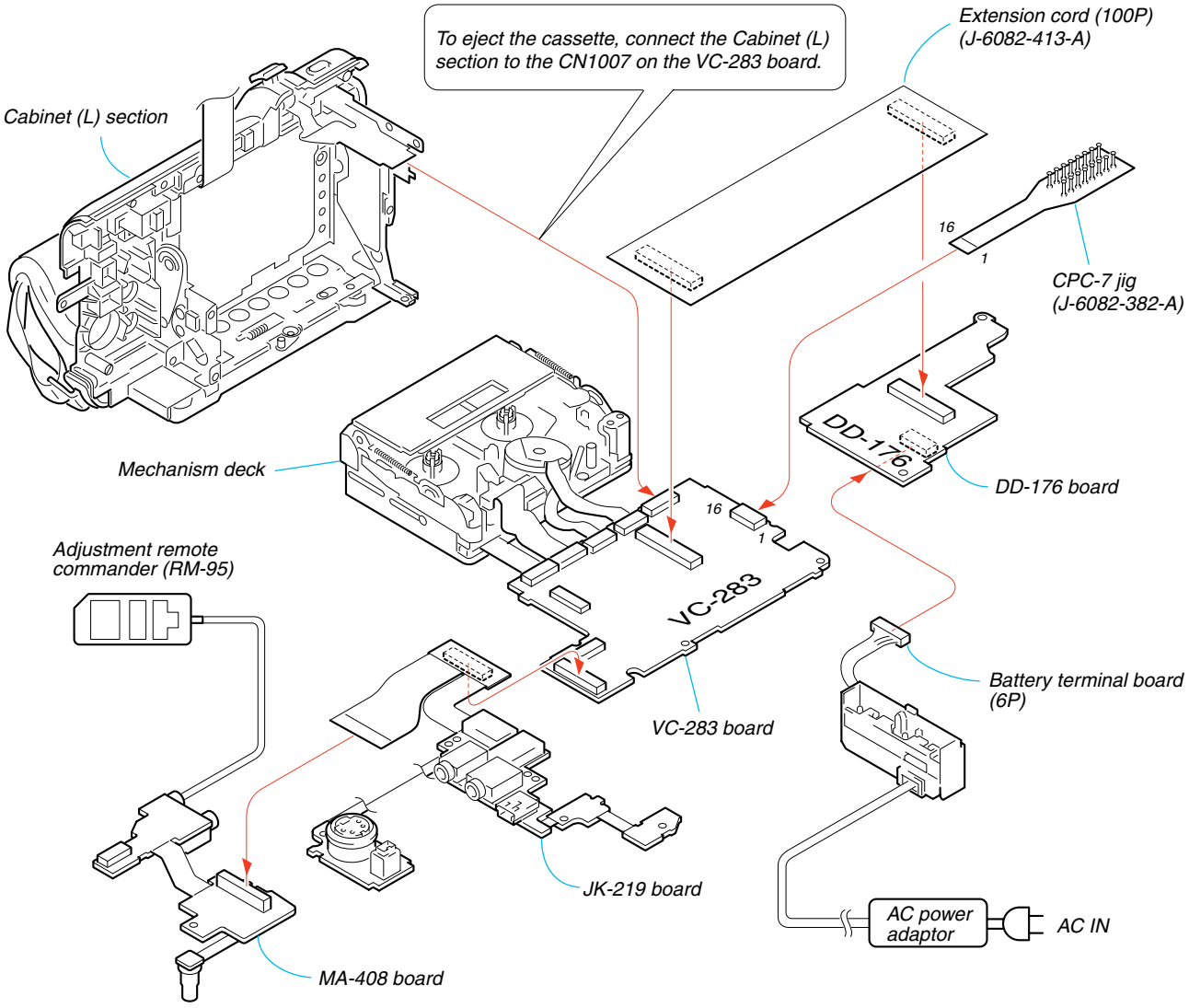
To check the VTR section, set the VTR to the "Forced VTR power ON" mode.
Operate the VTR functions using the adjustment remote commander (with the HOLD switch set in the OFF position).

Setting the "Forced VTR Power ON" mode

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

Exiting the "Forced VTR Power ON" mode

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



[SERVICE POSITION TO CHECK THE CAMERA SECTION]

Connection to Check the Camera Section

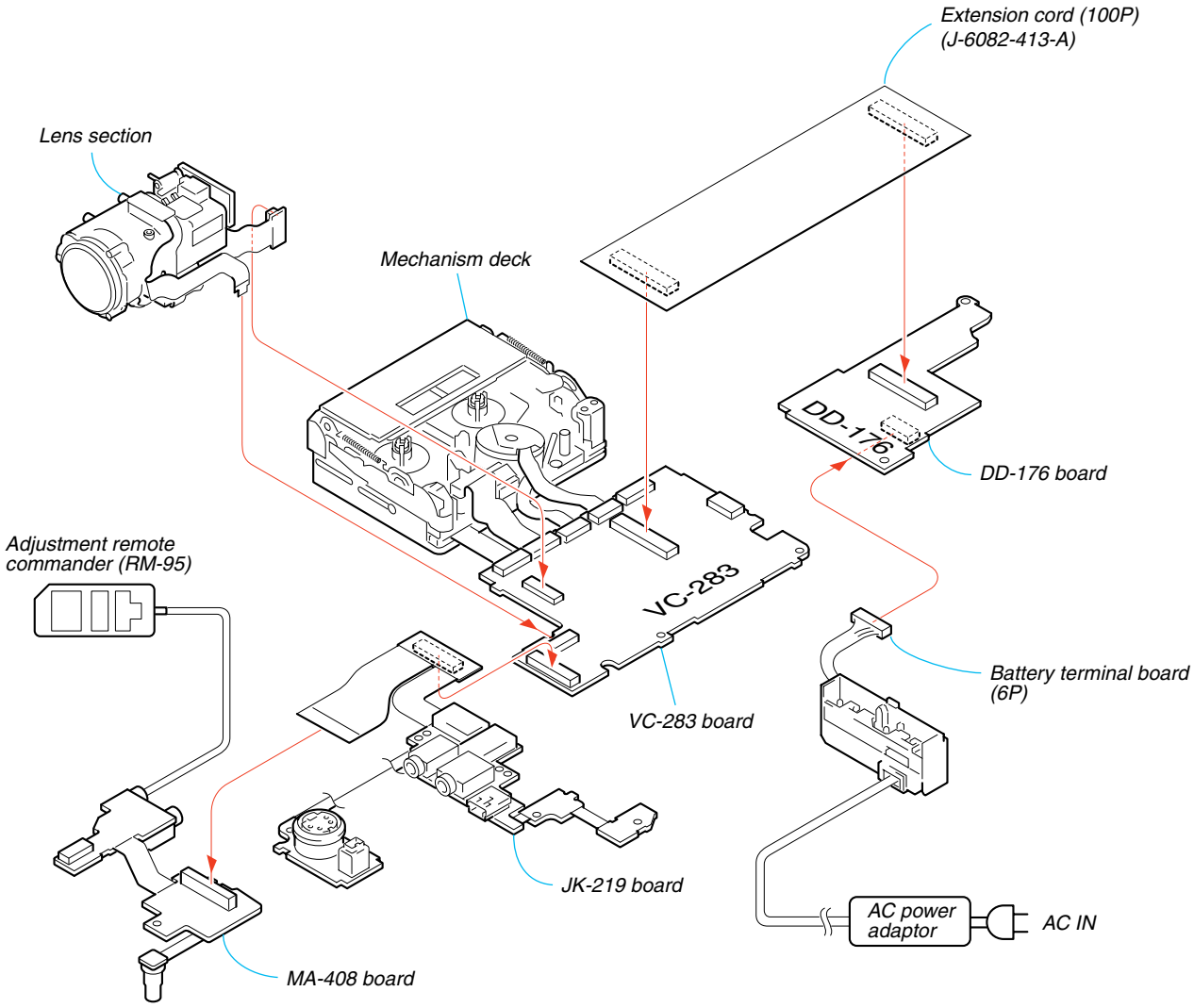
To check the CAMERA section, set the CAMERA to the “Forced camera power ON” mode.
When you want to operate the ZOOM and FOCUS, use the controls on the remote commander (with HOLD switch off).

Setting the “Forced Camera Power ON” mode

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

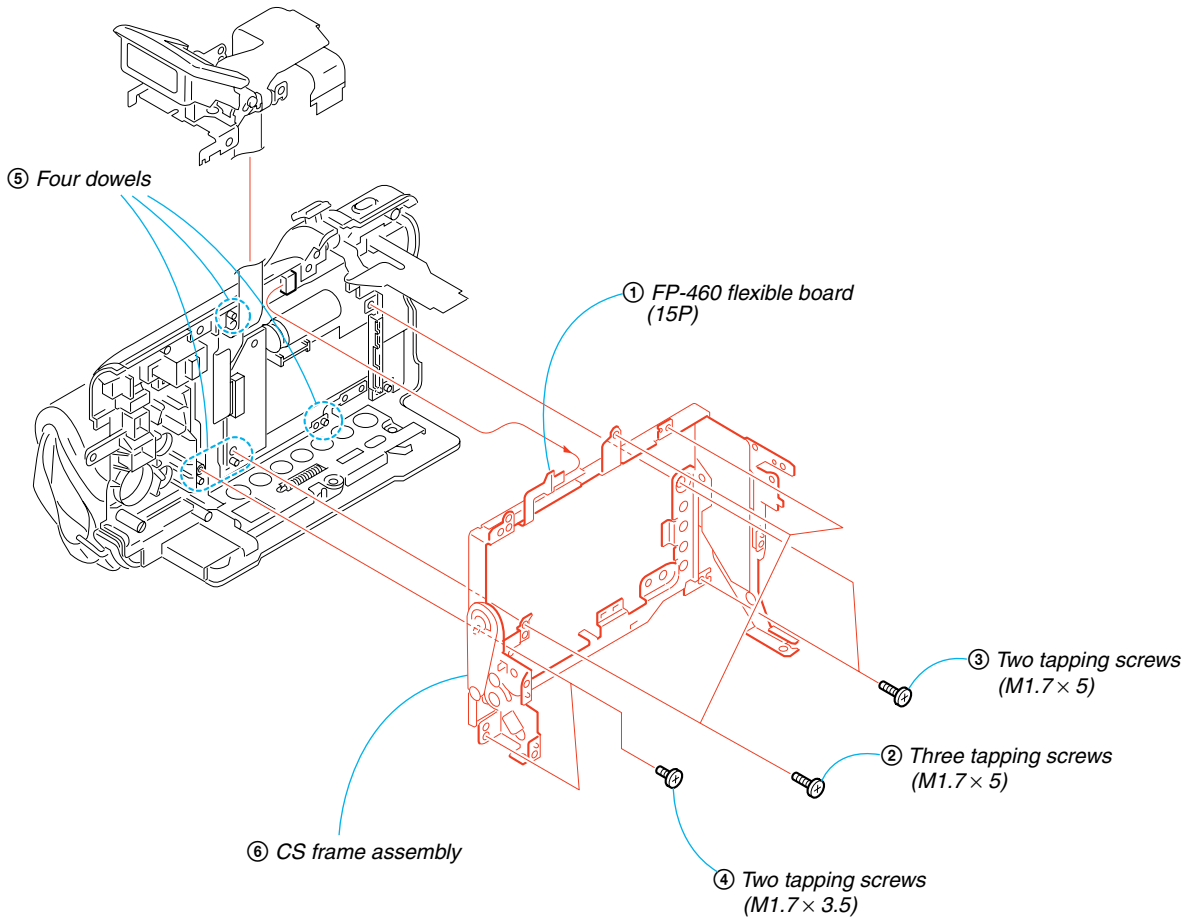
Exiting the “Forced Camera Power ON” mode

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

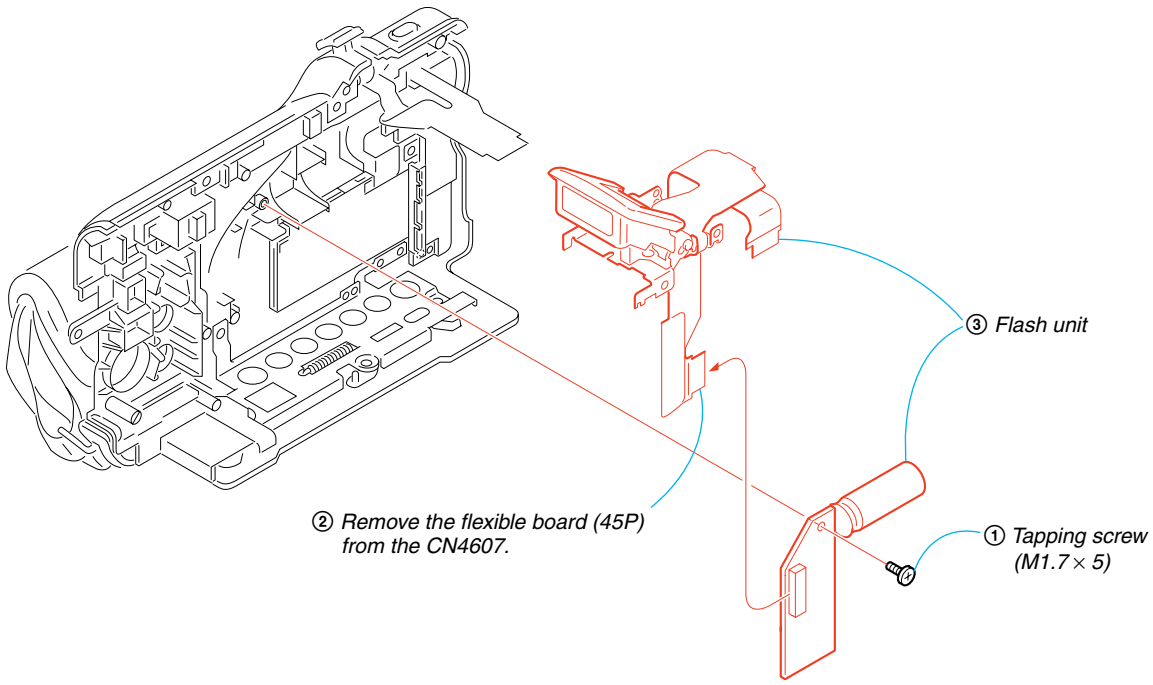


2-24. CS FRAME ASSEMBLY

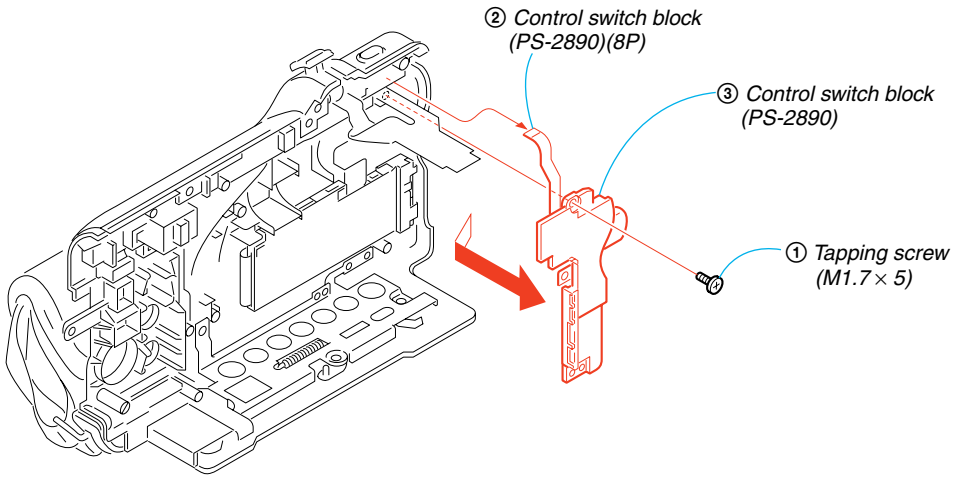
(Before starting disassembling, remove the glip cover and discharge the power supply capacitor referring to section 2-13)



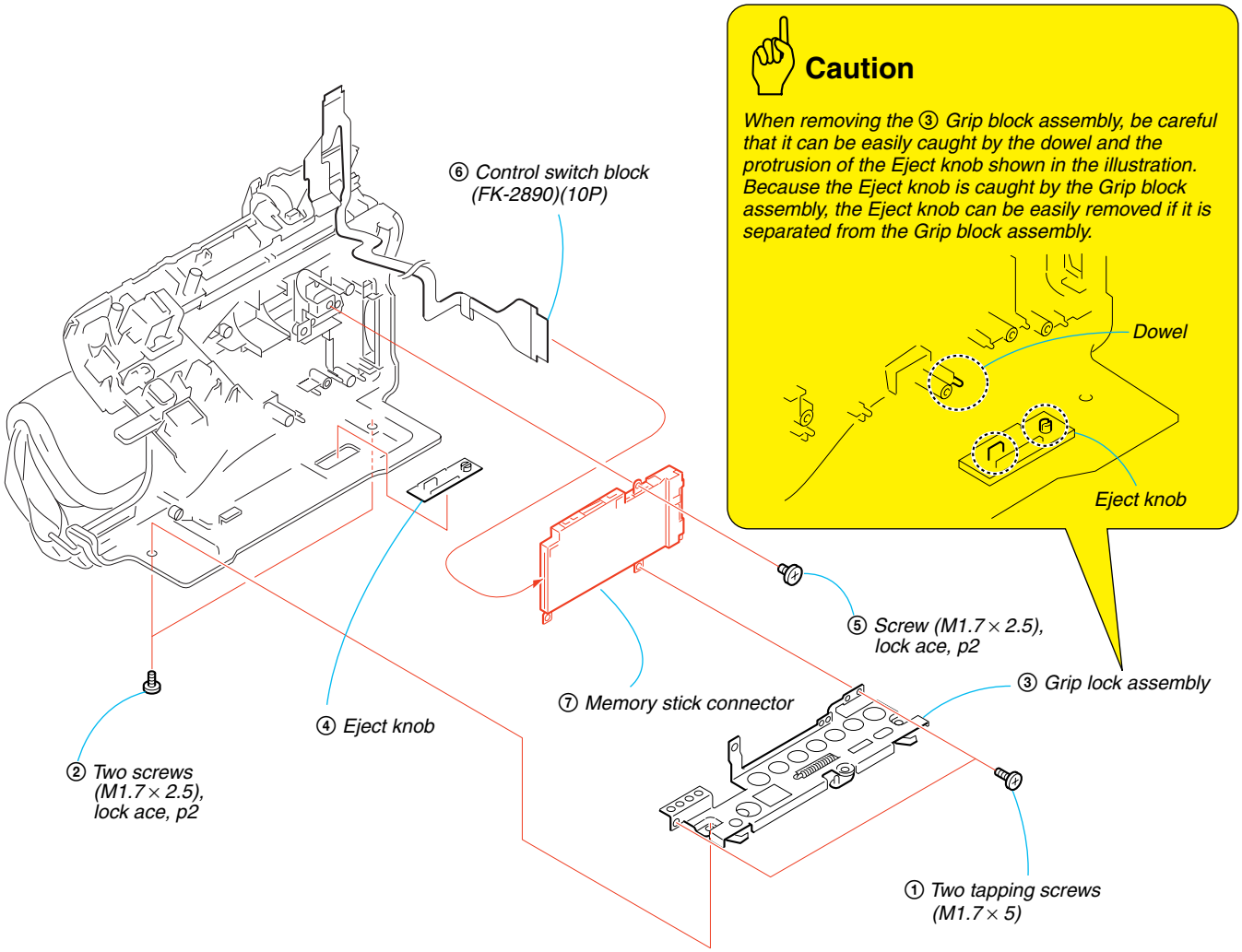
2-25. FLASH UNIT



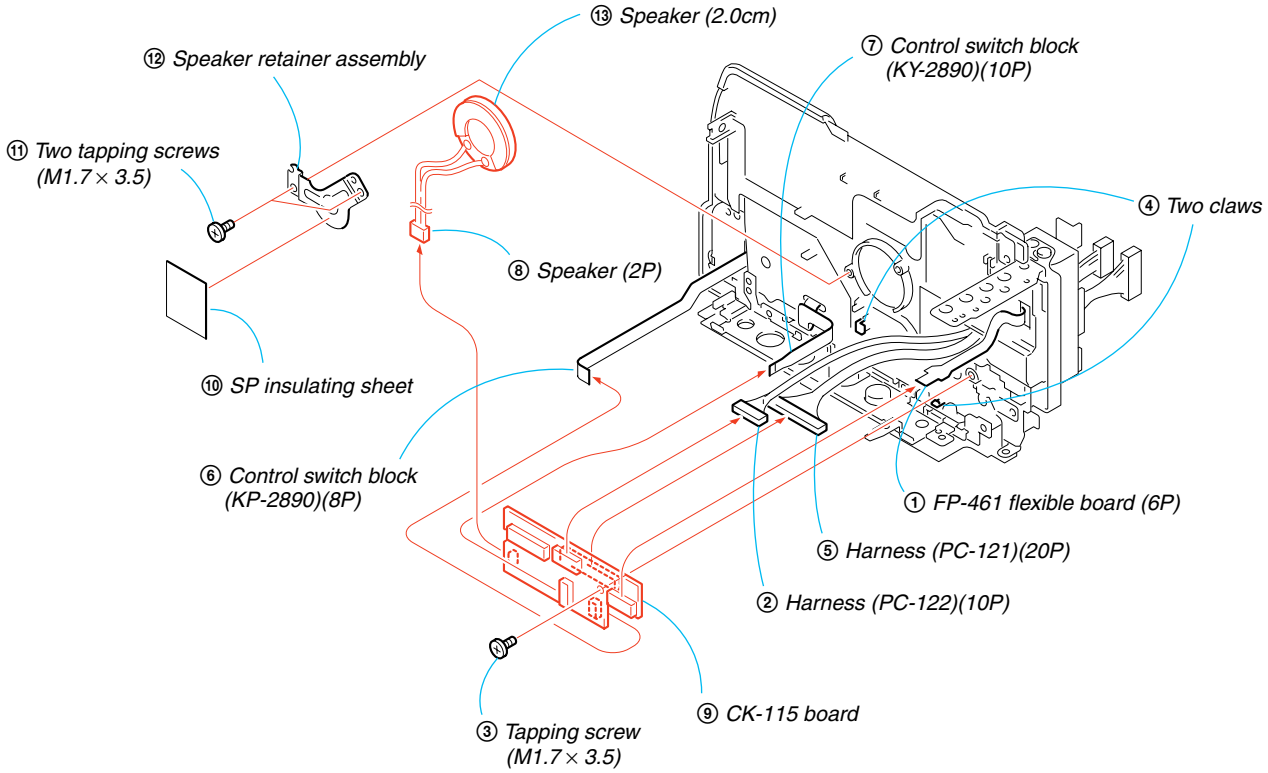
2-26. CONTROL SWITCH BLOCK (PS-2890)



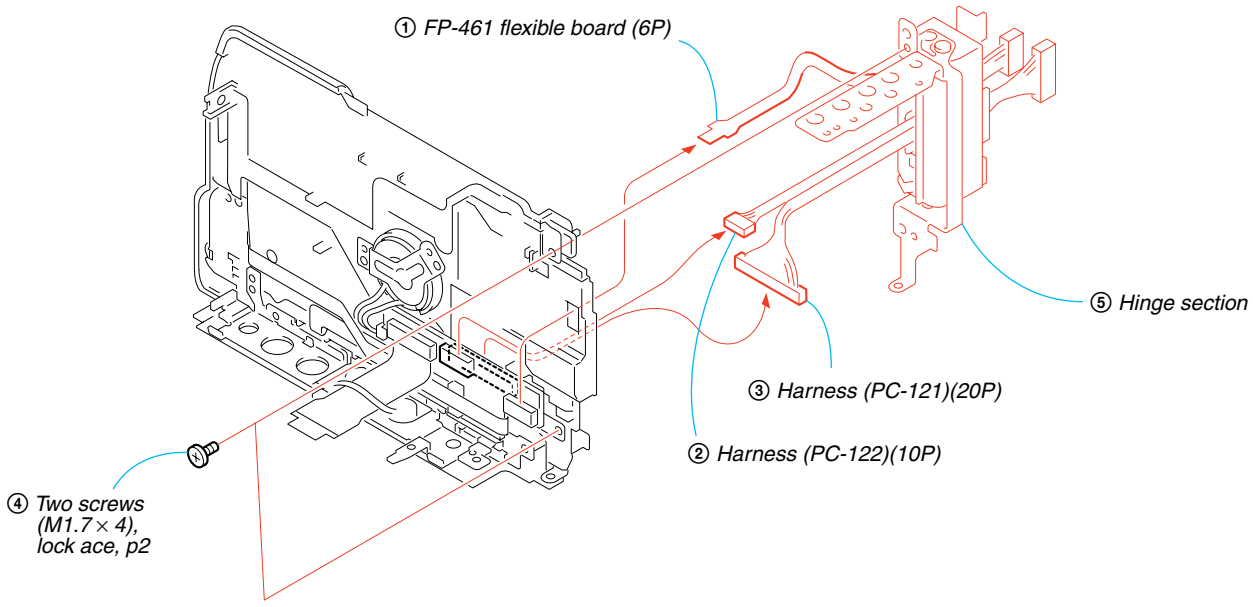
2-27. MEMORY STICK CONNECTOR



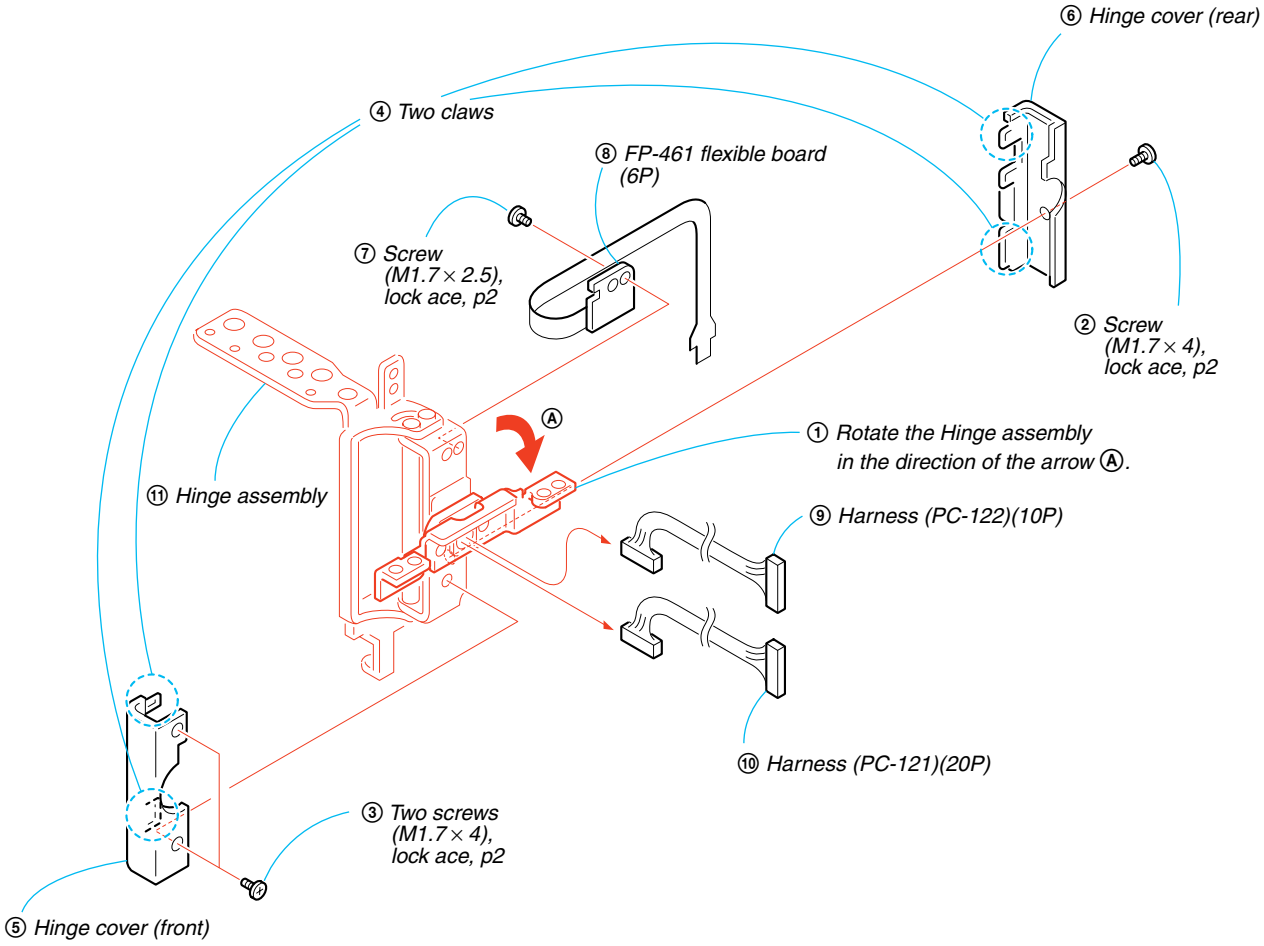
2-28. CK-115 BOARD, SPEAKER (2.0CM)



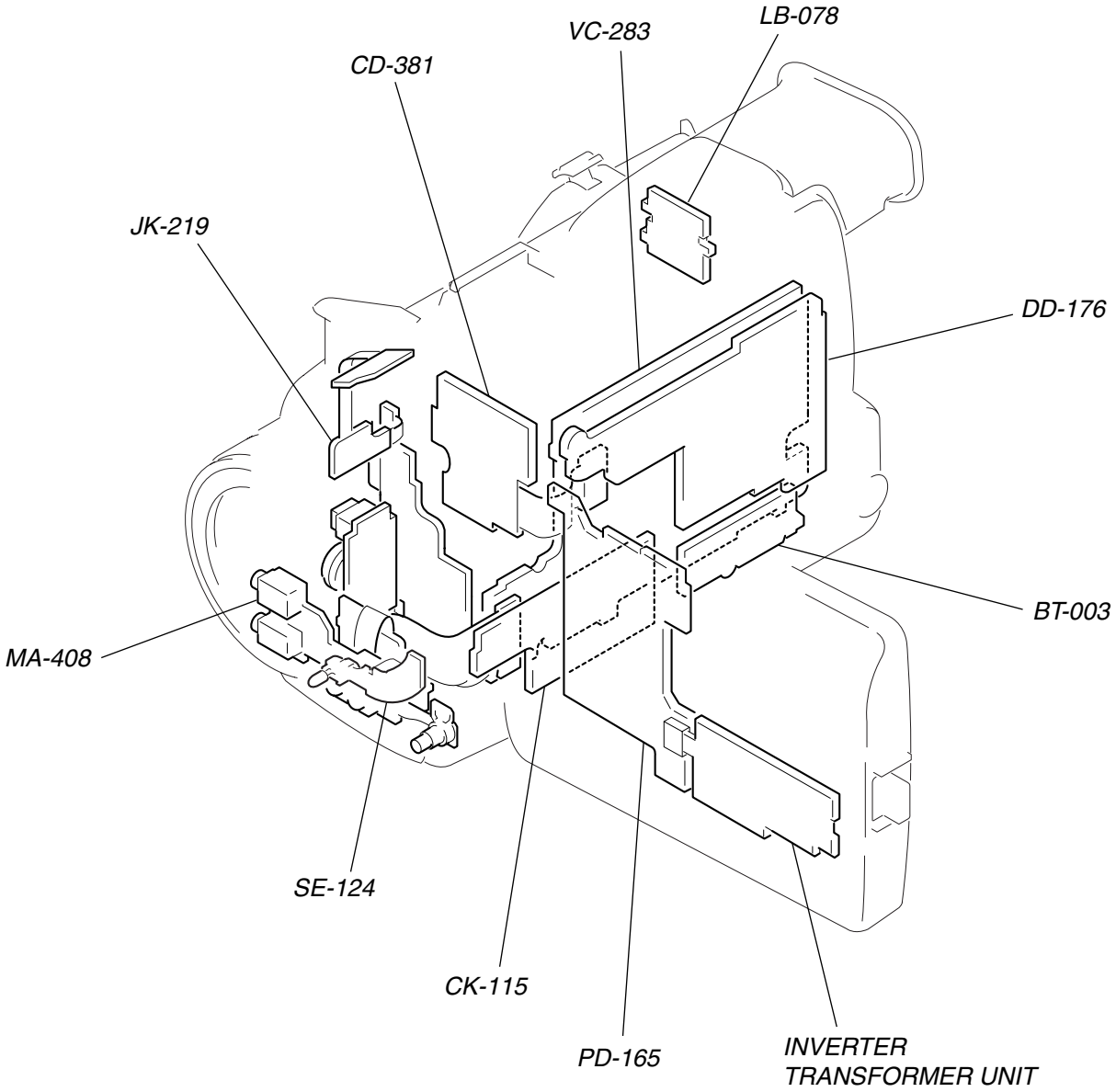
2-29. HINGE SECTION



2-30. HINGE ASSEMBLY



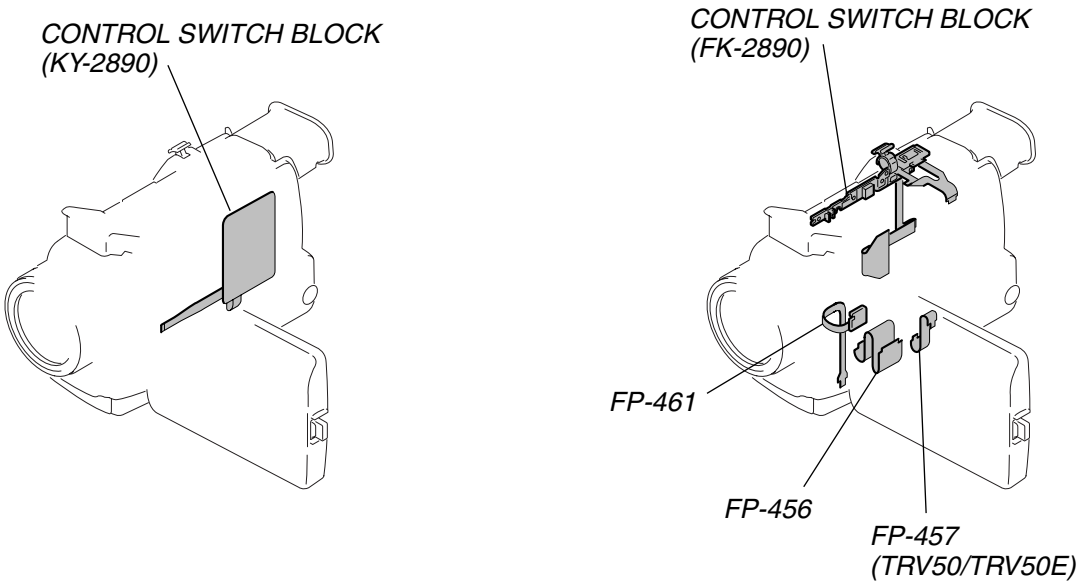
2-31. CIRCUIT BOARDS LOCATION

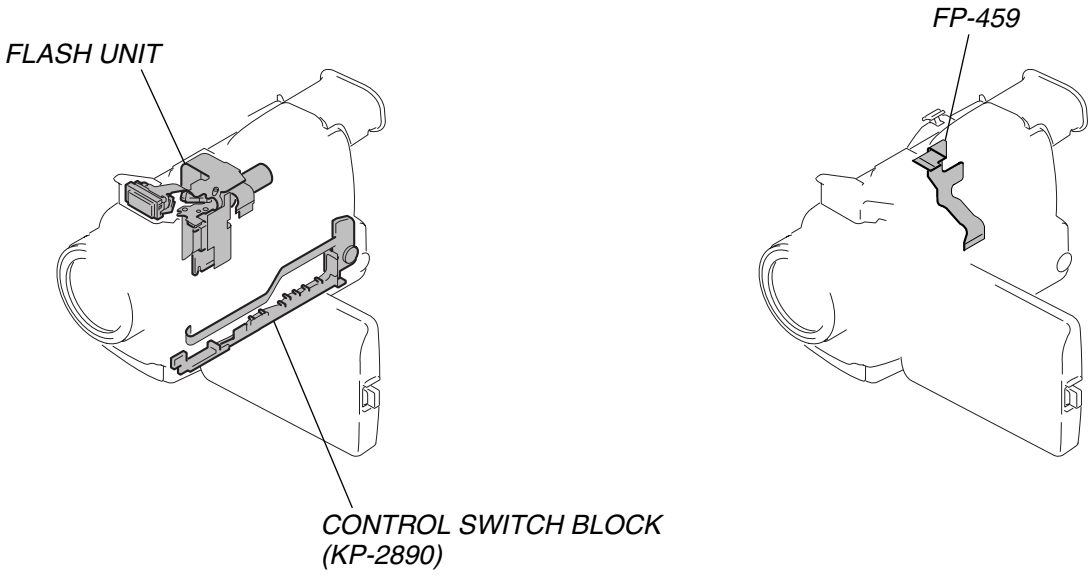


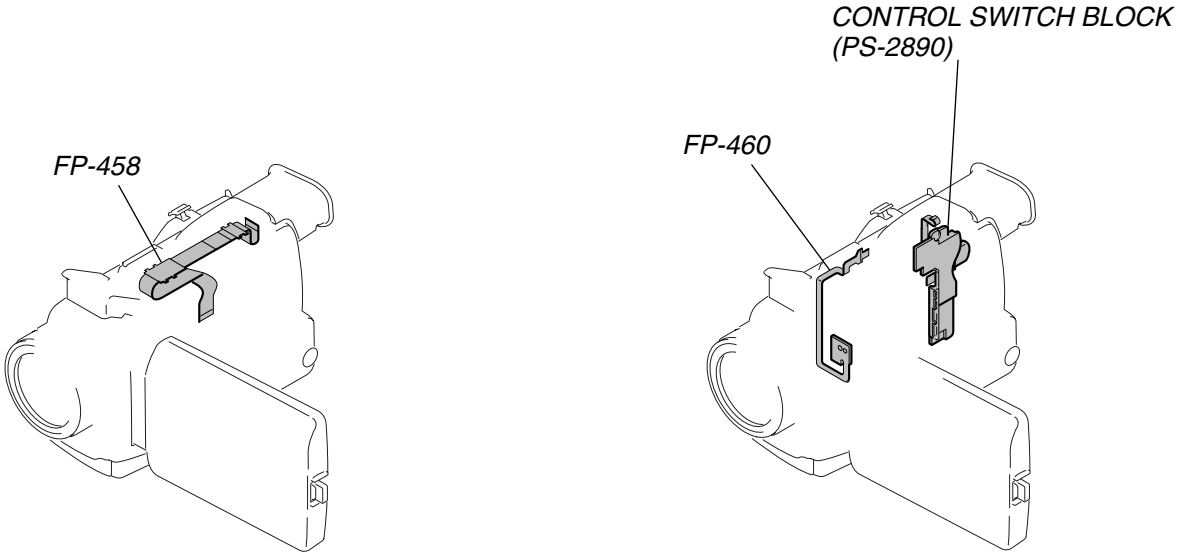
NAME	FUNCTION
BT-003	BLUE TOOTH (Schematic diagram and printed wiring board to replace blocks are not listed.)
CD-381	CCD IMAGER
CK-115	CONTROL SWITCH
DD-176	DC/DC CONVERTER
JK-219	AV IN/OUT, STEADY SHOT
LB-078	EVF BACKLIGHT
MA-408	MIC AMP, REMOTE COMMANDER RECEIVER, LANC, EXT MIC
PD-165	RGB DRIVE, TIMING GENERATOR, LCD DRIVE, BACKLIGHT
SE-124	MF SENSOR
VC-283	CAMERA PROCESS, DV PROCESS, VIDEO PROCESS, SERVO, CAMERA/MECHA CONTROL, HI CONTROL, AUDIO PROCESS, USB I/F

2-32. FLEXIBLE BOARDS LOCATION

The flexible boards contained in the mechanism deck are not shown.







COVER

3. BLOCK DIAGRAMS

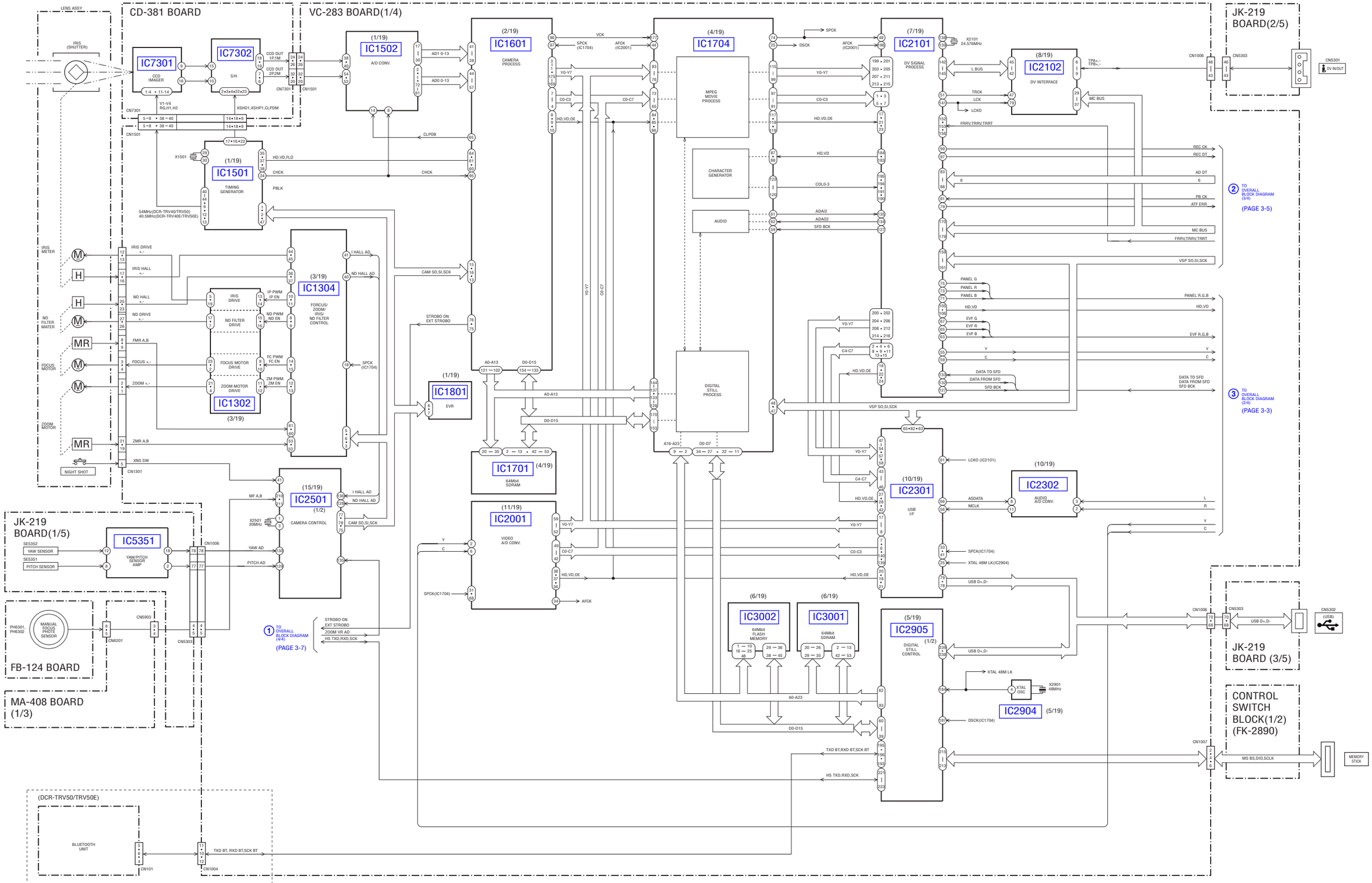
Link

COVER

SECTION 3
BLOCK DIAGRAMS

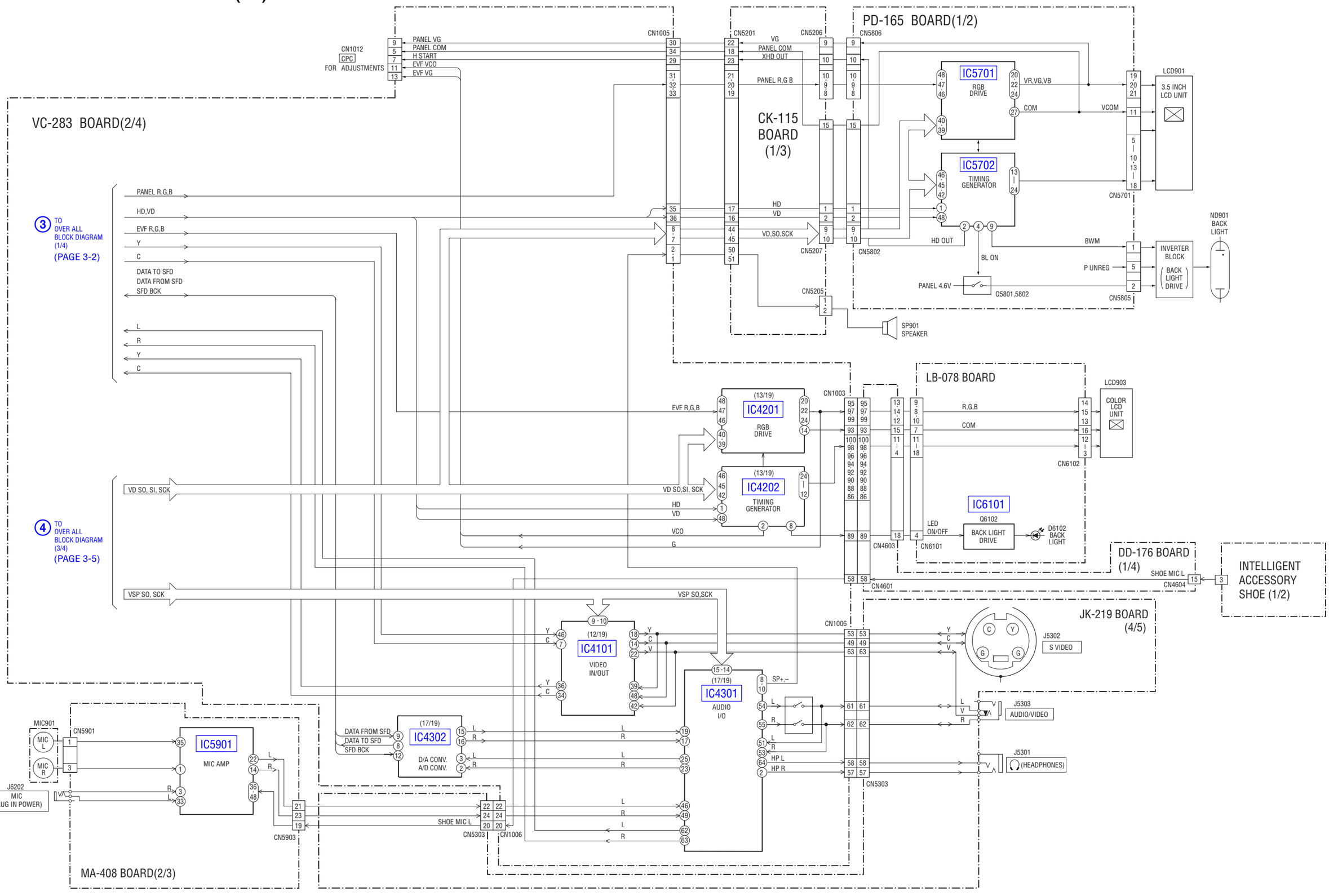
3-1. OVERALL BLOCK DIAGRAM (1/4)

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



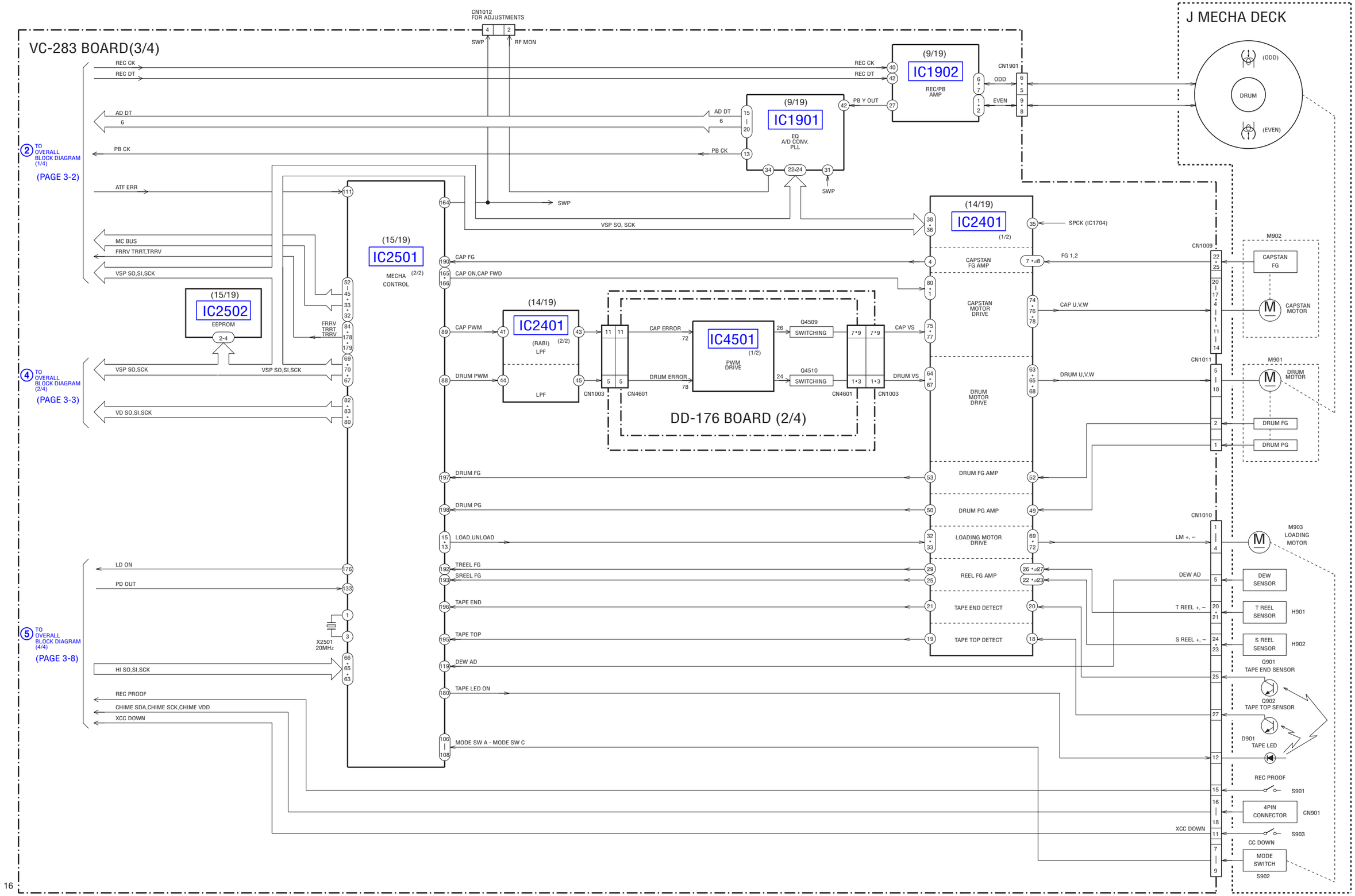
3-2. OVERALL BLOCK DIAGRAM (2/4)

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



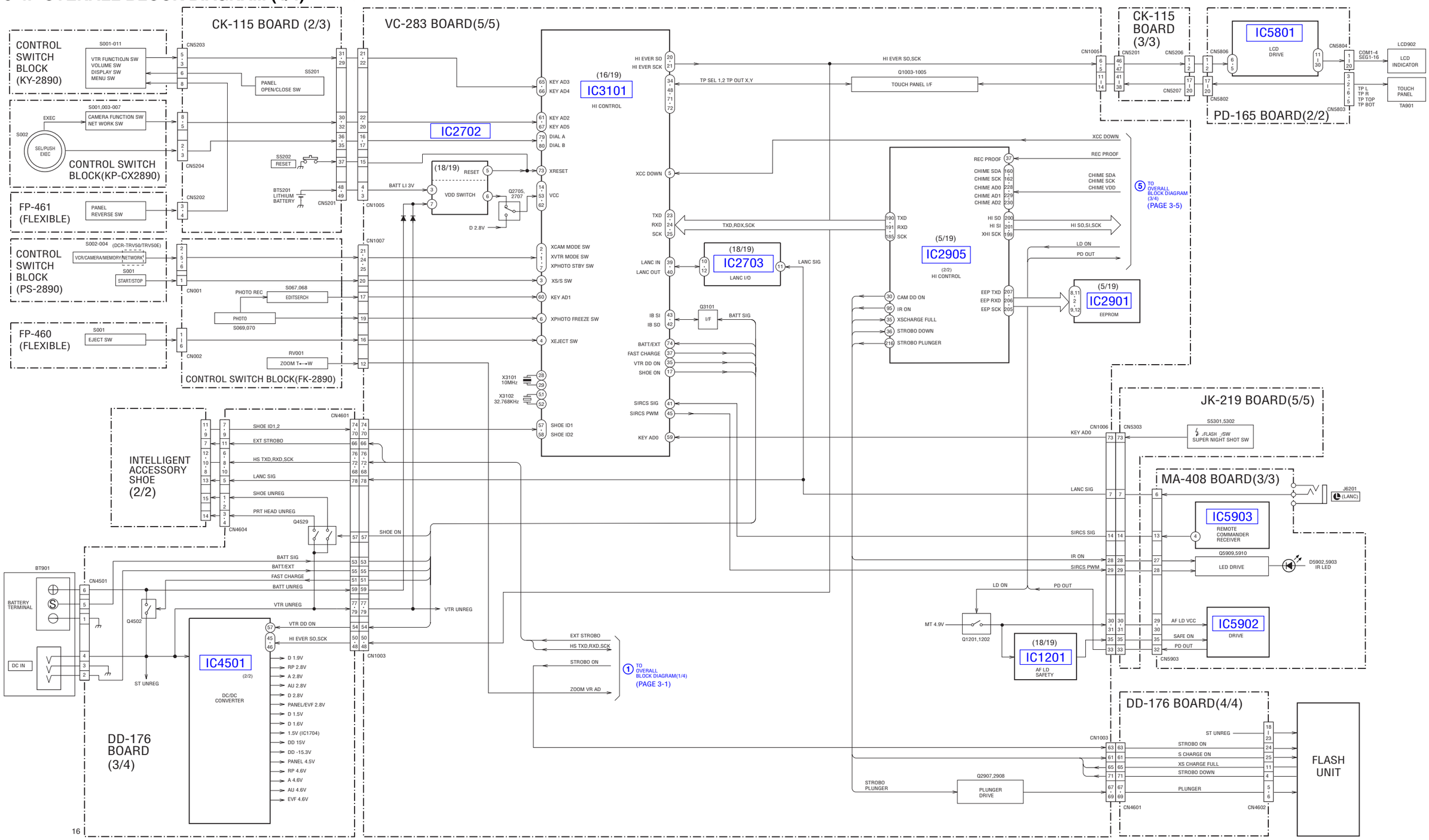
3-3. OVERALL BLOCK DIAGRAM (3/4)

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



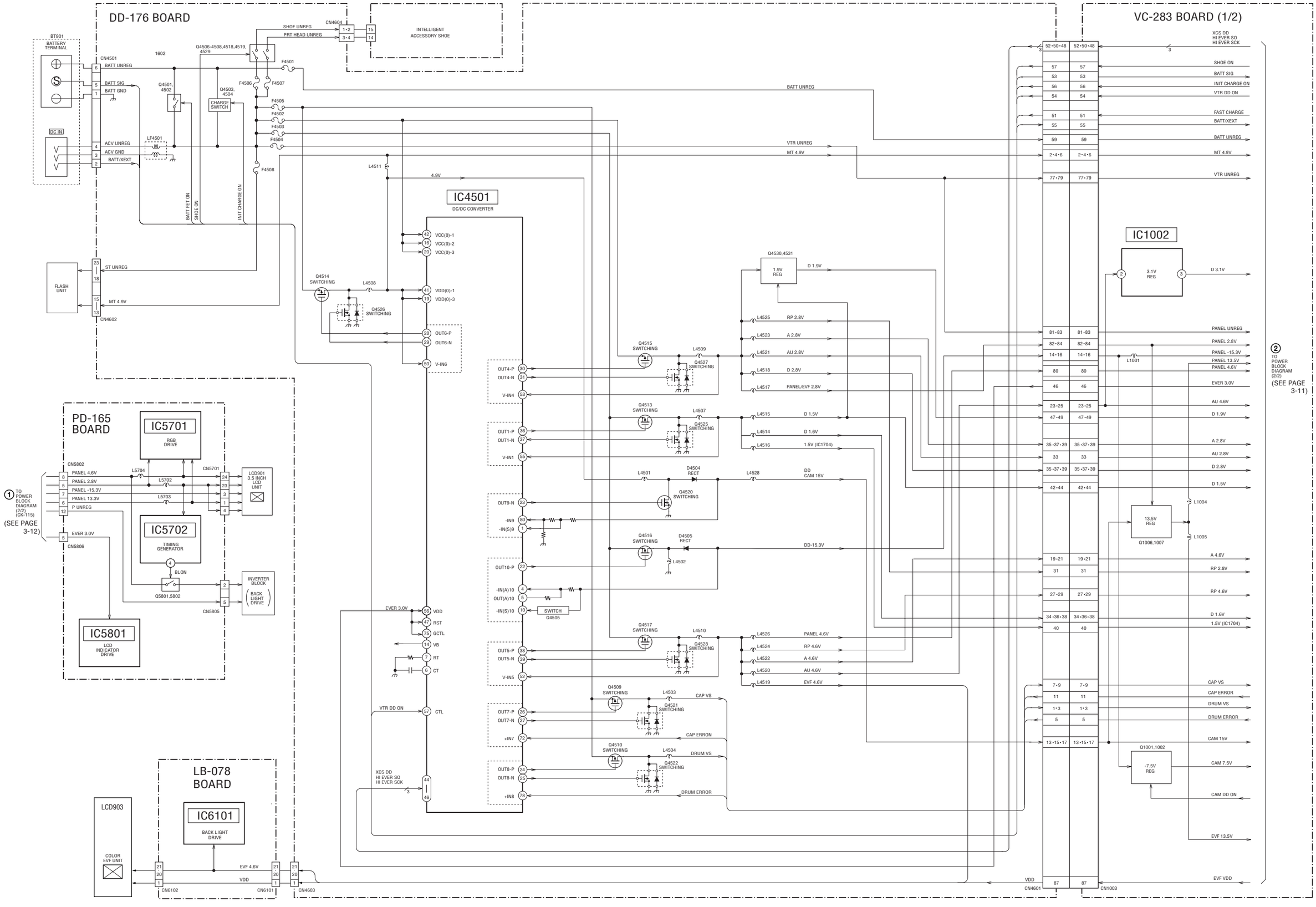
3-4. OVERALL BLOCK DIAGRAM (4/4)

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



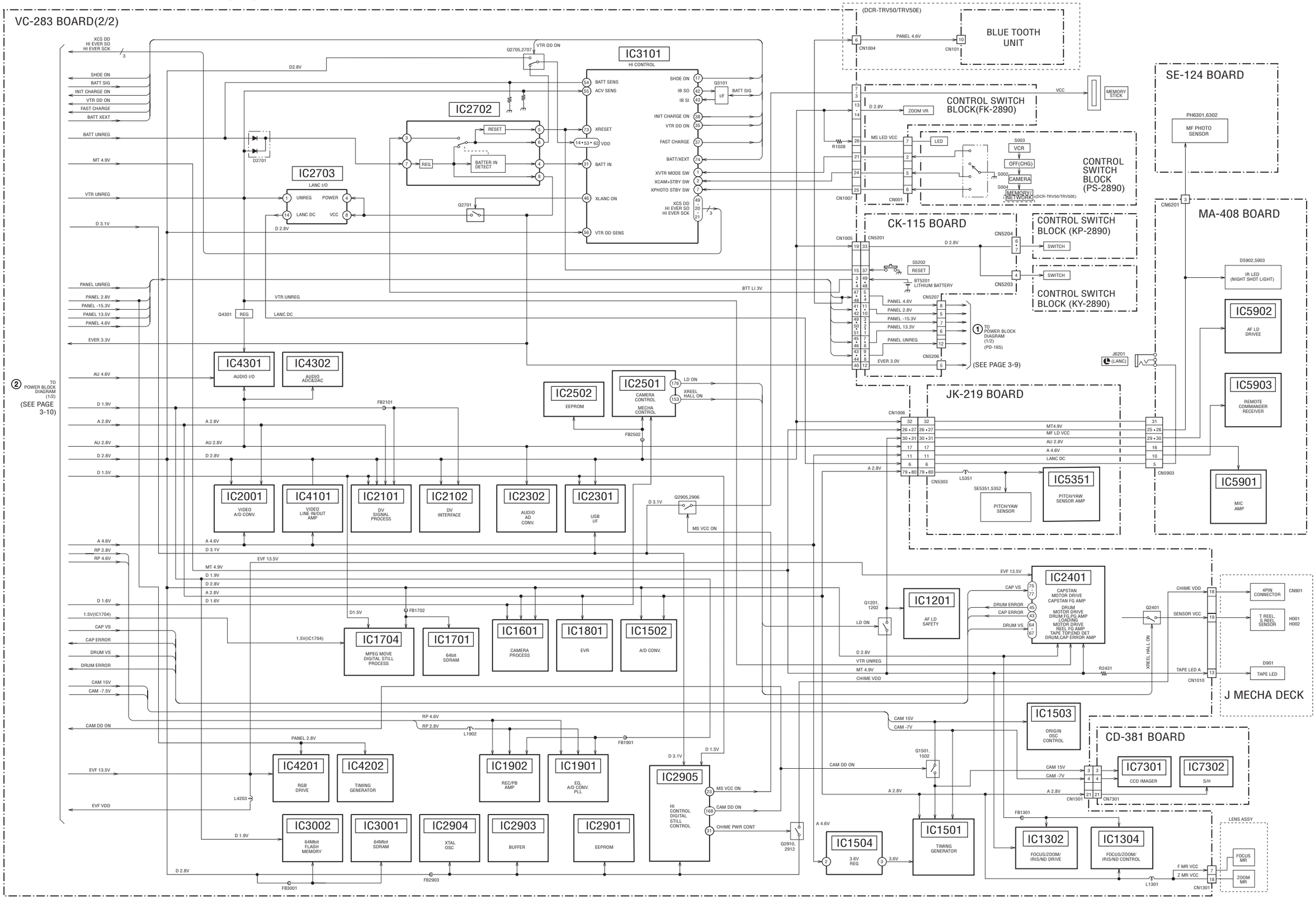
3-5. POWER BLOCK DIAGRAM (1/2)

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



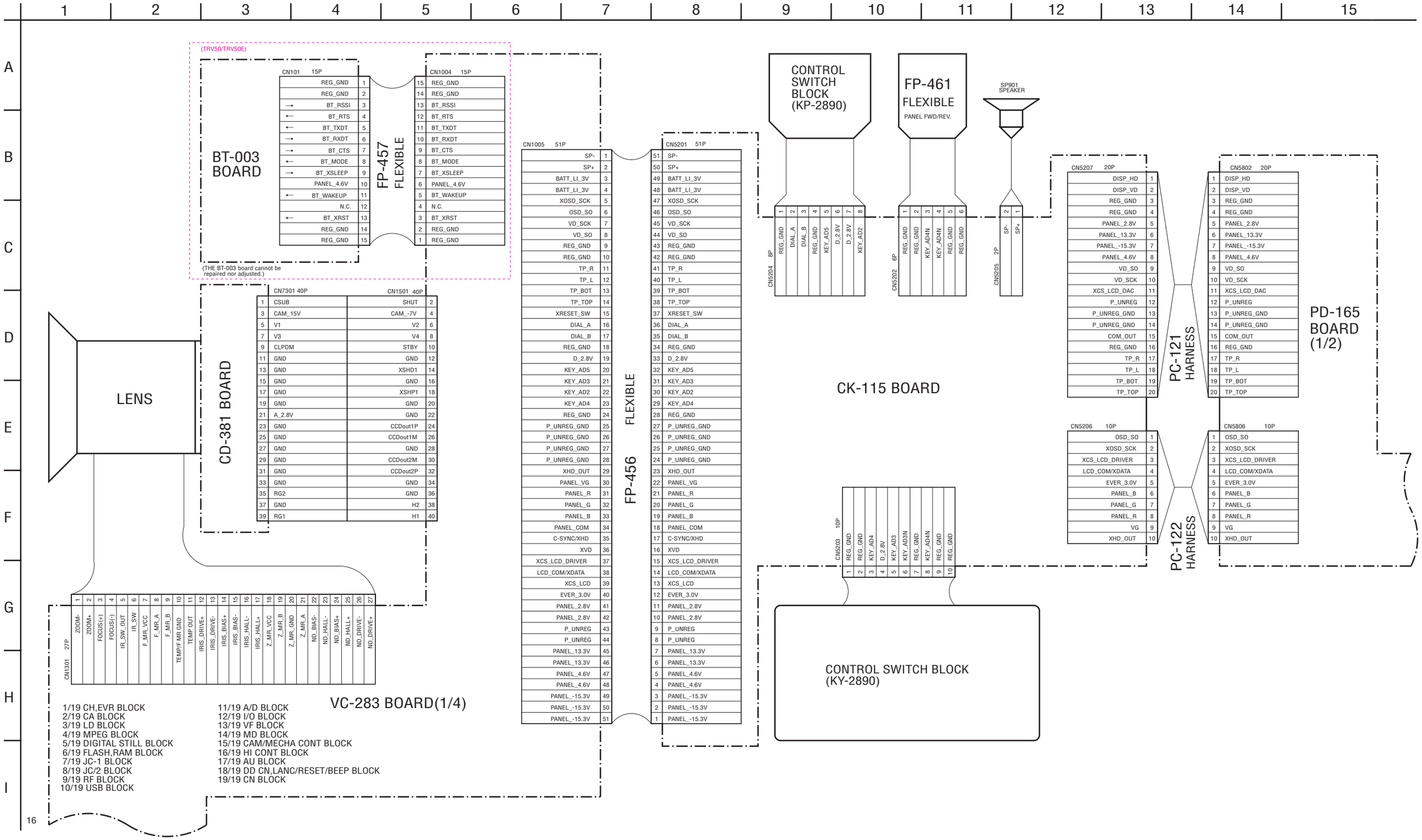
3-6. POWER BLOCK DIAGRAM (2/2)

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

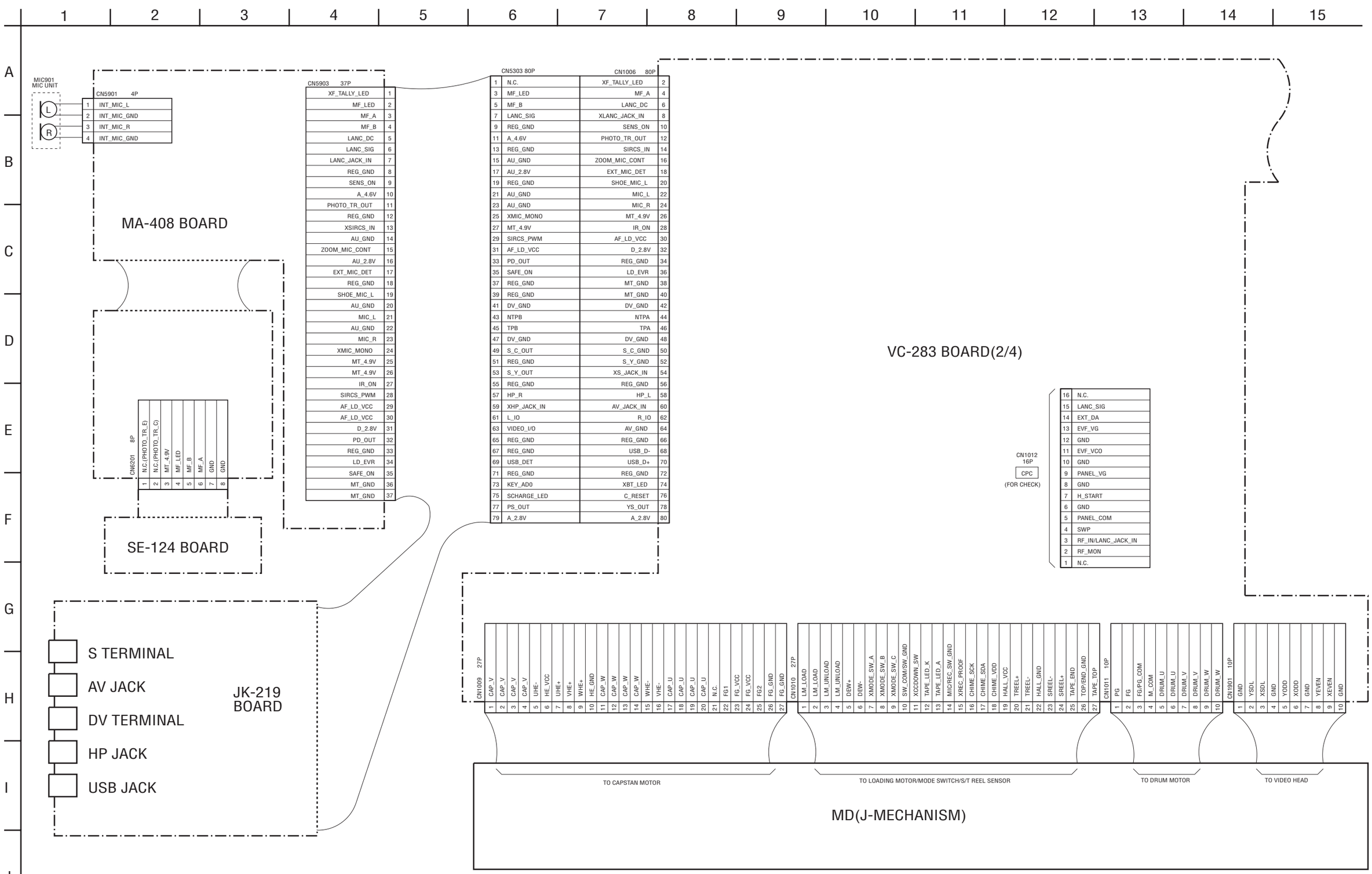


SECTION 4
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

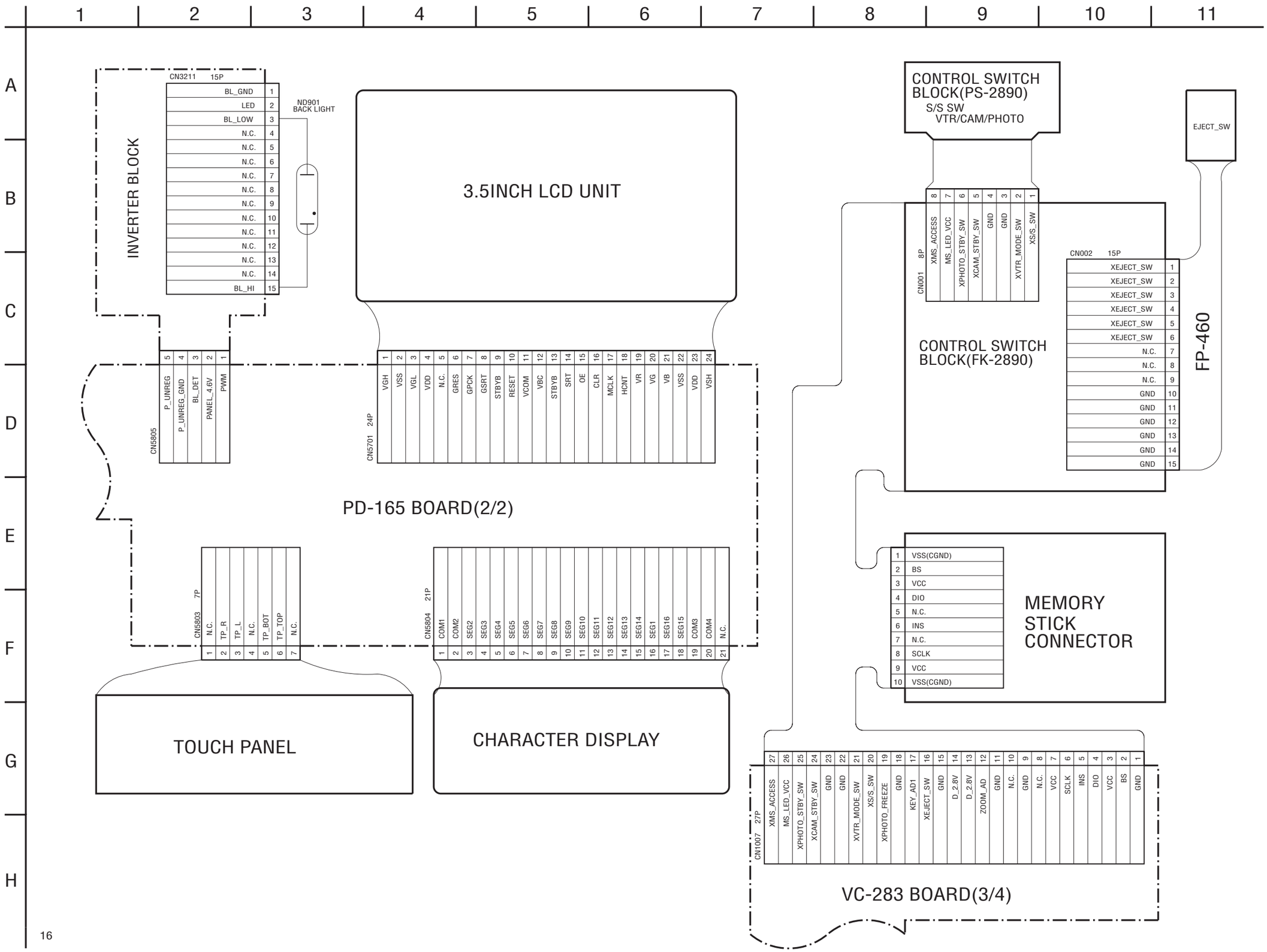
4-1. FRAME SCHEMATIC DIAGRAM (1/4)



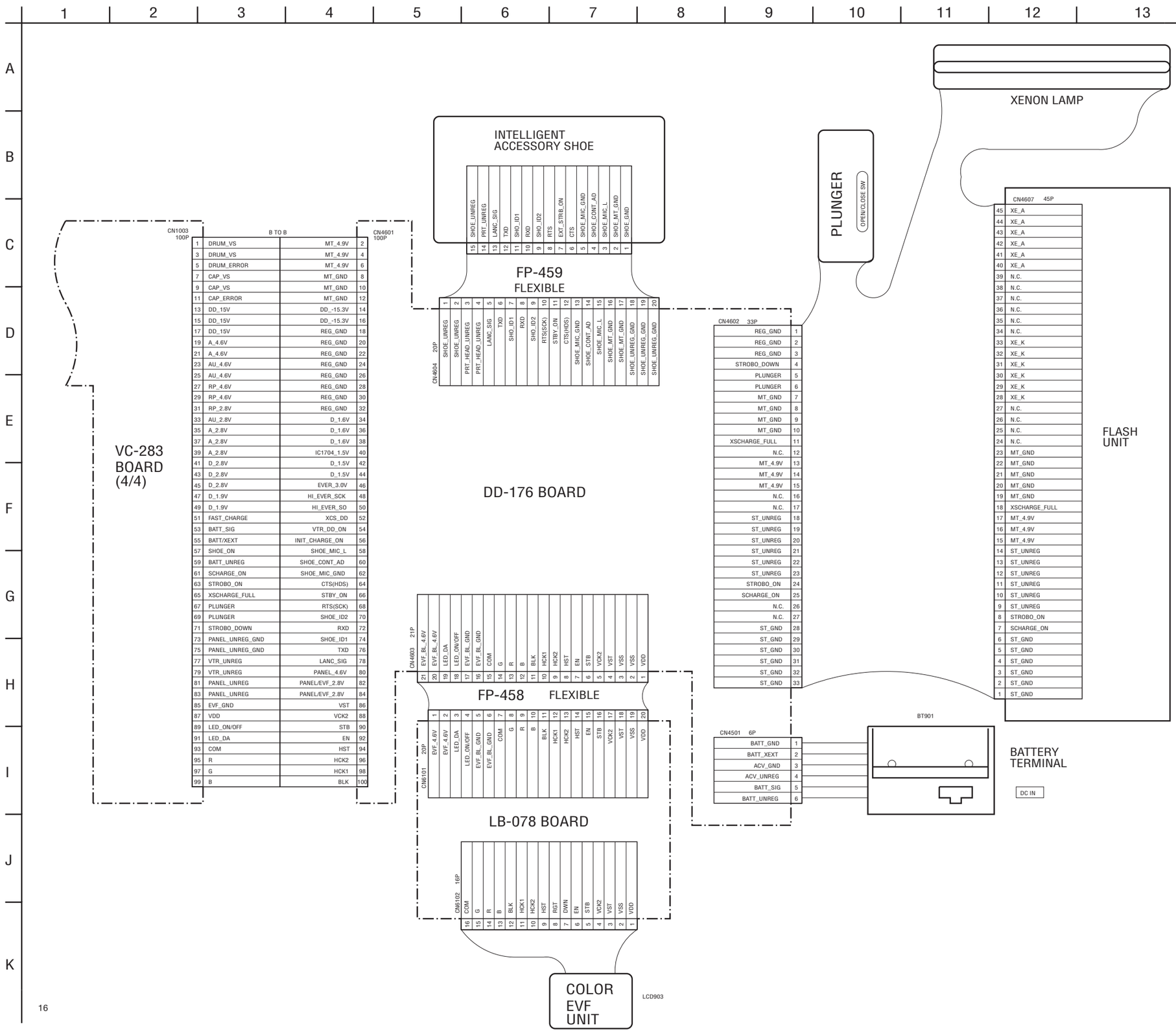
FRAME SCHEMATIC DIAGRAM (2/4)



FRAME SCHEMATIC DIAGRAM (3/4)

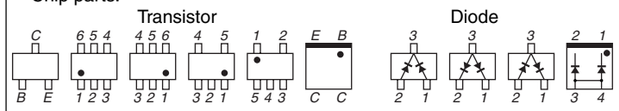


FRAME SCHEMATIC DIAGRAM (4/4)

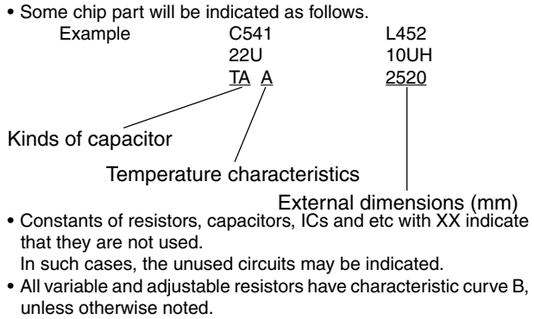


THIS NOTE IS COMMON FOR WIRING BOARDS AND SCHEMATIC DIAGRAMS
(In addition to this, the necessary note is printed in each block)

(For printed wiring boards)
- ▒▒▒: Pattern from the side which enables seeing.
  (The other layers' patterns are not indicated.)
- Through hole is omitted.
- Circled numbers refer to waveforms.
- There are few cases that the part printed on diagram isn't mounted in this model.
- Chip parts.



(For schematic diagrams)
- All capacitors are in µF unless otherwise noted. p: pF.
  50V or less are not indicated except for electrolytics and tantalums.
- Chip resistors are 1/10W unless otherwise noted.
  kΩ=1000Ω, MΩ=1000kΩ.
- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minus side of tantalum capacitor, Because it is damaged by the heat.
- Some chip part will be indicated as follows.



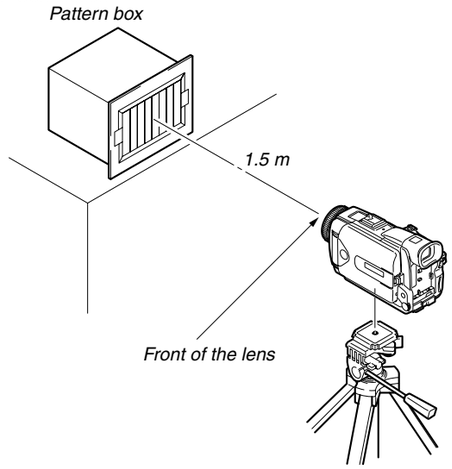
- Constants of resistors, capacitors, ICs and etc with XX indicate that they are not used.
  In such cases, the unused circuits may be indicated.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Signal name
  XEDIT → $\overline{\text{EDIT}}$ PB/XREC → PB/$\overline{\text{REC}}$
- : non flammable resistor
- : fusible resistor
- : panel designation
- : B+ Line *
- : B– Line *
- : IN/OUT direction of (+,–) B LINE. *
- : adjustment for repair. *
- Circled numbers refer to waveforms. *

* Indicated by the color red.

Note :	**Note :**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

(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 MΩ input impedance is used.).
- Voltage values change depending upon input impedance of VOM used.) *

1. Connection



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

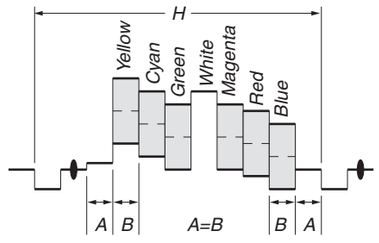


Fig. a (Video output terminal output waveform)

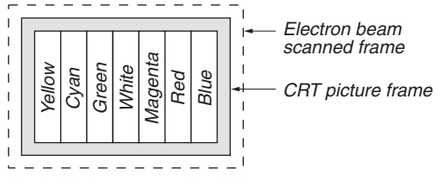


Fig.b (Picture on monitor TV)

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

COVER

4-2. SCHEMATIC DIAGRAMS

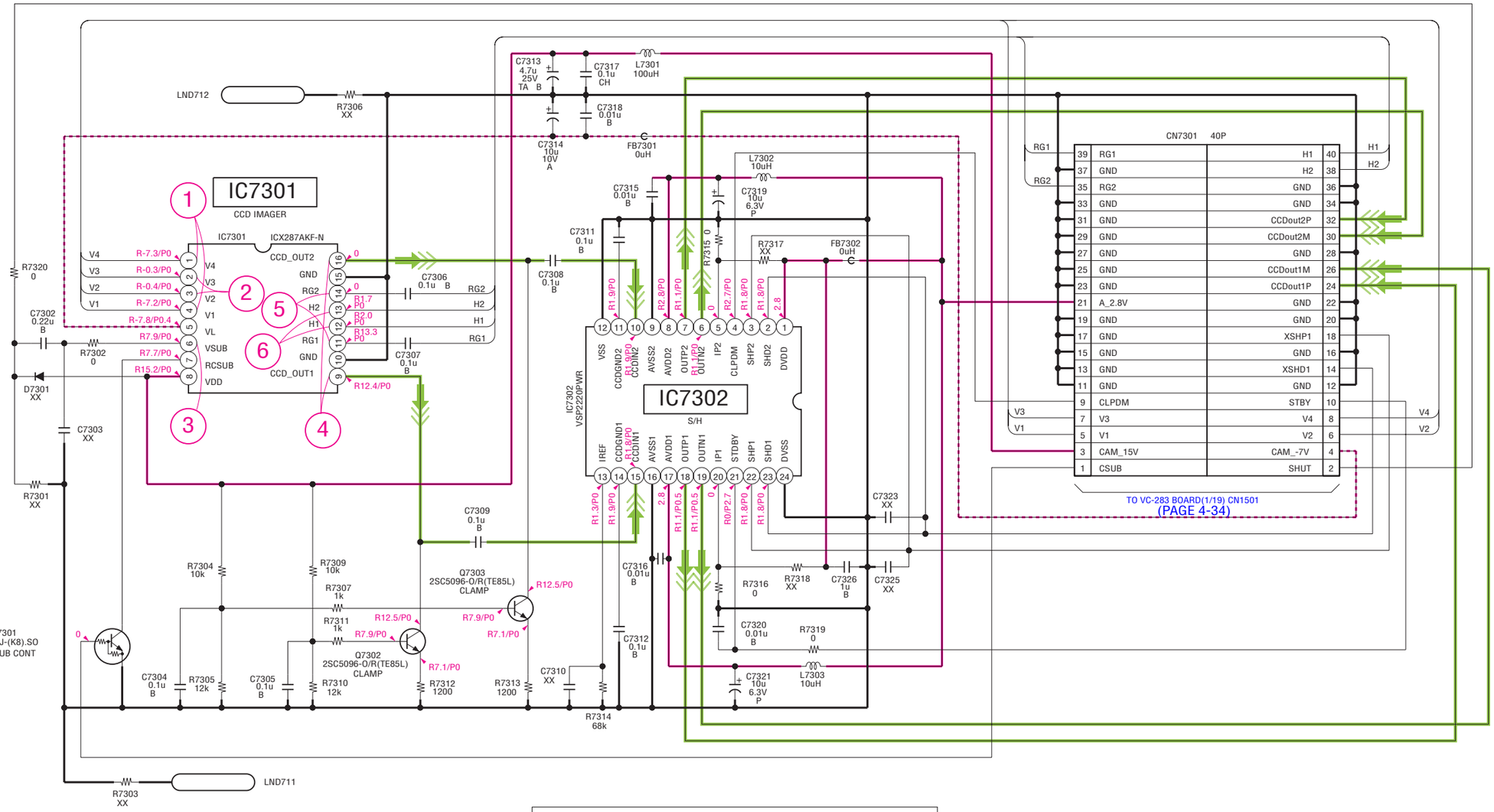
Link

4-2. SCHEMATIC DIAGRAMS

For Schematic Diagram
- Refer to page 4-71 for printed wiring board.
- Refer to page 4-93 for waveforms.

CD-381 BOARD
CCD IMAGER
XX MARK:NO MOUNT

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



39	RG1	H1	40
37	GND	H2	38
35	RG2	GND	36
33	GND	GND	34
31	GND	CCDout2P	32
29	GND	CCDout2M	30
27	GND	GND	28
25	GND	CCDout1M	26
23	GND	CCDout1P	24
21	A_2.8V	GND	22
19	GND	GND	20
17	GND	XSHP1	18
15	GND	GND	16
13	GND	XSHD1	14
11	GND	GND	12
9	CLPDM	STBY	10
7	V3	V4	8
5	V1	V2	6
3	CAM_15V	CAM_-7V	4
1	CSUB	SHUT	2

SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC			⇒
PB			

Precautions Upon Replacing CCD imager

- The CD-381 board mounted as a repair part is not equipped with a CCD imager.
  When replacing this board, remove the CCD imager from the old one and mount it onto the new one.
- If the CCD imager has been replaced, carry out all the adjustments for the camera section.
- As the CCD imager may be damaged by static electricity from its structure, handle it carefully like for the MOS IC.
  In addition, ensure that the receiver is not covered with dusts nor exposed to strong light.

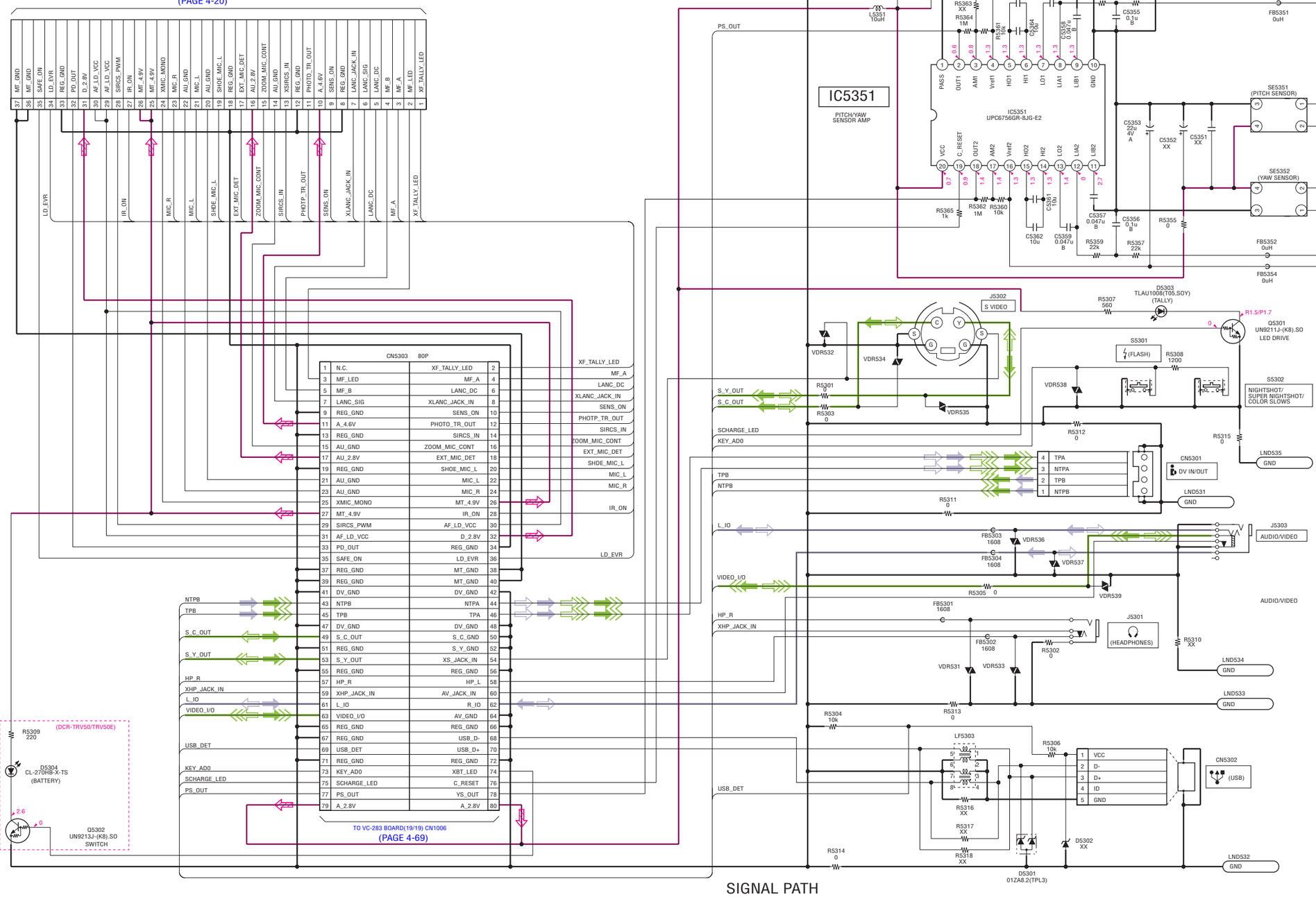
For Schematic Diagram

• Refer to page 4-73 for printed wiring board.

JK-219 BOARD
AV IN/OUT,STEADY SHOT
XX MARK:NO MOUNT

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

TO MA-408 BOARD(1/2) CN5903
(PAGE 4-20)



SIGNAL PATH

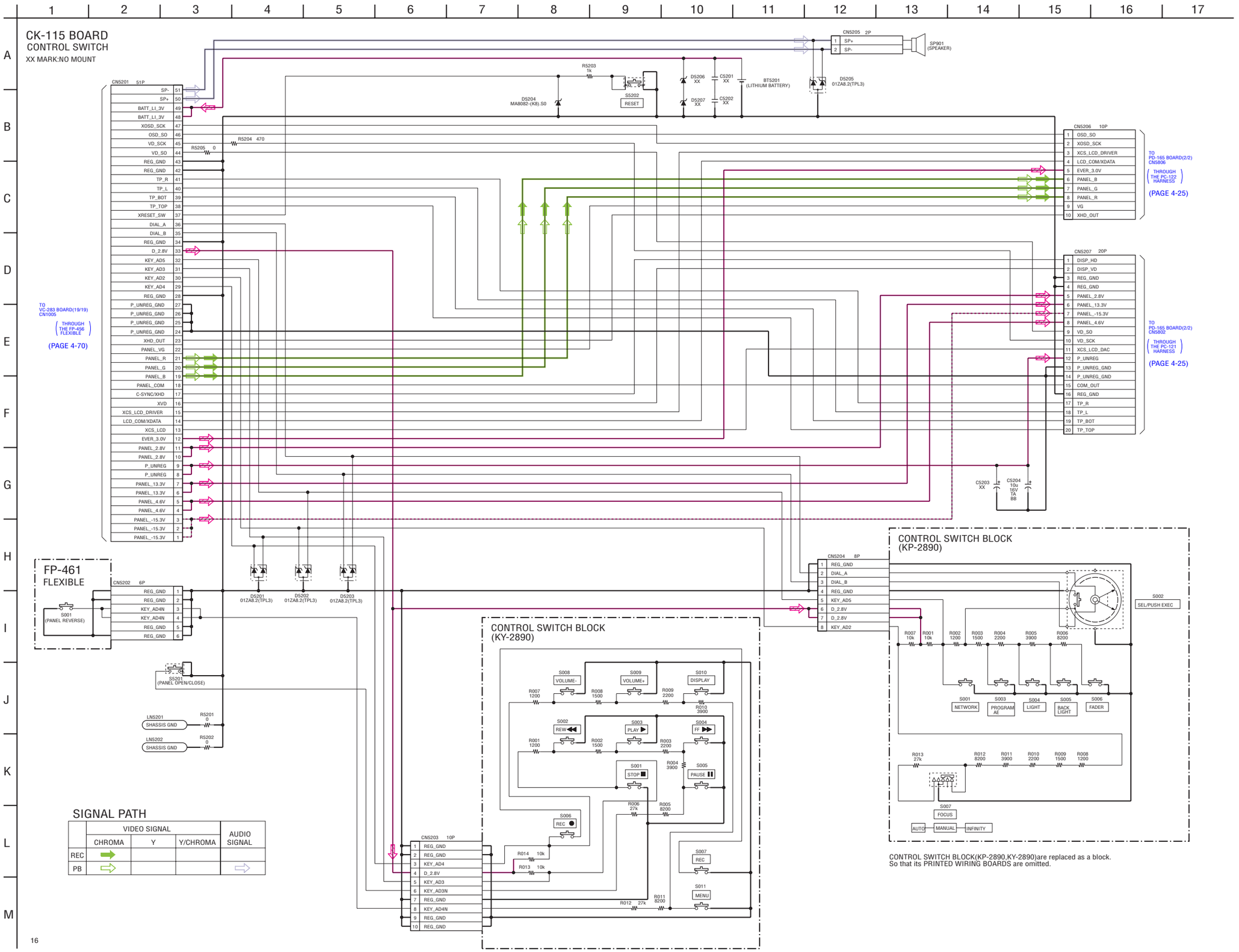
	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
REC	▶	▶	▶	▶
PB	▷	▷	▷	▷

COVER

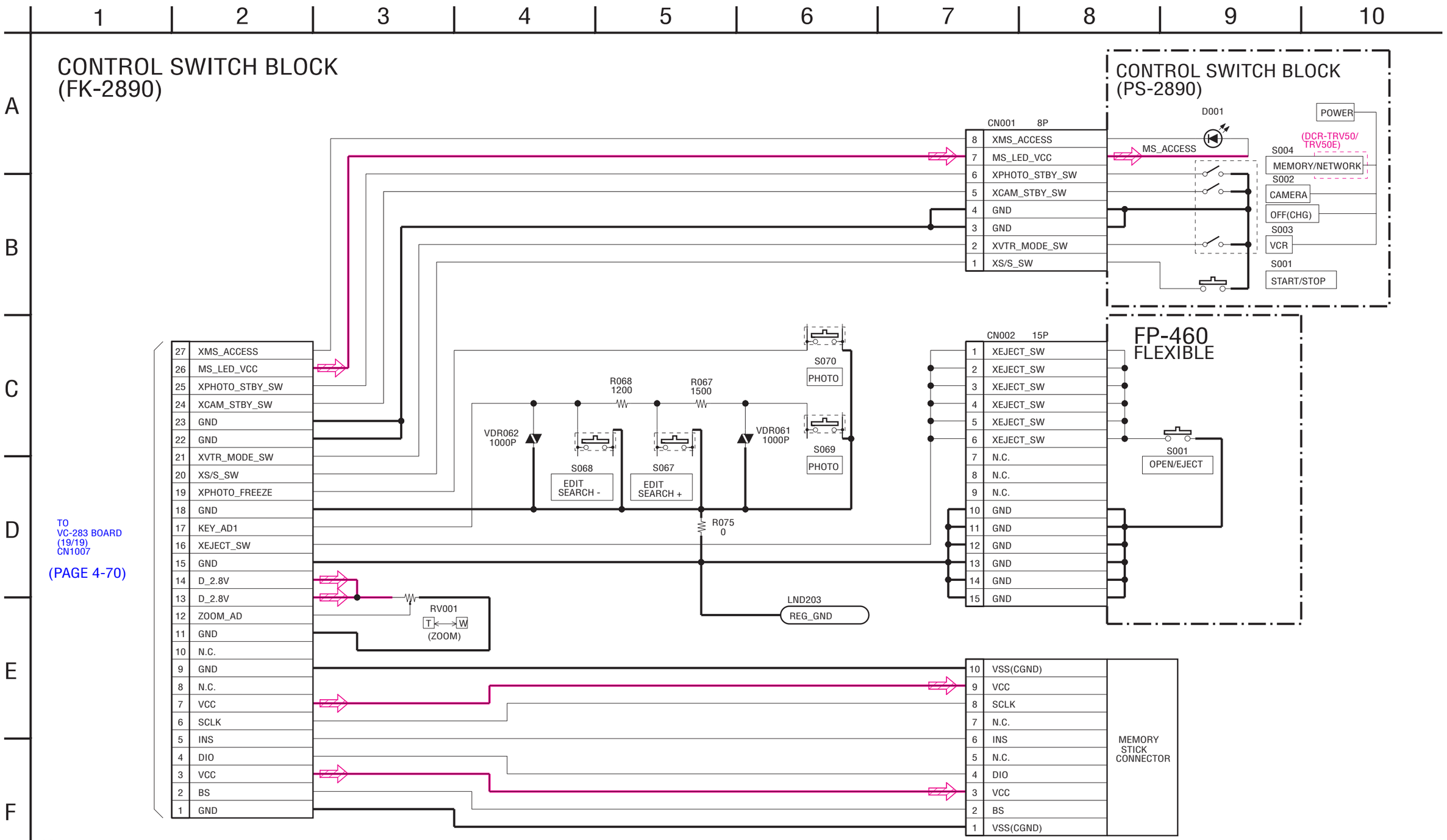
4-2. SCHEMATIC DIAGRAMS | CK-115 PRINTED WIRING BOARD

For Schematic Diagram

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



CONTROL SWITCH BLOCK(KP-2890,KY-2890)are replaced as a block.
So that its PRINTED WIRING BOARDS are omitted.



CONTROL SWITCH BLOCK(FK-2890,PS-2890)
are replaced as a block.
So that its PRINTED WIRING BOARD are omitted.

For Schematic Diagram

• Refer to page 4-79 for printed wiring board.

MA-408 BOARD(1/2)

MIC AMP,REMOTE COMMANDER RECEIVER

XX MARK:NO MOUNT

NO MARK:REC/PB MODE

IC5901 MIC AMP

IC5901 AN2901FHQ-EB

IC5902 AF LASER CONTROL

IC5903 REMOTE COMMANDER RECEIVER

SIGNAL PATH

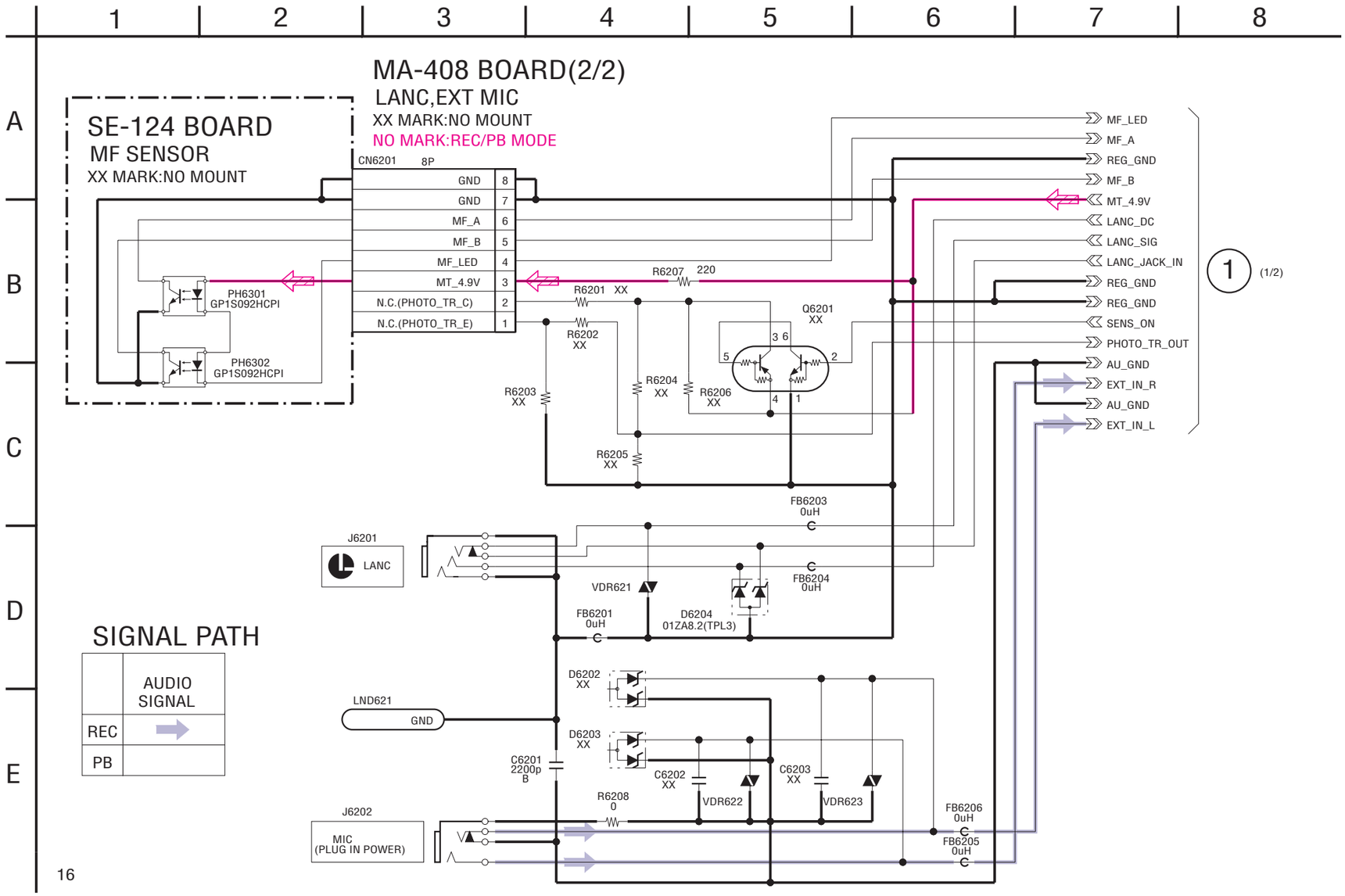
	AUDIO SIGNAL
REC	→
PB	

TO VC-283 BOARD(19/19) CN1006 (PAGE 4-69)

TO JK-219 BOARD (PAGE 4-13)

For Schematic Diagram

• Refer to page 4-79 for printed wiring board.



For Schematic Diagram

- Refer to page 4-83 for printed wiring board.
- Refer to page 4-93 for waveforms.

PD-165 BOARD(1/2)

RGB DRIVE,TIMING GENERATOR

XX MARK:NO MOUNT

NO MARK:REC/PB MODE

IC5701

RGB DRIVE

IC5701
CXA3592R-T4

IC5702

TIMING GENERATOR

IC5702
CM7021L3-E2

Q5701
2SD2216J-QR(K8).SO
RESET

Q5702
UN9213J-(K8).SO
INVERTER

D5701
MA111-TX

D5702
1SV288(TPH3)

CN5701 24P

24	VSH
23	VDD
22	VSS
21	VB
20	VG
19	VR
18	HCNT
17	MCLK
16	CLR
15	OE
14	SRT
13	STBYB
12	VBC
11	VCOM
10	RESET
9	STBYB
8	GSRT
7	GPCK
6	GRES
5	N.C.
4	VDD
3	VGL
2	VSS
1	VGH

LCD901
COLOR LCD UNIT

SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	→		
PB	⇨		

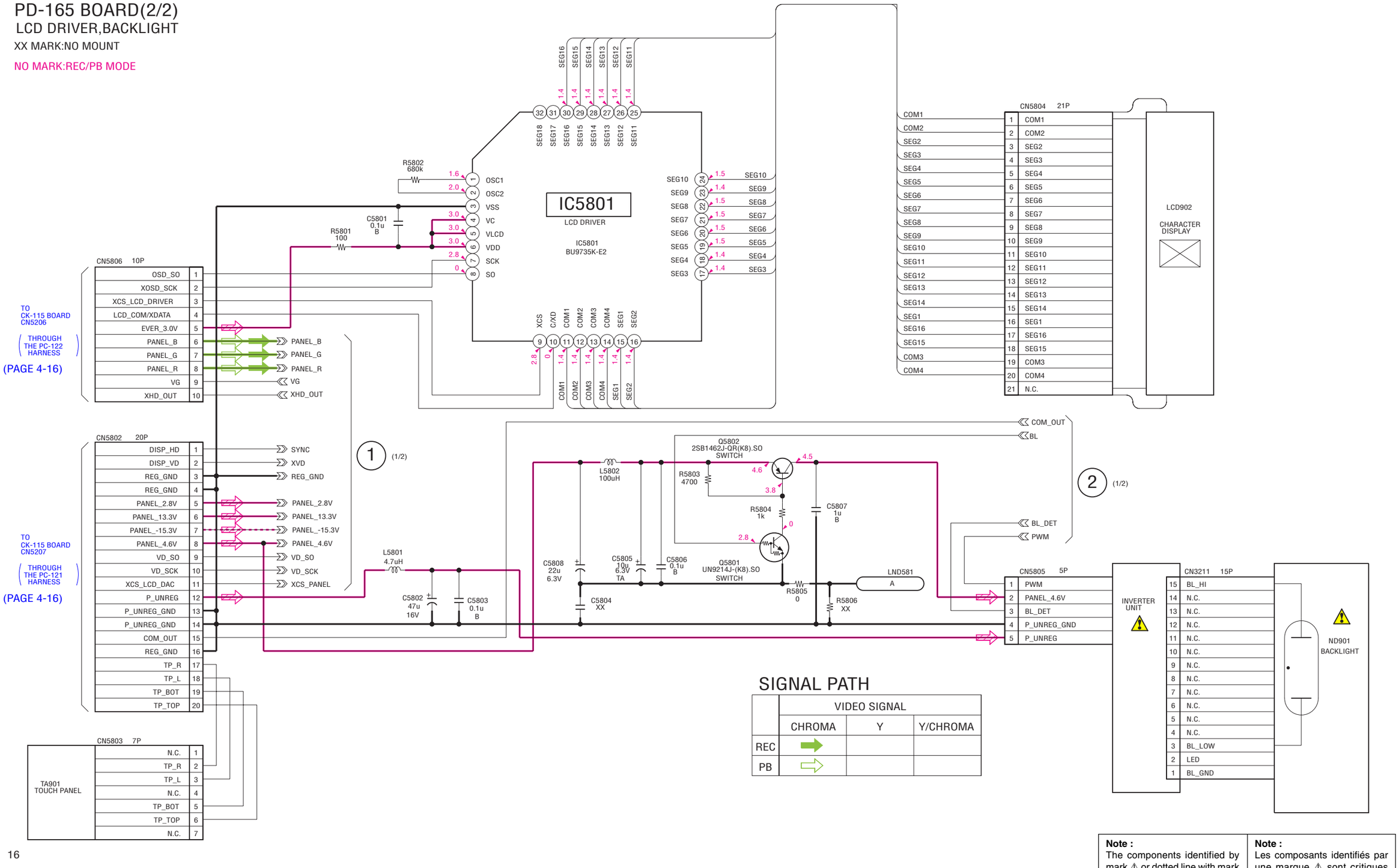
For Schematic Diagram
- Refer to page 4-83 for printed wiring board.
- Refer to page 4-93 for waveforms.

PD-165 BOARD(2/2)

LCD DRIVER,BACKLIGHT

XX MARK:NO MOUNT

NO MARK:REC/PB MODE



SIGNAL PATH

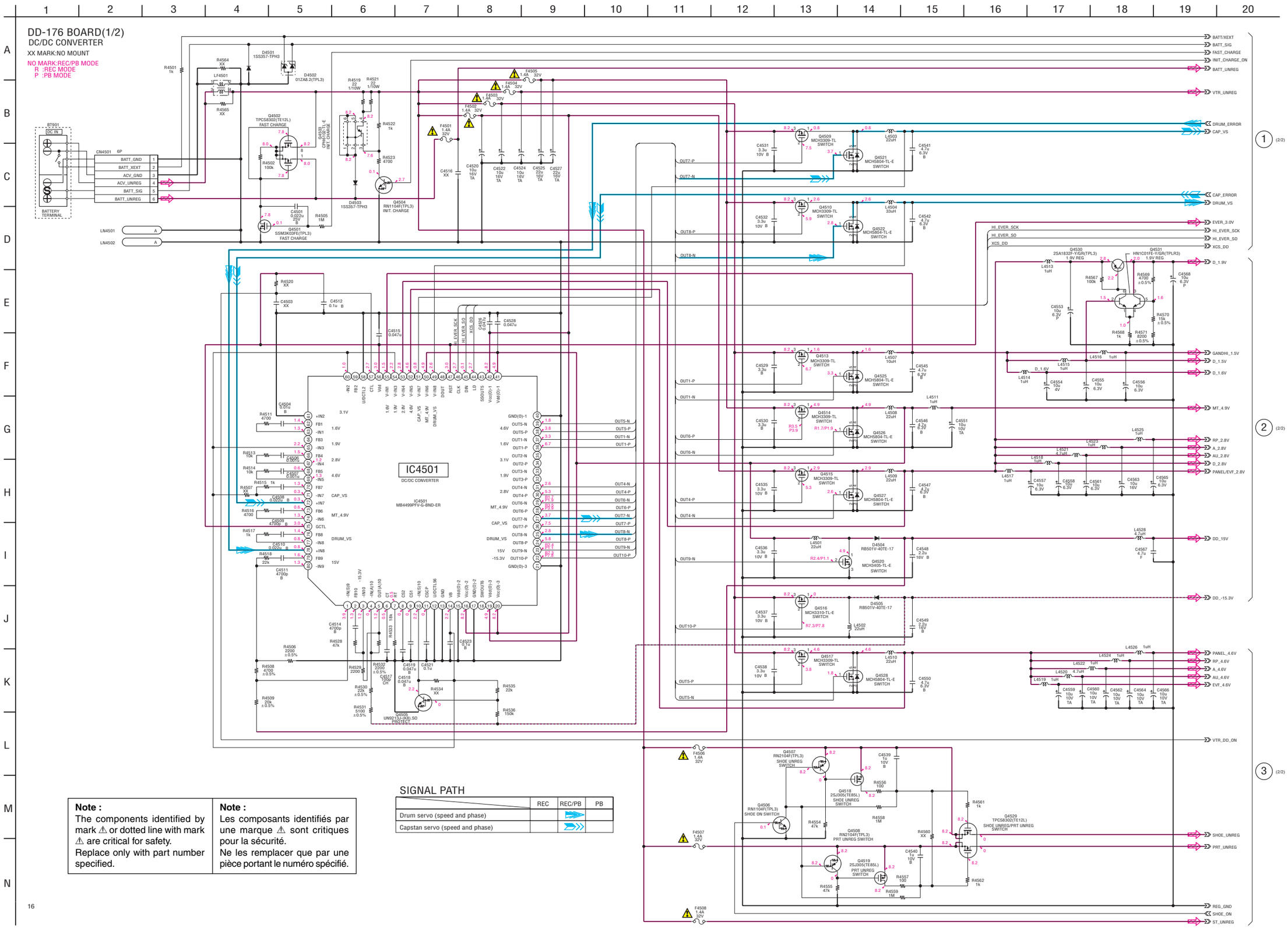
	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡		
PB	⇨		

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

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

For Schematic Diagram

• Refer to page 4-85 for printed wiring board.



SIGNAL PATH	REC	REC/PB	PB
Drum servo (speed and phase)		▶	
Capstan servo (speed and phase)		▶▶	

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

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

For Schematic Diagram

• Refer to page 4-85 for printed wiring board.

DD-176 BOARD(2/2)

CONNECTOR

XX MARK:NO MOUNT

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

CN4601 100P B TO B

2	MT_4.9V	DRUM_VS	1
4	MT_4.9V	DRUM_VS	3
6	MT_4.9V	DRUM_ERROR	5
8	MT_GND	CAP_VS	7
10	MT_GND	CAP_VS	9
12	MT_GND	CAP_ERROR	11
14	DD_-15.3V	DD_15V	13
16	DD_-15.3V	DD_15V	15
18	REG_GND	DD_15V	17
20	REG_GND	A_4.6V	19
22	REG_GND	A_4.6V	21
24	REG_GND	AU_4.6V	23
26	REG_GND	AU_4.6V	25
28	REG_GND	RP_4.6V	27
30	REG_GND	RP_4.6V	29
32	REG_GND	RP_2.8V	31
34	D_1.6V	AU_2.8V	33
36	D_1.6V	A_2.8V	35
38	D_1.6V	A_2.8V	37
40	IC1704_1.5V	A_2.8V	39
42	D_1.5V	D_2.8V	41
44	D_1.5V	D_2.8V	43
46	EVER_3.0V	D_2.8V	45
48	HI_EVER_SCK	D_1.9V	47
50	HI_EVER_SO	D_1.9V	49
52	XCS_DD	FAST_CHARGE	51
54	VTR_DD_ON	BATT_SIG	53
56	INIT_CHARGE_ON	BATT/XEXT	55
58	SHOE_MIC_L	SHOE_ON	57
60	SHOE_CONT_AD	BATT_UNREG	59
62	SHOE_MIC_GND	SCHARGE_ON	61
64	CTS(HDS)	STROBO_ON	63
66	STBY_ON	XSCHARGE_FULL	65
68	RTS(SCK)	PLUNGER	67
70	SHOE_ID2	PLUNGER	69
72	RXD	STROBO_DOWN	71
74	SHOE_ID1	PANEL_UNREG_GND	73
76	TXD	PANEL_UNREG_GND	75
78	LANC_SIG	VTR_UNREG	77
80	PANEL_4.6V	VTR_UNREG	79
82	PANEL/EVF_2.8V	PANEL_UNREG	81
84	PANEL/EVF_2.8V	PANEL_UNREG	83
86	VST	EVF_GND	85
88	VCK2	VDD	87
90	STB	LED_ON/OFF	89
92	EN	LED_DA	91
94	HST	COM	93
96	HCK2	R	95
98	HCK1	G	97
100	BLK	B	99

TO VC-283 BOARD(18/19) CN1003
(PAGE 4-67)

CN4602 33P

	ST_GND		33
	ST_GND		32
	ST_GND		31
	ST_GND		30
	ST_GND		29
	ST_GND		28
	N.C.		27
	N.C.		26
	SCHARGE_ON	SCHARGE_ON	25
	STROBO_ON	STROBO_ON	24
	ST_UNREG		23
	ST_UNREG		22
	ST_UNREG		21
	ST_UNREG		20
	ST_UNREG		19
	ST_UNREG		18
	N.C.		17
	N.C.		16
	MT_4.9V		15
	MT_4.9V		14
	MT_4.9V		13
	N.C.		12
	XSCHARGE_FULL	XSCHARGE_FULL	11
	MT_GND		10
	MT_GND		9
	MT_GND		8
	MT_GND		7
	PLUNGER	PLUNGER	6
	PLUNGER		5
	STROBO_DOWN	STROBO_DOWN	4
	REG_GND		3
	REG_GND		2
	REG_GND		1

CN4603 21P

	EVF_BL_4.6V		21
	EVF_BL_4.6V		20
LED_DA	LED_DA		19
LED_ON/OFF	LED_ON/OFF		18
	EVF_BL_GND		17
	EVF_BL_GND		16
COM	COM		15
G	G		14
R	R		13
B	B		12
BLK	BLK		11
HCK1	HCK1		10
HCK2	HCK2		9
HST	HST		8
EN	EN		7
STB	STB		6
VCK2	VCK2		5
VST	VST		4
	VSS		3
VSS	VSS		2
VDD	VDD		1

CN4604 20P

	SHOE_UNREG_GND		20
	SHOE_UNREG_GND		19
	SHOE_UNREG_GND		18
	SHOE_MT_GND		17
	SHOE_MT_GND		16
	SHOE_MIC_L		15
	SHOE_CONT_AD		14
	SHOE_MIC_GND		13
	CTS(HDS)		12
	STBY_ON		11
	RTS(SCK)		10
	SHO_ID2		9
	RXD		8
	SHO_ID1		7
	TXD		6
	LANC_SIG		5
	PRT_HEAD_UNREG		4
	PRT_HEAD_UNREG		3
	SHOE_UNREG		2
	SHOE_UNREG		1

FP-459
FLEXIBLE

	SHOE_GND		1
	SHOE_MT_GND		2
	SHOE_MIC_L		3
	SHOE_CONT_AD		4
	SHOE_MIC_GND		5
	CTS		6
	EXT_STRB_ON		7
	RTS		8
	SHO_ID2		9
	RXD		10
	SHO_ID1		11
	TXD		12
	LANC_SIG		13
	PRT_UNREG		14
	SHOE_UNREG		15

INTELLIGENT ACCESSORY SHOE

FP-458
FLEXIBLE

CN6101 20P

	EVF_4.6V		1
	EVF_4.6V		2
	LED_DA		3
	LED_ON/OFF		4
	EVF_BL_GND		5
	EVF_BL_GND		6
	COM		7
	G		8
	R		9
	B		10
	BLK		11
	HCK1		12
	HCK2		13
	HST		14
	EN		15
	STB		16
	VCK2		17
	VST		18
	VSS		19
	VDD		20

CN6102 16P

	COM		16
	G		15
	R		14
	B		13
	BLK		12
	HCK1		11
	HCK2		10
	HST		9
	RGT		8
	DWN		7
	EN		6
	STB		5
	VCK2		4
	VST		3
	VSS		2
	VDD		1

LCD903
COLOR EVF UNIT

CN4607 45P

	XE_A		45
	XE_A		44
	XE_A		43
	XE_A		42
	XE_A		41
	N.C.		40
	N.C.		39
	N.C.		38
	N.C.		37
	N.C.		36
	N.C.		35
	XE_K		34
	XE_K		33
	XE_K		32
	XE_K		31
	XE_K		30
	XE_K		29
	XE_K		28
	N.C.		27
	N.C.		26
	N.C.		25
	N.C.		24
	MT_GND		23
	MT_GND		22
	MT_GND		21
	MT_GND		20
	MT_GND		19
	XSCHARGE_FULL		18
	MT_4.9V		17
	MT_4.9V		16
	MT_4.9V		15
	ST_UNREG		14
	ST_UNREG		13
	ST_UNREG		12
	ST_UNREG		11
	ST_UNREG		10
	ST_UNREG		9
	STROBO_ON		8
	SCHARGE_ON		7
	ST_GND		6
	ST_GND		5
	ST_GND		4
	ST_GND		3
	ST_GND		2
	ST_GND		1

FLASH UNIT

PL901
(OPEN/CLOSE)

FLEXIBLE

FLASH UNIT is replaced as a block so that PRINTED WIRING BOARD and SCHEMATIC DIAGRAM are omitted.

LB-078 BOARD
EVF BACKLIGHT
XX MARK:NO MOUNT

IC6101
BRIGHT CONTROL

SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡		
PB	⇨		

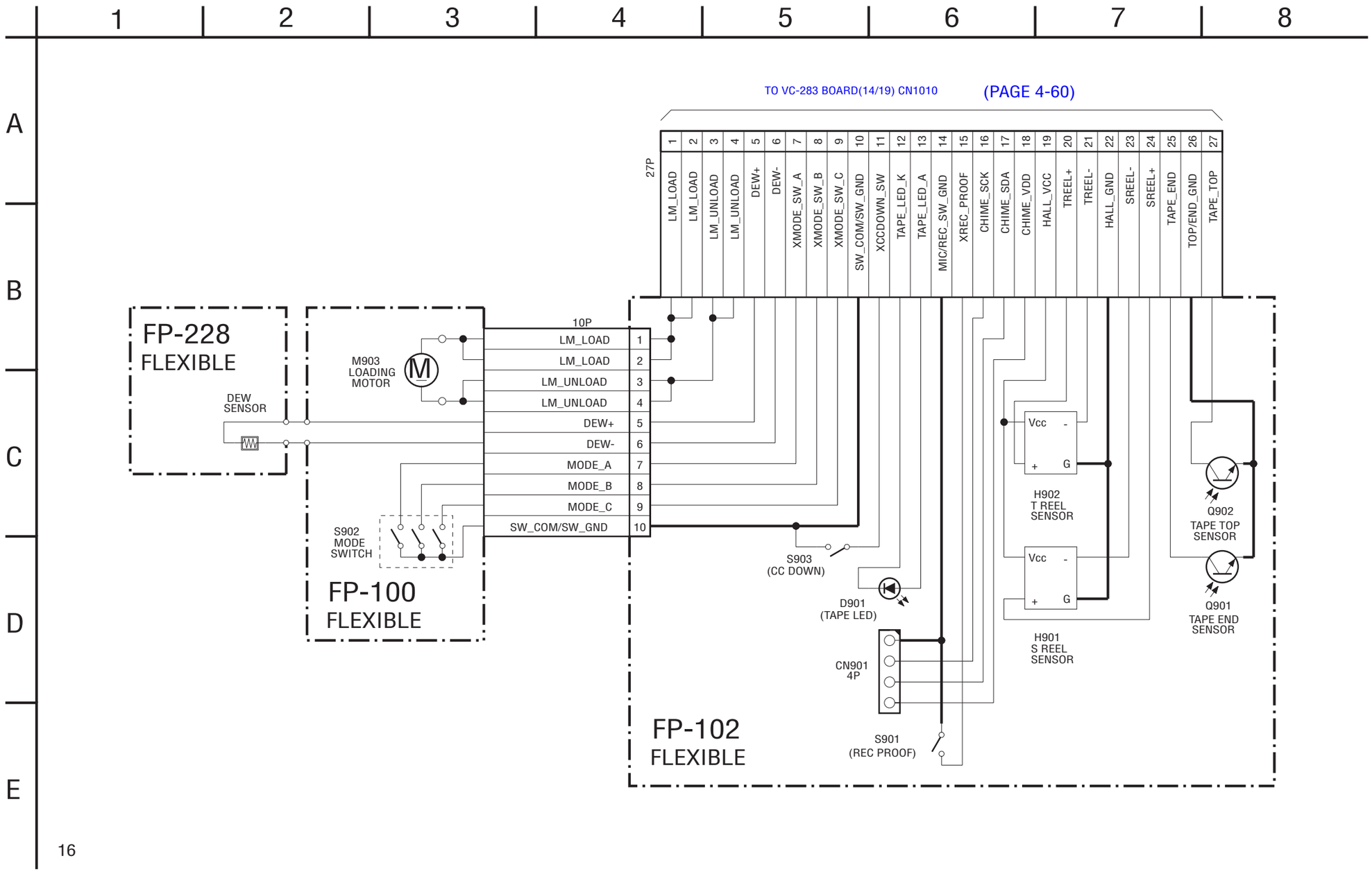
SIGNAL PATH

	REC	REC/PB	PB
Drum servo (speed and phase)		➡	
Capstan servo (speed and phase)		➡	

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

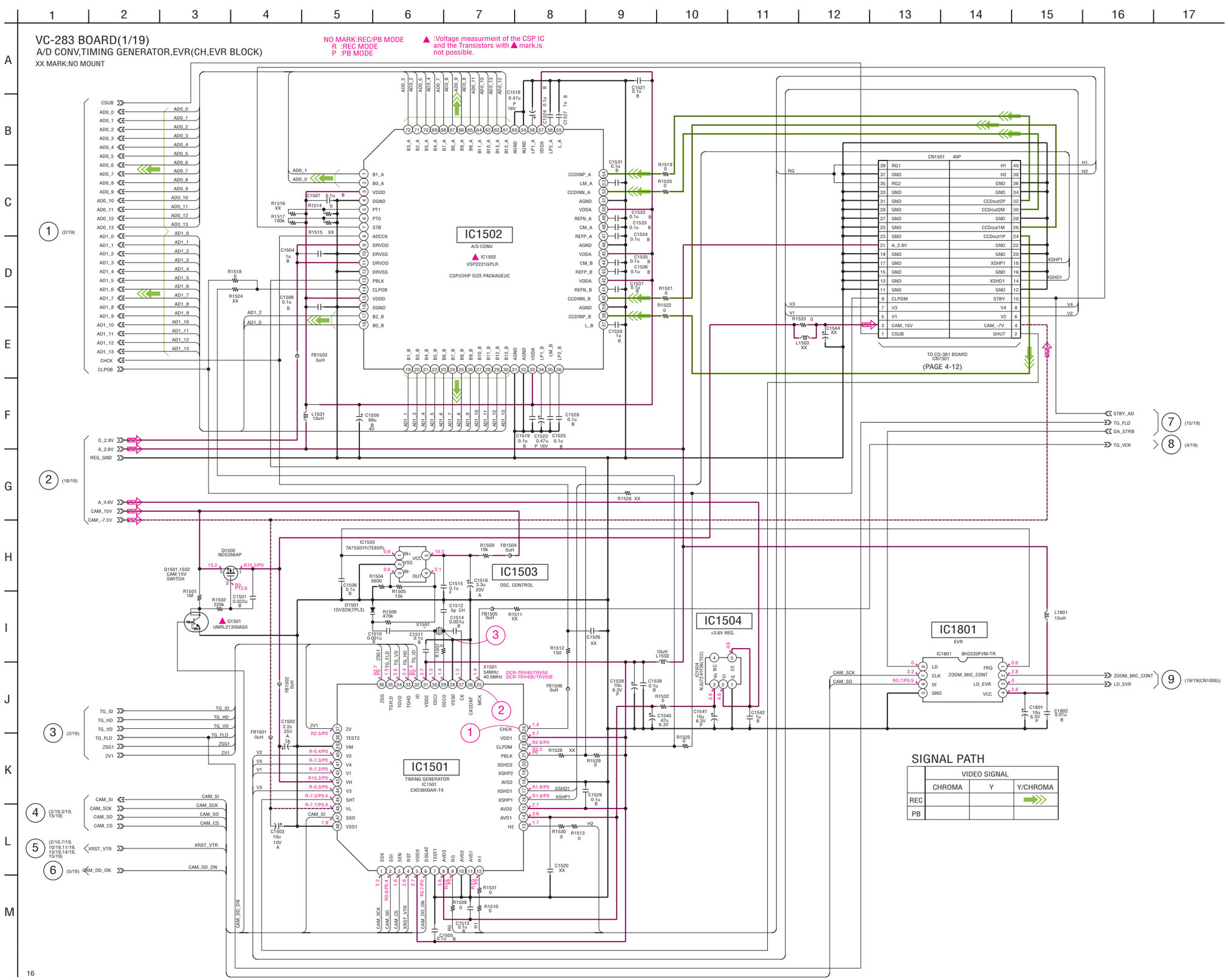
Note :
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

For Schematic Diagram
• Refer to page 4-87 for printed wiring board.



For Schematic Diagram

• Refer to page 4-89 for printed wiring board.



For Schematic Diagram

• Refer to page 4-89 for printed wiring board.

VC-283 BOARD(2/19)

CAMERA PROCESS(CA BLOCK)

XX MARK:NO MOUNT

IC1601

CAMERA PROCESS

IC1601

M65515WG-DF02

CPS(CHIP SIZE PACKAGE)IC

SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	→	⇒	⇛
PB	⇨	⇨	

For Schematic Diagram

• Refer to page 4-89 for printed wiring board.

VC-283 BOARD(3/19)

FOCUS/ZOOM/IRIS/ND DRIVE(LD BLOCK)

XX MARK:NO MOUNT

NO MARK:REC/PB MODE
R :REC MODE
P :PB MODE
* :Cannot be measured

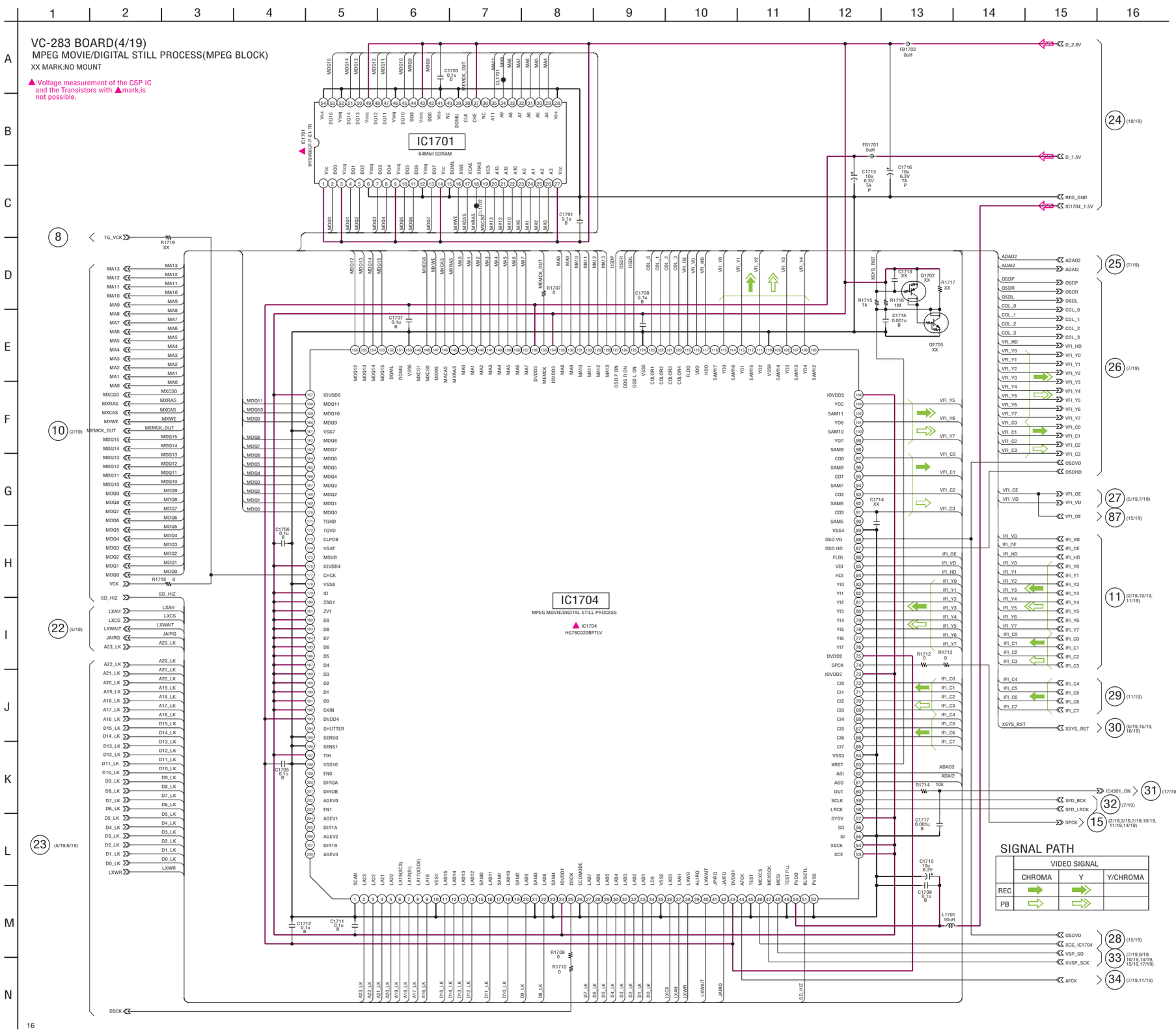
ZOOM LENS BLOCK is replaced as a block so that the SCHEMATIC DIAGRAM and PRINTED WIRING BOARD are omitted.

IC1304
FOCUS/ZOOM/IRIS/ND CONTROL
IC1304
CXD9681TQ-E2

IC1302
FOCUS/ZOOM/IRIS/ND DRIVE
IC1302
UPD16877MA-6A5-E2

For Schematic Diagram

• Refer to page 4-89 for printed wiring board.



For Schematic Diagram

• Refer to page 4-89 for printed wiring board.

VC-283 BOARD(5/19)

HI CONTROL,DIGITAL STILL CONTROL(DIGITAL STILL BLOCK)

XX MARK:NO MOUNT

NO MARK:REC/PB MODE

▲ :Voltage measurment of the CSP IC and the Transistors with ▲mark,is not possible.

IC2904 XTAL DSC

IC2903 BUFFER

IC2905 HI CONTROL,DIGITAL STILL CONTROL

▲ IC2905 HD6417190BPZ110BV CSP(CHIP SIZE PACKAGE)IC

IC2901 64K EEPROM

SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
REC			➡	⇨
PB			⇨	⇨

For Schematic Diagram

• Refer to page 4-89 for printed wiring board.

VC-283 BOARD(6/19)

FLASH MEMORY,SDRAM(FLASH,RAM BLOCK)

XX MARK:NO MOUNT

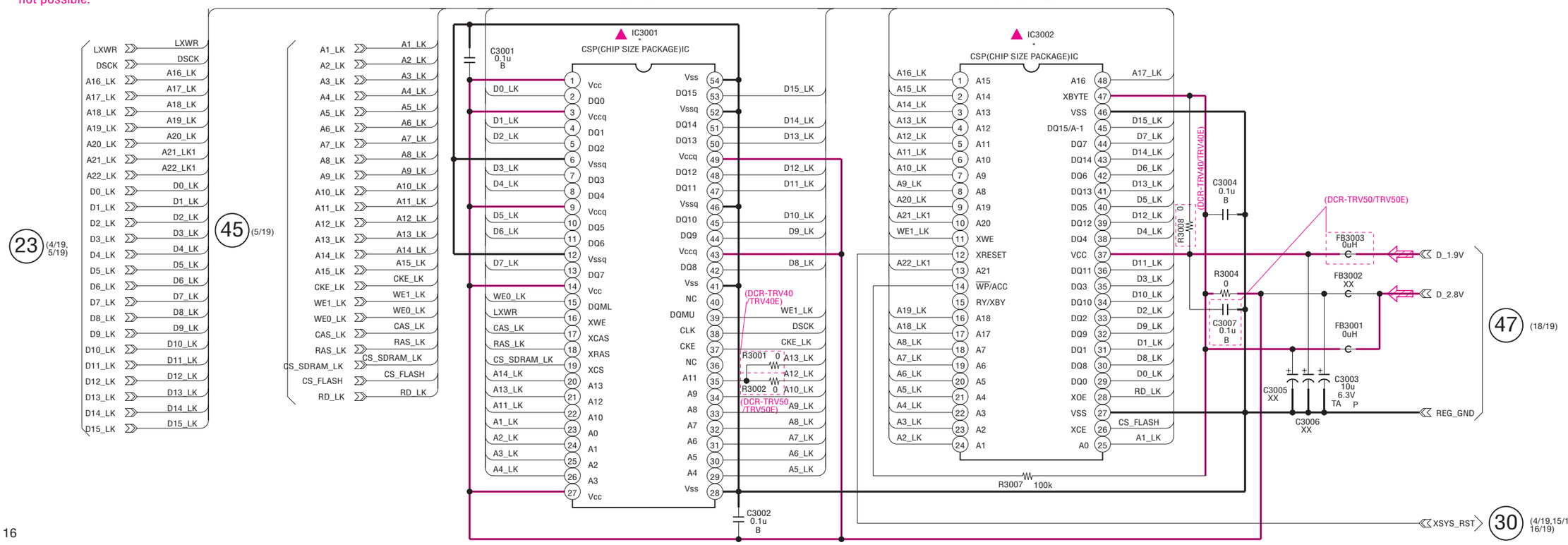
▲:Voltage measurement of the CSP IC and the Transistors with ▲ mark,is not possible.

IC3001
64Mbit SDRAM

IC3001
HY5V66GF-P
MB81F161622C-15PB-ER
:DCR-TRV50/TRV50E
:DCR-TRV40/TRV40E

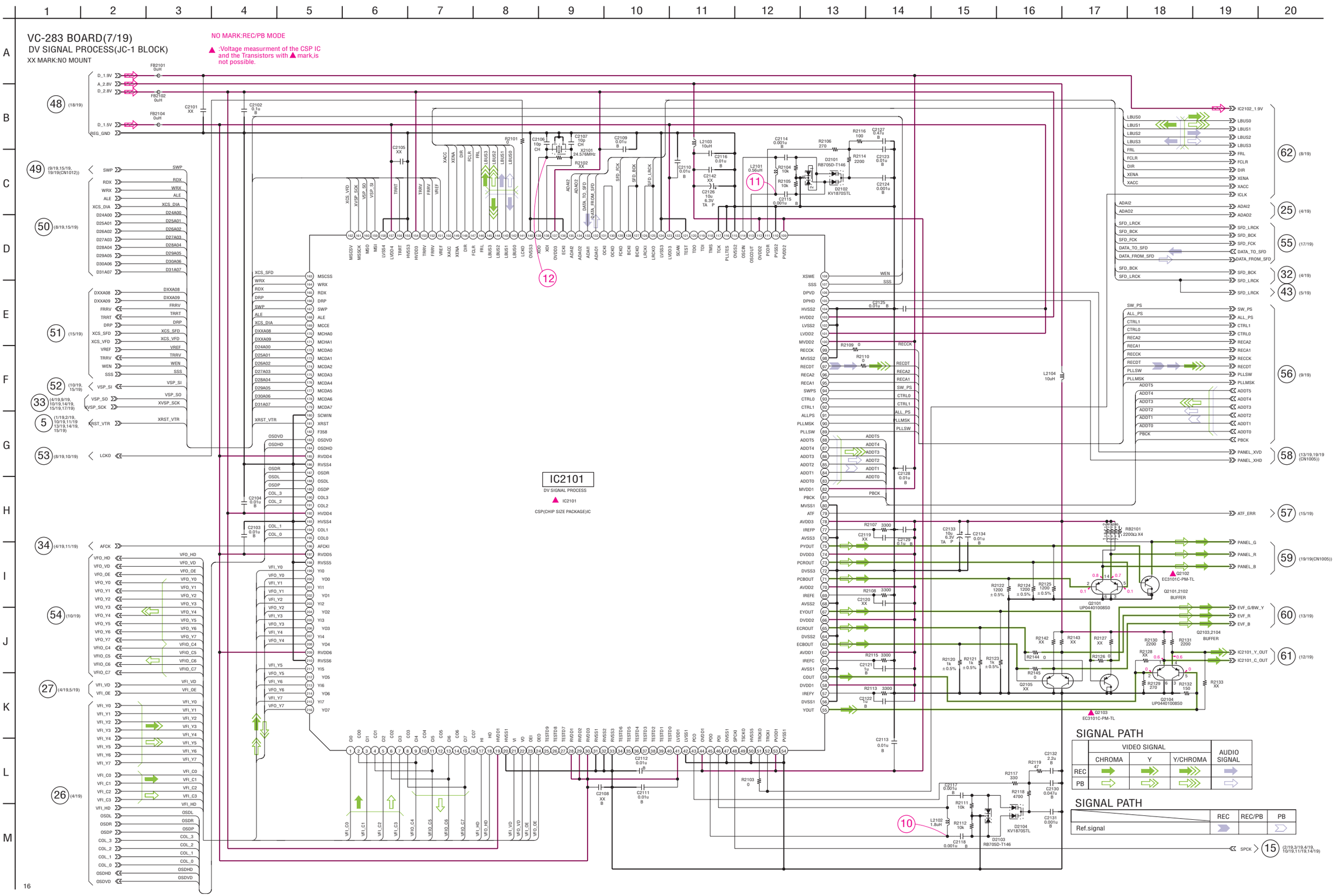
IC3002
64Mbit FLASH MEMORY

IC3002
UPD29F064115F9-005-E
MB85331BE9PBT-02-ER
:DCR-TRV50/TRV50E
:DCR-TRV40/TRV40E



For Schematic Diagram

• Refer to page 4-89 for printed wiring board.



For Schematic Diagram
• Refer to page 4-89 for printed wiring board.

VC-283 BOARD(8/19)

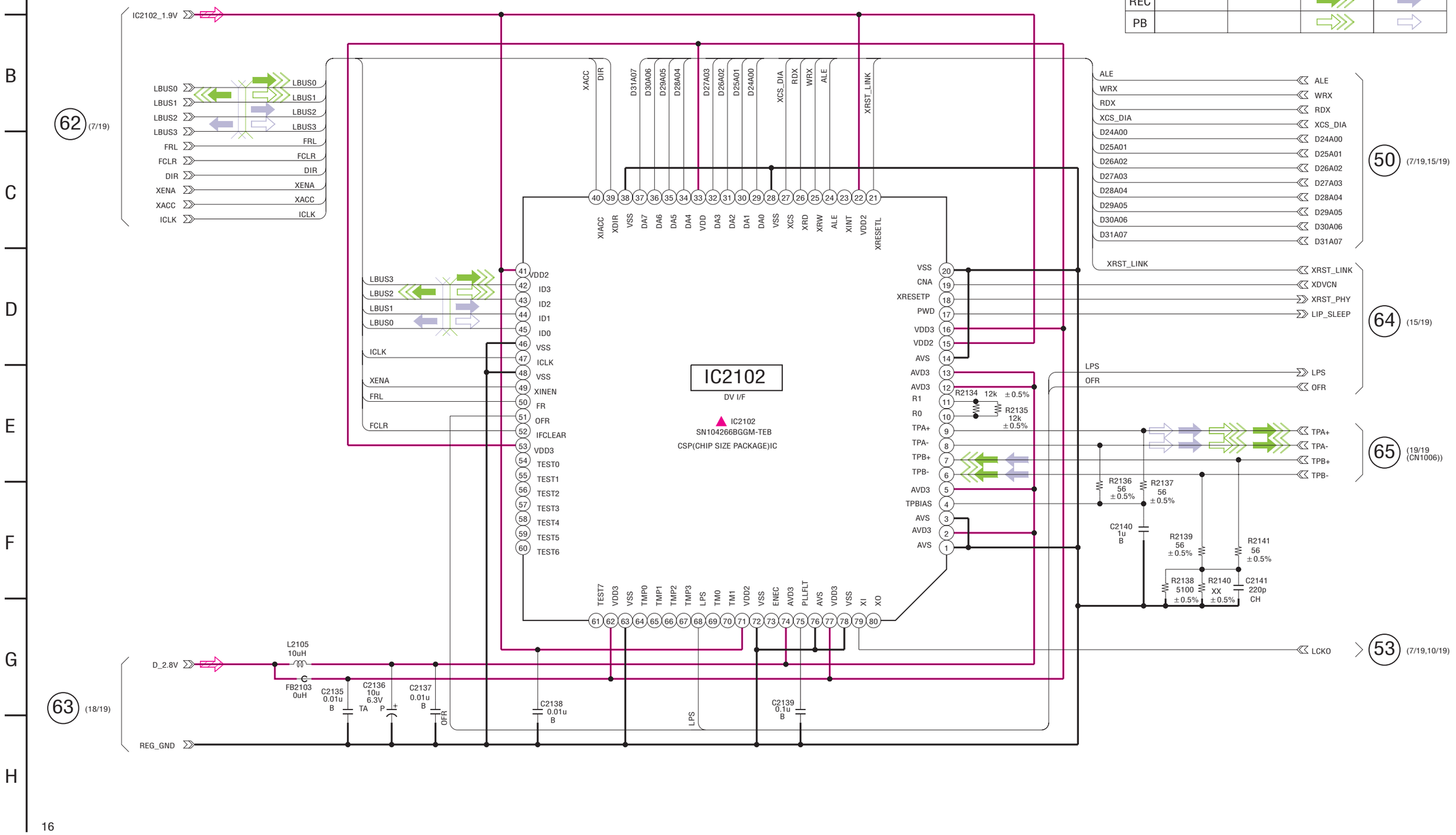
DV INTERFACE(JC-2 BLOCK)

XX MARK:NO MOUNT

▲ :Voltage measurment of the CSP IC and the Transistors with ▲mark,is not possible.

SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
REC			⇛	→
PB			⇛	→



16

For Schematic Diagram

• Refer to page 4-89 for printed wiring board.

VC-283 BOARD(9/19)

REC/PB AMP(RF BLOCK)

XX MARK:NO MOUNT

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

▲ :Voltage measurment of the CSP IC and the Transistors with ▲ mark,is not possible.

SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL	VIDEO/ AUDIO/ SERVO SIGNAL
	CHROMA	Y	Y/CHROMA		
REC			⇒	⇒	
PB			⇨	⇨	—

SIGNAL PATH

	REC	REC/PB	PB
Ref.signal	⇒		⇨

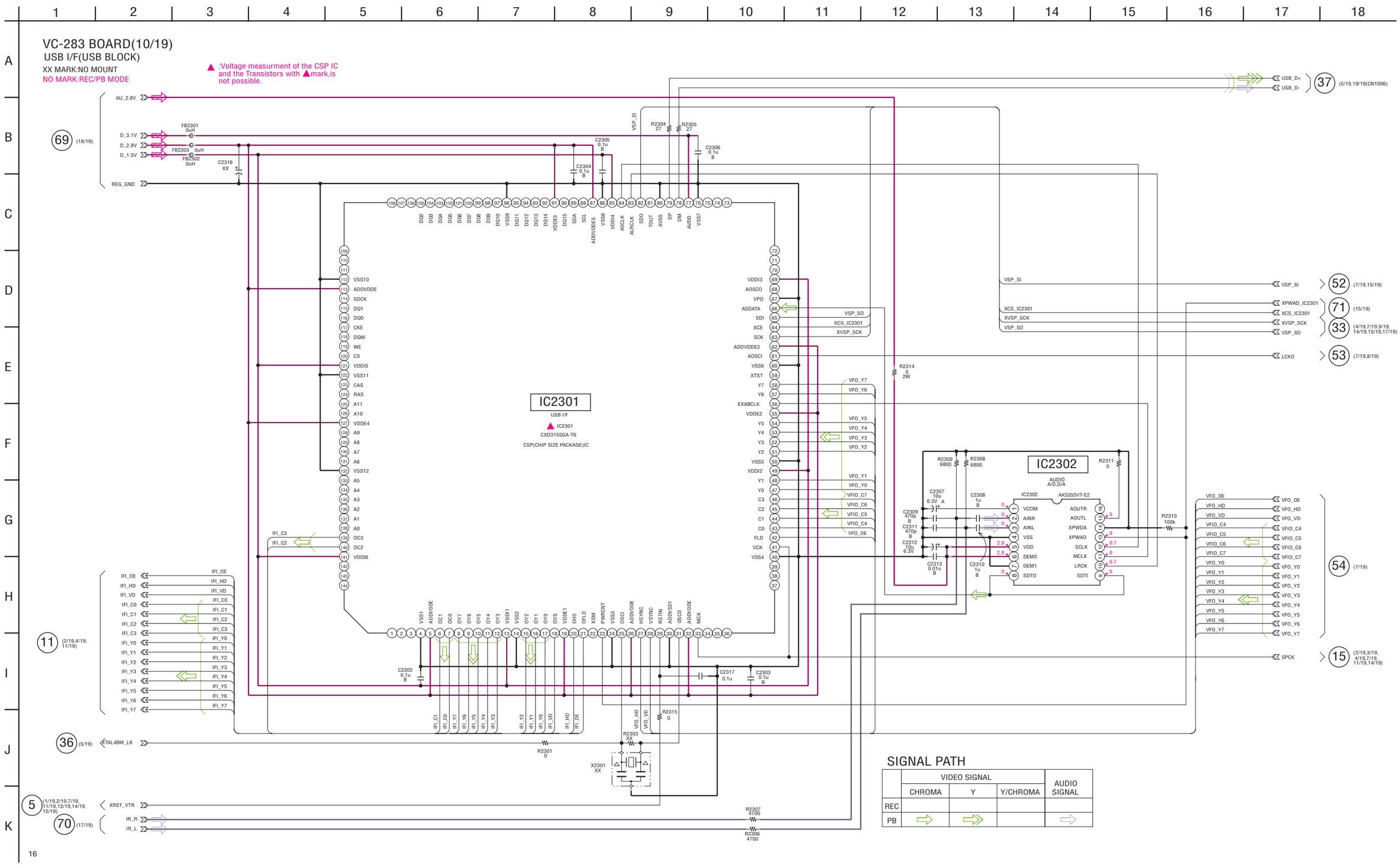
IC1901 A/D CONV.PLL IC1901 CXA2071R-T4

IC1902 REC/PB AMP IC1902 CXA2072R-T4

J-MECHANISM (1/2)

For Schematic Diagram

• Refer to page 4-89 for printed wiring board.



For Schematic Diagram

• Refer to page 4-89 for printed wiring board.

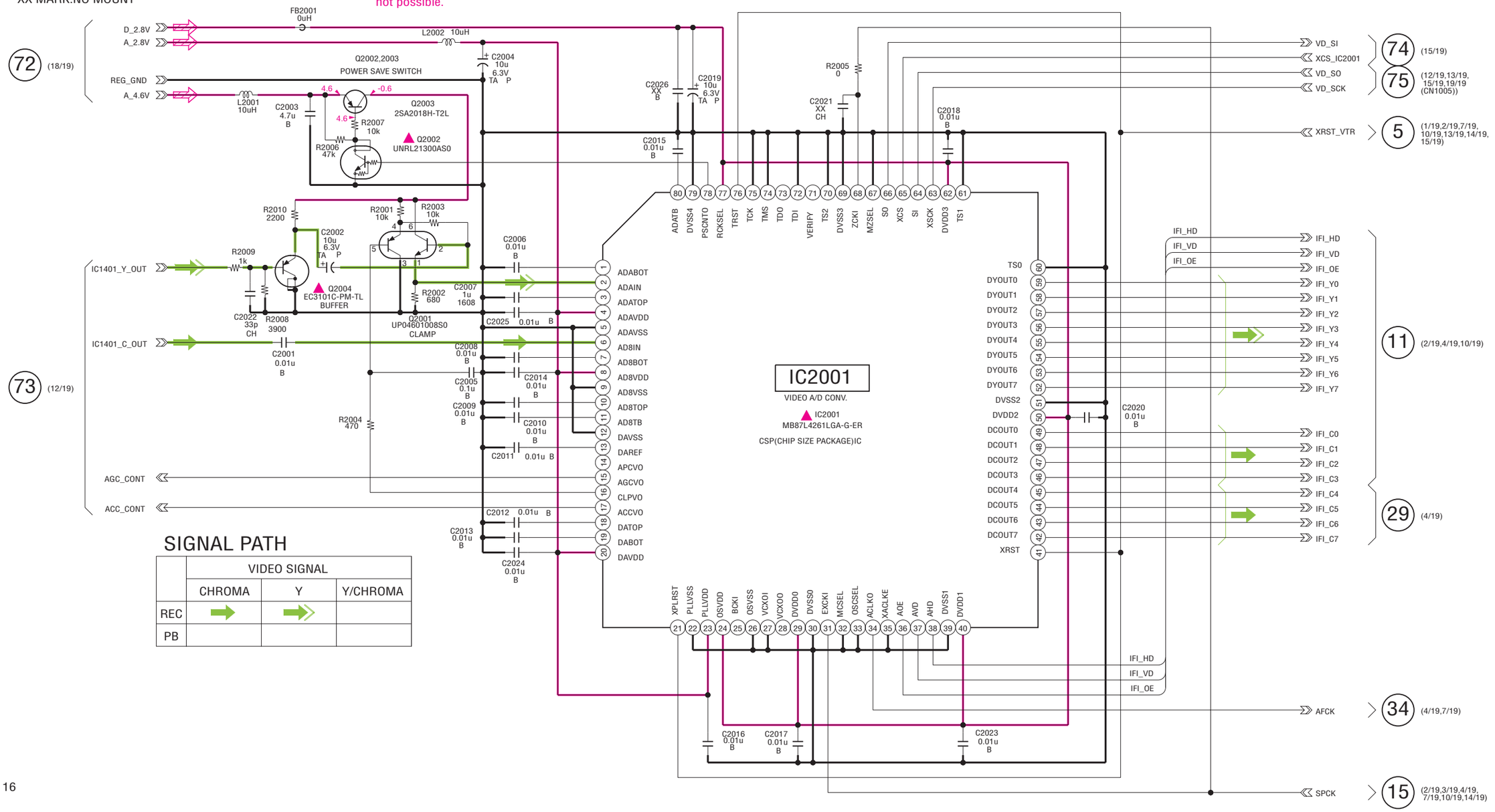
VC-283 BOARD(11/19)

VIDEO A/D CONVERTER(A/D BLOCK)

XX MARK:NO MOUNT

NO MARK:REC/PB MODE

▲ :Voltage measurment of the CSP IC and the Transistors with ▲mark,is not possible.

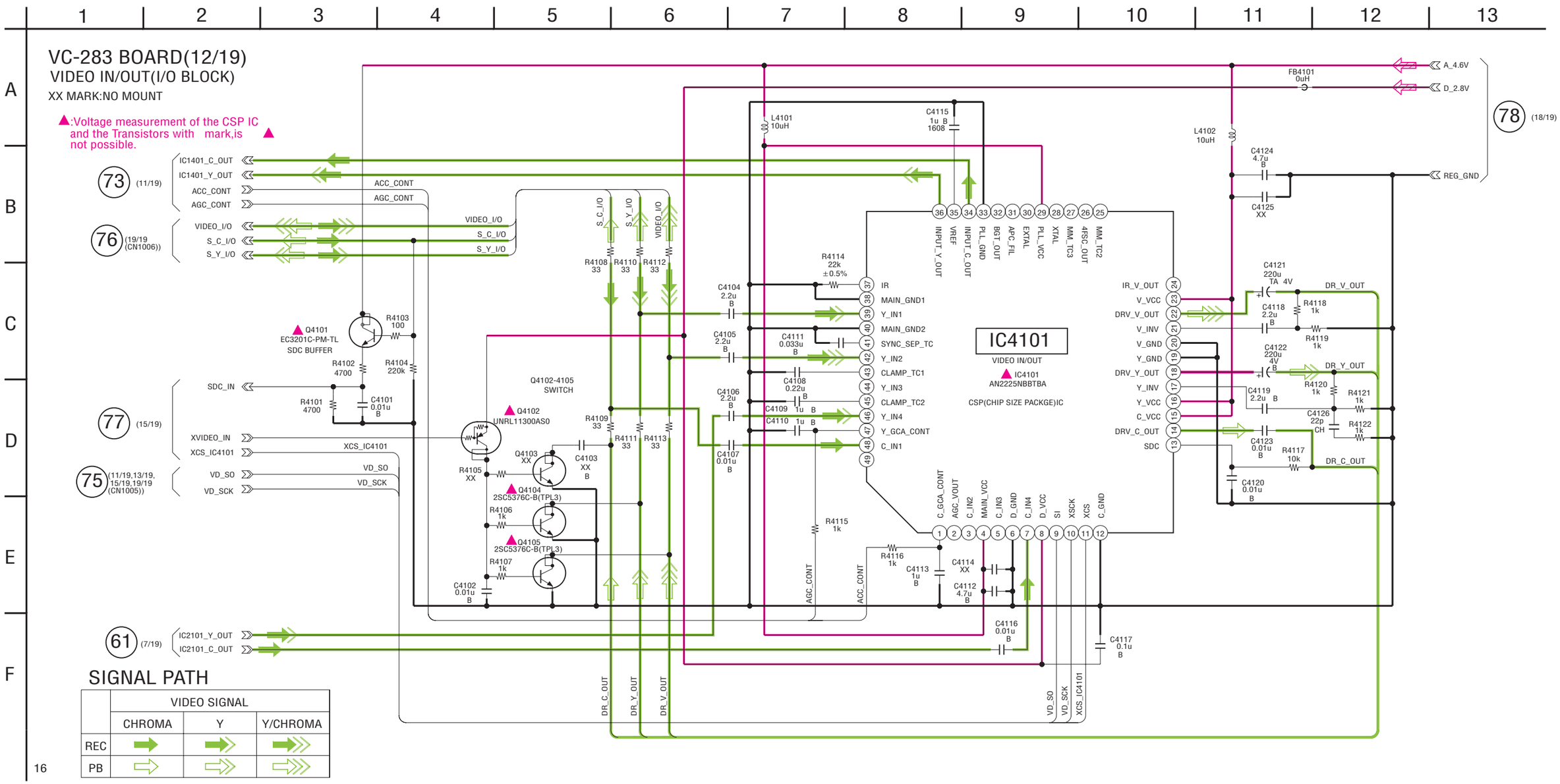


SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	→	⇒	
PB			

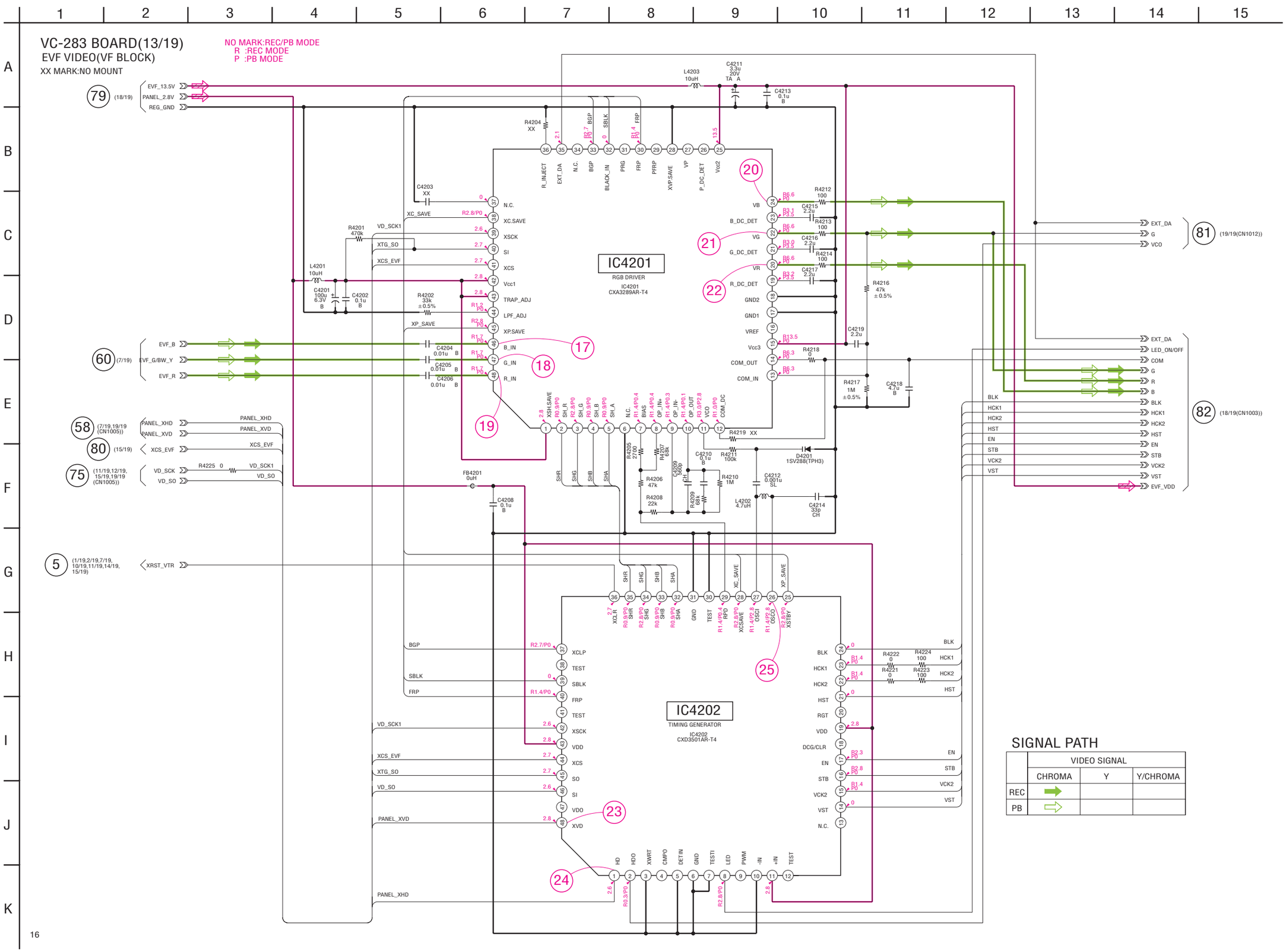
For Schematic Diagram

• Refer to page 4-89 for printed wiring board.



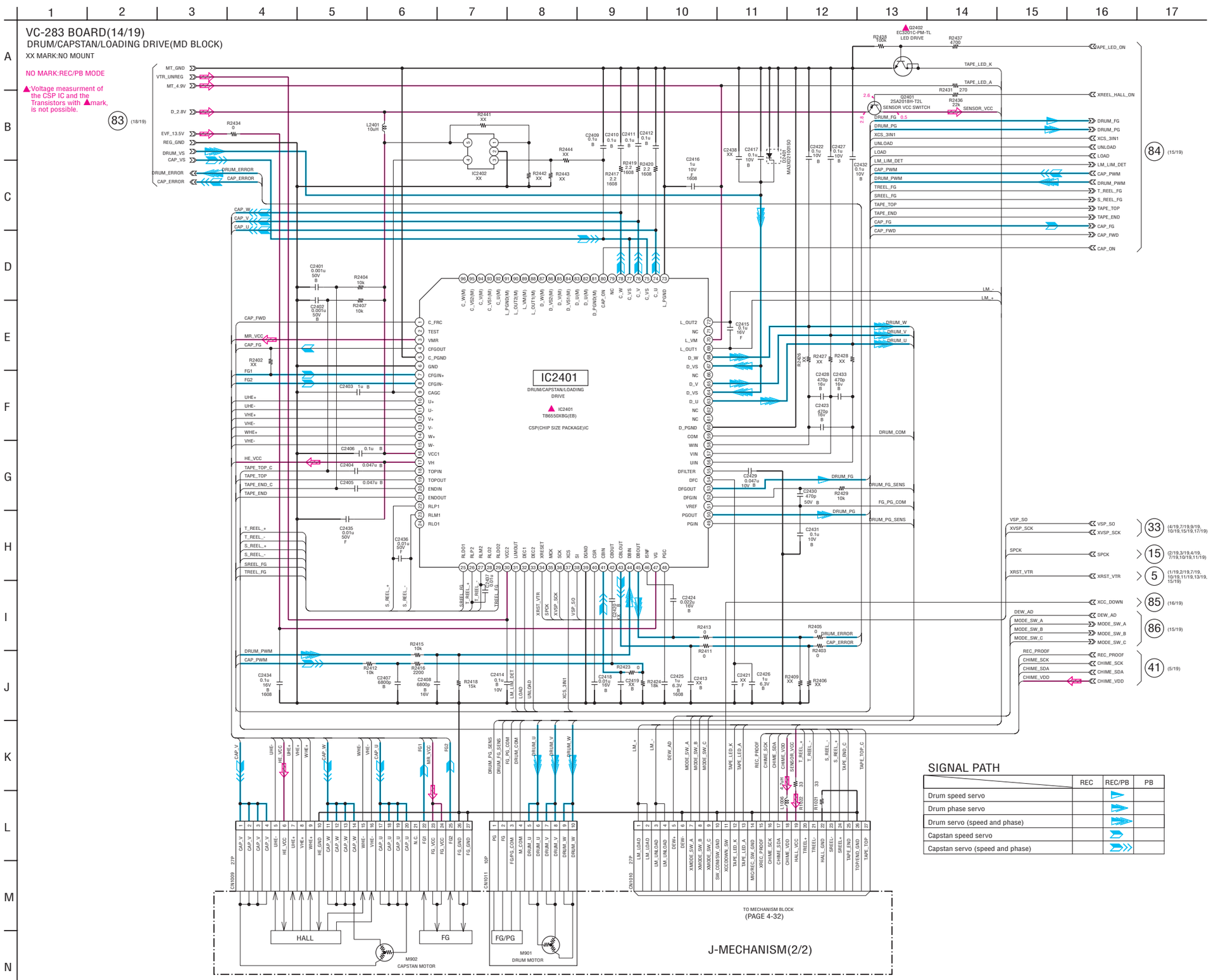
For Schematic Diagram

• Refer to page 4-89 for printed wiring board.



For Schematic Diagram

• Refer to page 4-89 for printed wiring board.



For Schematic Diagram

• Refer to page 4-89 for printed wiring board.

VC-283 BOARD(15/19)

CAMERA/MECHA CONTROL(CAM/MECHA CONT BLOCK)

XX MARK:NO MOUNT

NO MARK:REC/PB MODE

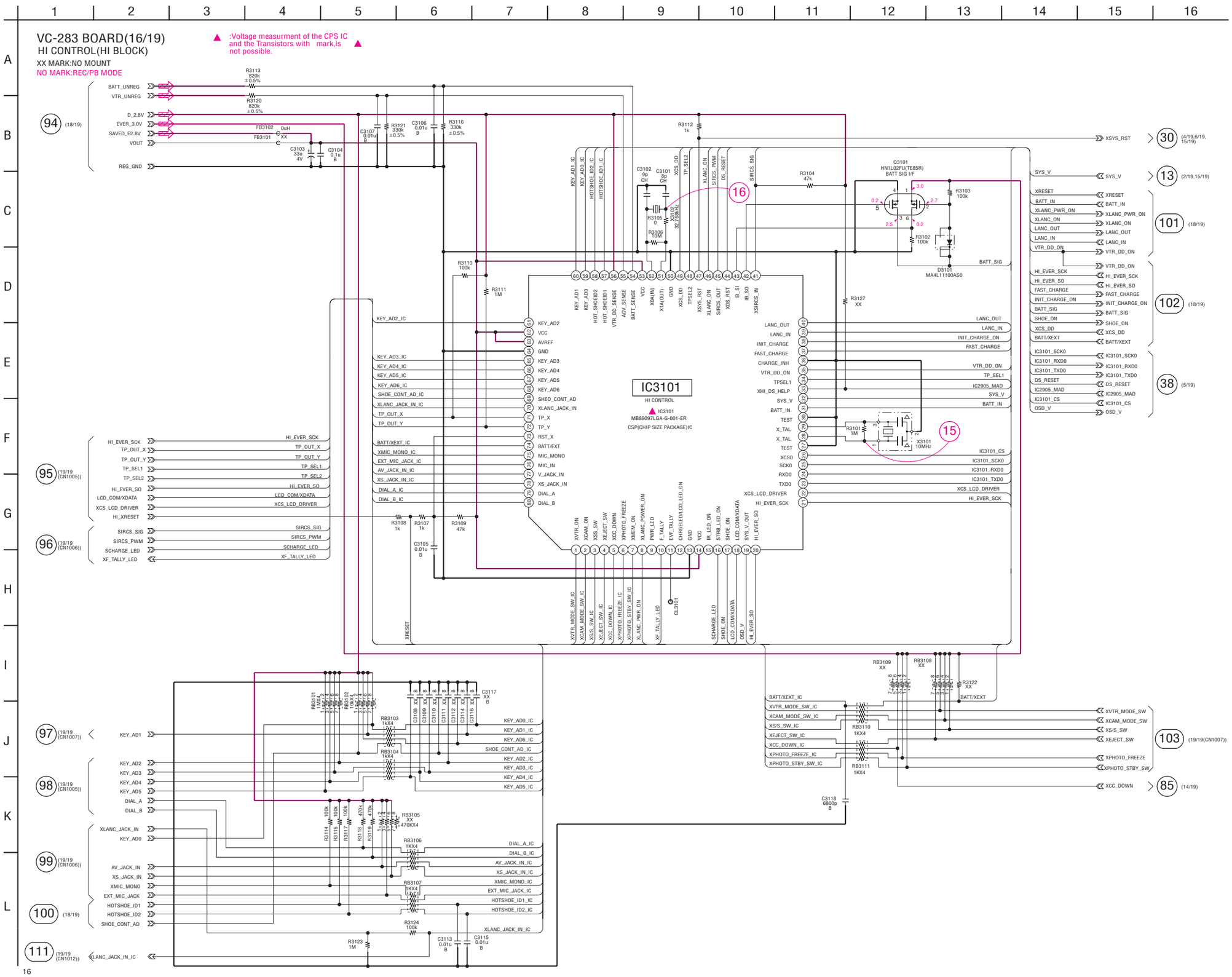
▲ :Voltage measurment of the CSP IC and the Transistors with ▲mark,is not possible.

SIGNAL PATH

	REC	REC/PB	PB
Drum speed servo		▷	
Drum phase servo		▷	
Drum servo (speed and phase)		▷	
Capstan speed servo		▷	
Capstan servo (speed and phase)		▷	
Ref.signal			▷

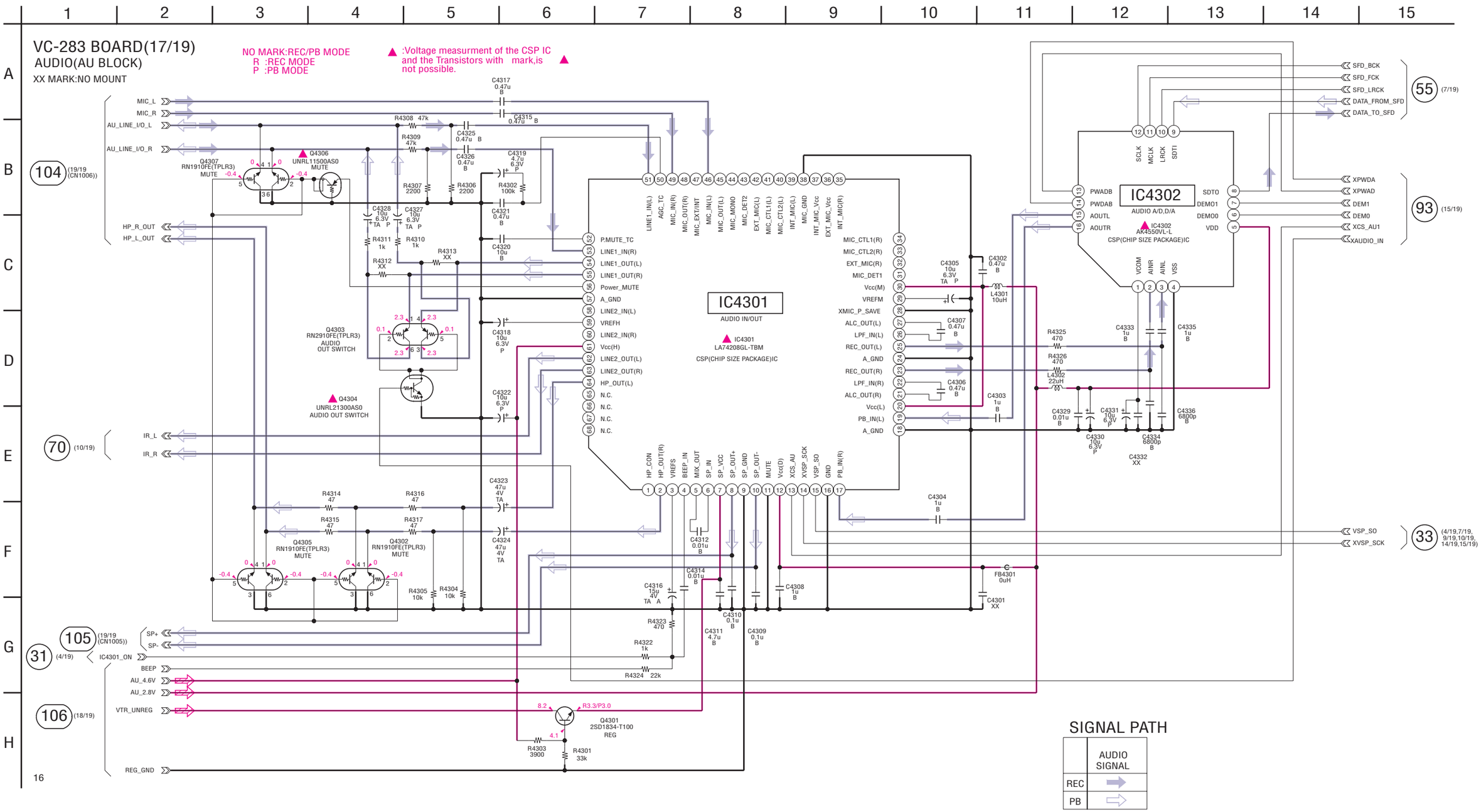
For Schematic Diagram

• Refer to page 4-89 for printed wiring board.



For Schematic Diagram

• Refer to page 4-89 for printed wiring board.



SIGNAL PATH

	AUDIO SIGNAL
REC	⇒
PB	⇨

For Schematic Diagram

• Refer to page 4-89 for printed wiring board.

VC-283 BOARD(18/19)

DD CONNECTOR,LANC,RESET,BEEP(DD CN,LANC/RESET/BEEP BLOCK)

XX MARK:NO MOUNT

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

▲:Voltage measurment of the CSP IC and the Transistors with ▲mark, is not possible.

TO DD-176 BOARD(2/2) CN4601

CN1003 100P

(PAGE 4-29)

2	MT_4.9V	DRUM_VS	1
4	MT_4.9V	DRUM_VS	3
6	MT_4.9V	DRUM_ERROR	5
8	MT_GND	CAP_VS	7
10	MT_GND	CAP_VS	9
12	MT_GND	CAP_ERROR	11
14	DD_-15.3V	DD_15V	13
16	DD_-15.3V	DD_15V	15
18	REG_GND	DD_15V	17
20	REG_GND	A_4.6V	19
22	REG_GND	A_4.6V	21
24	REG_GND	AU_4.6V	23
26	REG_GND	AU_4.6V	25
28	REG_GND	RP_4.6V	27
30	REG_GND	RP_4.6V	29
32	REG_GND	RP_2.8V	31
34	D_1.6V	AU_2.8V	33
36	D_1.6V	A_2.8V	35
38	D_1.6V	A_2.8V	37
40	IC1704_1.5V	A_2.8V	39
42	D_1.5V	D_2.8V	41
44	D_1.5V	D_2.8V	43
46	EVER_3.0V	D_2.8V	45
48	HI_EVER_SCK	D_1.9V	47
50	HI_EVER_SO	D_1.9V	49
52	XCS_DD	FAST_CHARGE	51
54	VTR_DD_ON	BATT_SIG	53
56	INIT_CHARGE_ON	BATT/XEXT	55
58	SHOE_MIC_L	SHOE_ON	57
60	SHOE_CONT_AD	BATT_UNREG	59
62	SHOE_MIC_GND	SCHARGE_ON	61
64	CTS(HDS)	STROBO_ON	63
66	STBY_ON	XSCHARGE_FULL	65
68	RTS(SCK)	PLUNGER	67
70	SHOE_ID2	PLUNGER	69
72	RXD	STROBO_DOWN	71
74	SHOE_ID1	PANEL_UNREG_GND	73
76	TXD	PANEL_UNREG_GND	75
78	LANC_SIG	VTR_UNREG	77
80	PANEL_4.6V	VTR_UNREG	79
82	PANEL/EVF_2.8V	PANEL_UNREG	81
84	PANEL/EVF_2.8V	PANEL_UNREG	83
86	VST	EVF_GND	85
88	VCK2	VDD	87
90	STB	LED_ON/OFF	89
92	EN	LED_DA	91
94	HST	COM	93
96	HCK2	R	95
98	HCK1	G	97
100	BLK	B	99

Q1001,1002 -7.5V REG

Q1001 HN1A01FE-Y/GR(TPLR3)

Q1002 EC3201C-PM-TL

Q1006 EC3101C-PM-TL

Q1006,1007 13.5V REG

Q1007 HN1C01FE-Y/GR(TPL3)

IC1002 3.1V REG NJU7241F31(TE2)

IC2702 RESET BLOCK BD4201FV-E2

IC2703 LANC I/O TL1596CPWR

IC1201 AF LASER SAFTY TC7WH123FU(TE12R)

Q2701 UNRL11100AS0 LANC POWER SW

Q2703 UNRL21300AS0 Q2703,2704 MODULATOR

Q1201 UNRL21300AS0 AF LD VCC SWITCH

Q1202 EC3101C-PM-TL AF LD VCC SWITCH

Q1203 UNRL21300AS0 SAFE SWITCH

Q2704 EC3201C-PM-TL

Q2705 MCH3211-TL-E

Q2707 MCH3306-TL-E

Q2708 HN1C01FE-Y/GR(TPLR3)

Q2705,2707,2708 SAVED E2.8V SWITCH

D2701 MA132WK-(K8).SO

D2702 MA4L72800AS0

D2703 MA4L11100AS0

D2704 MA4L72800AS0

D2705 MA4L72800AS0

D1201 MA4L11100AS0

SIGNAL PATH

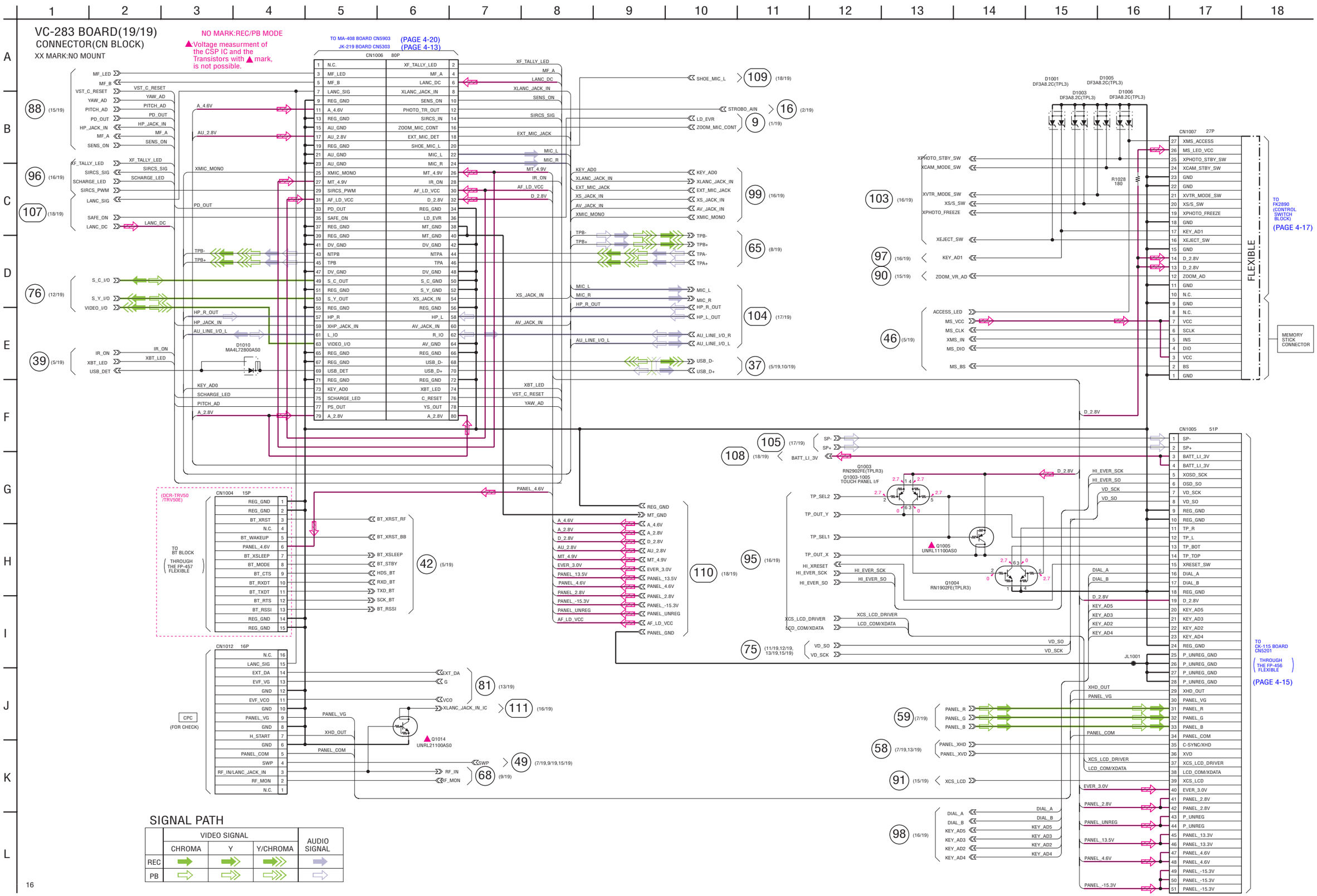
	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	⇒		
PB	⇨		

SIGNAL PATH

	REC	REC/PB	PB
Drum servo (speed and phase)		⇒	
Capstan servo (speed and phase)		⇒»	

For Schematic Diagram

• Refer to page 4-89 for printed wiring board.



SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
REC	➡	➡	➡	➡
PB	⇨	⇨	⇨	⇨

COVER

4-3. PRINTED WIRING BOARDS

Link

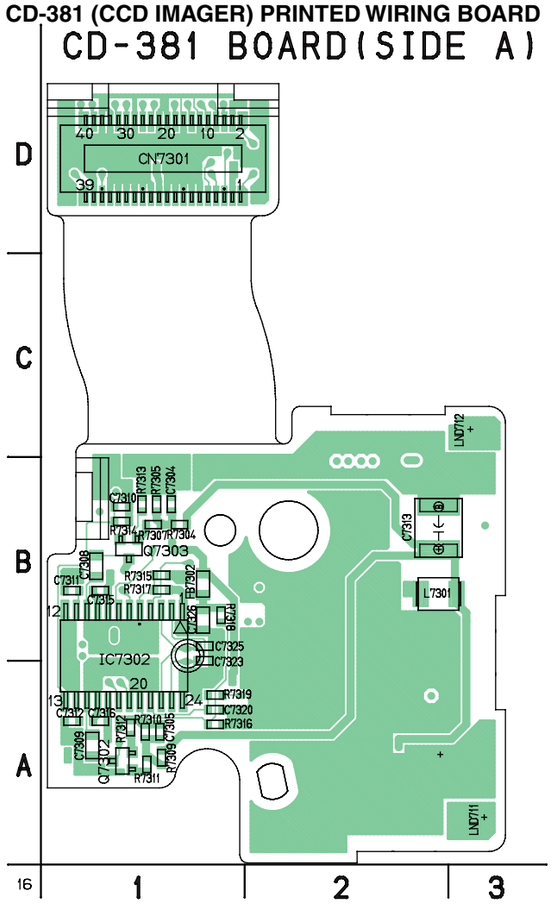
CD-381 BOARD	SE-124 BOARD
FP-460 FLEXIBLE BOARD	PD-165 BOARD
JK-219 BOARD (SIDE A)	DD-176 BOARD
JK-219 BOARD (SIDE B)	LB-078 BOARD
CK-115 BOARD	FP-100, FP-228, FP-102 FLEXIBLE BOARDS
MA-408 BOARD	VC-283 BOARD (SIDE A)
FP-461 BOARD	VC-283 BOARD (SIDE B)

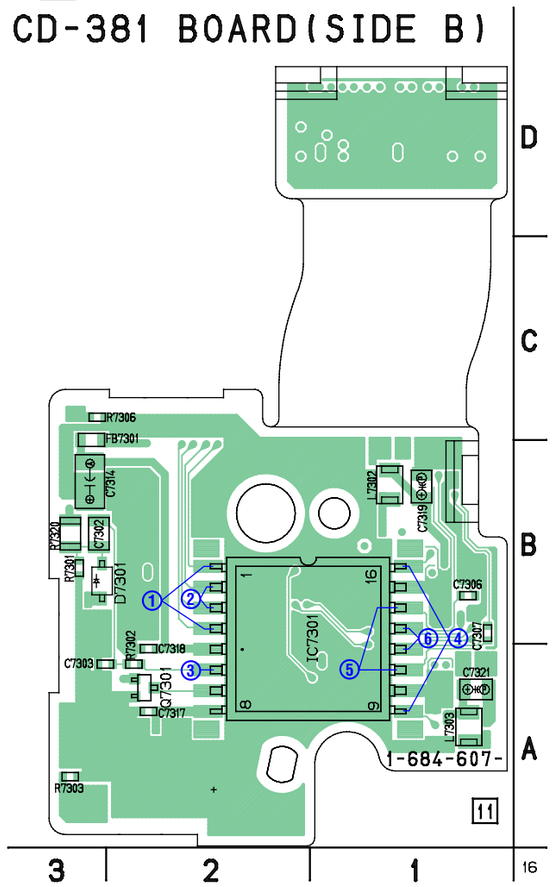
COMMON NOTE FOR PRINTED WIRING BOARDS		WAVEFORMS
MOUNTED PARTS LOCATION	CIRCUIT BOARDS LOCATION	FLEXIBLE BOARDS LOCATION

4-3. PRINTED WIRING BOARDS

CD-381 (CCD IMAGER) PRINTED WIRING BOARD

• : Uses unleaded solder.



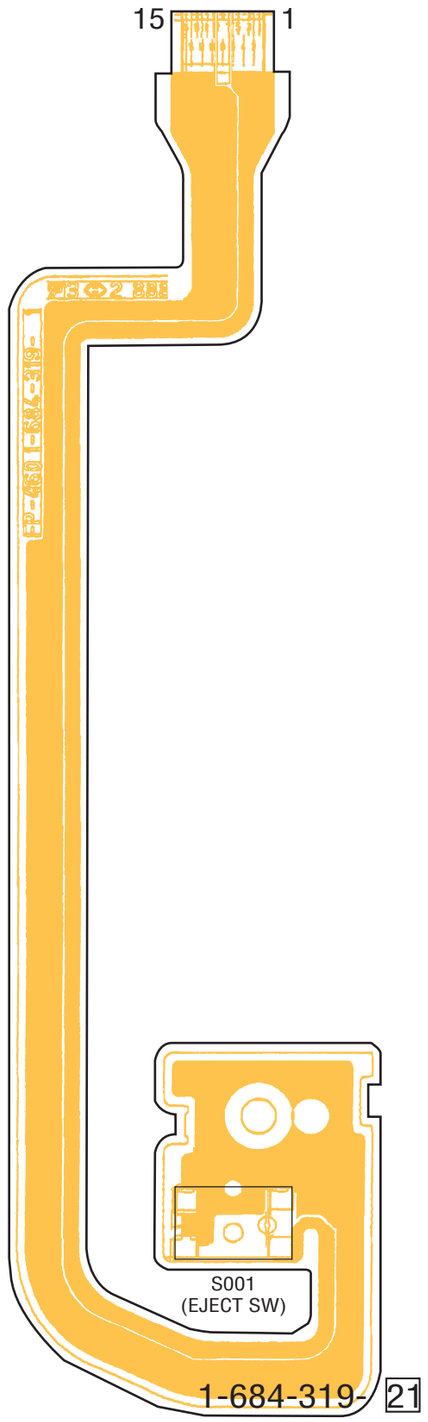


For printed wiring boards

- Refer to page 4-96 for parts location.
- This board is six-layer print board. However, the patterns of layers two to five have not been included in the diagram.

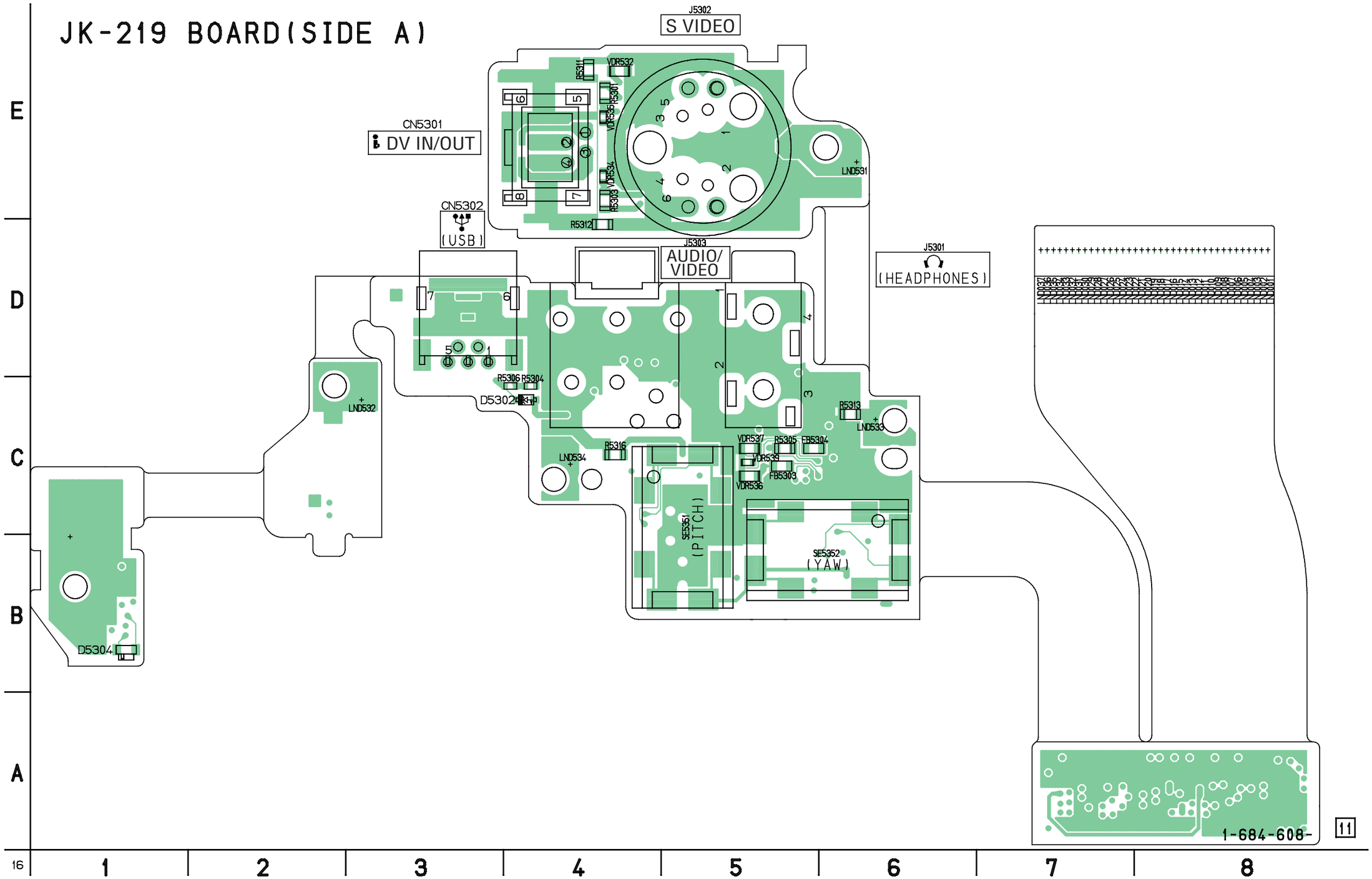
There are a few cases that the part printed on this diagram isn't mounted in this model.

FP-460 FLEXIBLE BOARD



JK-219 (AV IN/OUT, STEADY SHOT) PRINTED WIRING BOARD

- : Uses unleaded solder.



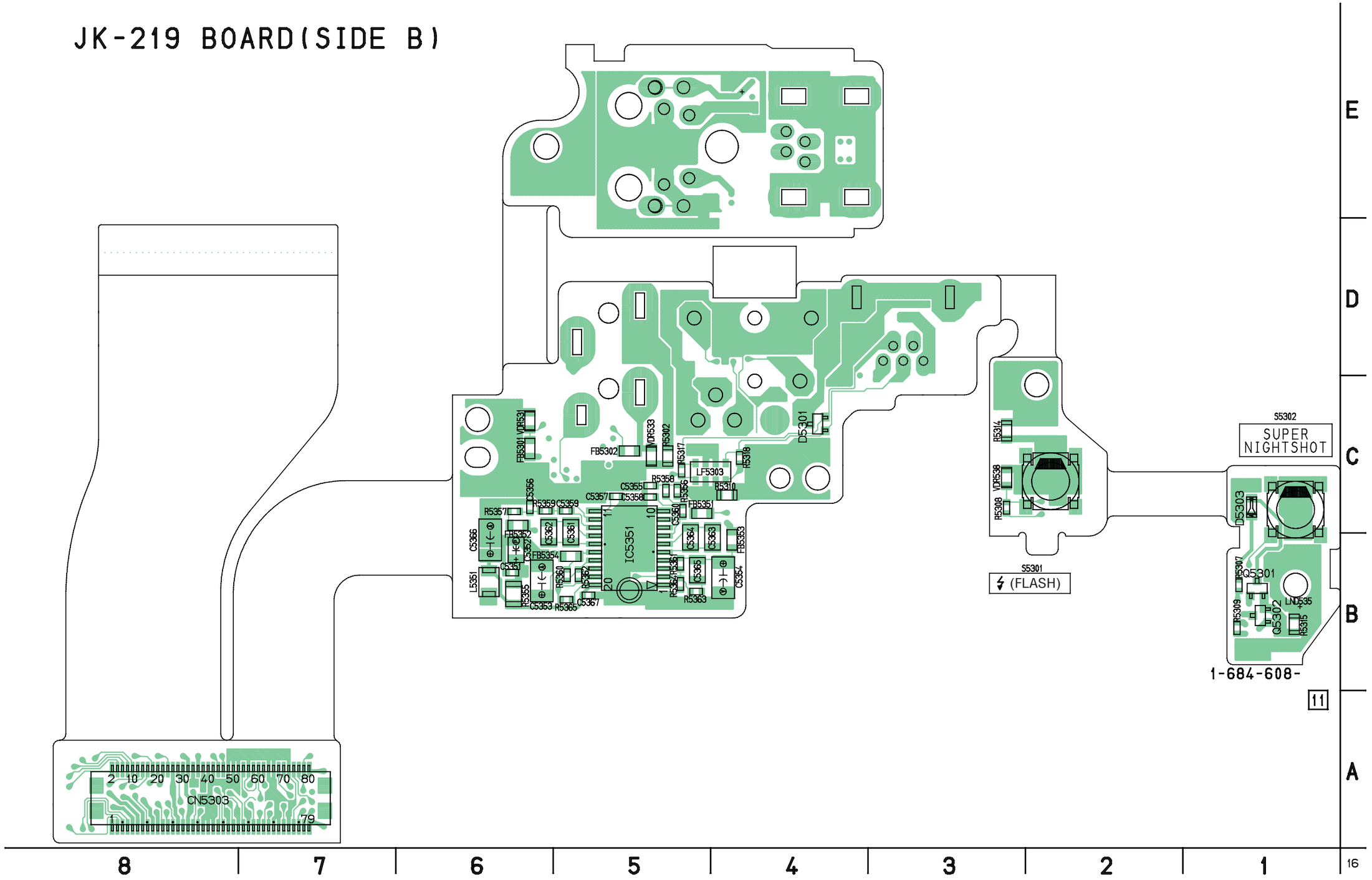
For printed wiring boards

- Refer to page 4-96 for parts location.
- This board is six-layer print board. However, the patterns of layers two to five have not been included in the diagram.

There are a few cases that the part printed on this diagram isn't mounted in this model.

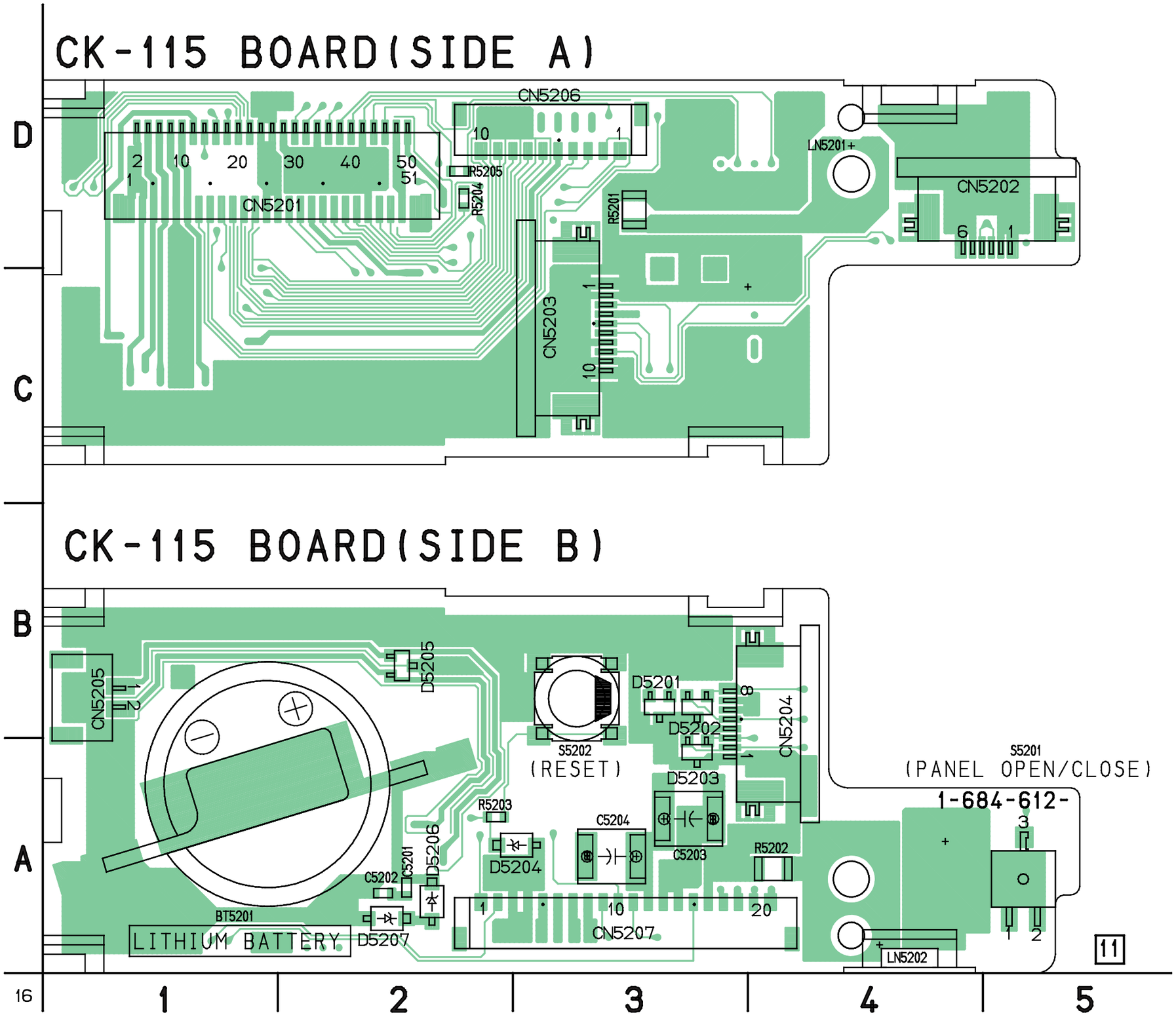
- : Uses unleaded solder.

JK-219 BOARD(SIDE B)



CK-115 (CONTROL SWITCH) PRINTED WIRING BOARD

• : Uses unleaded solder.



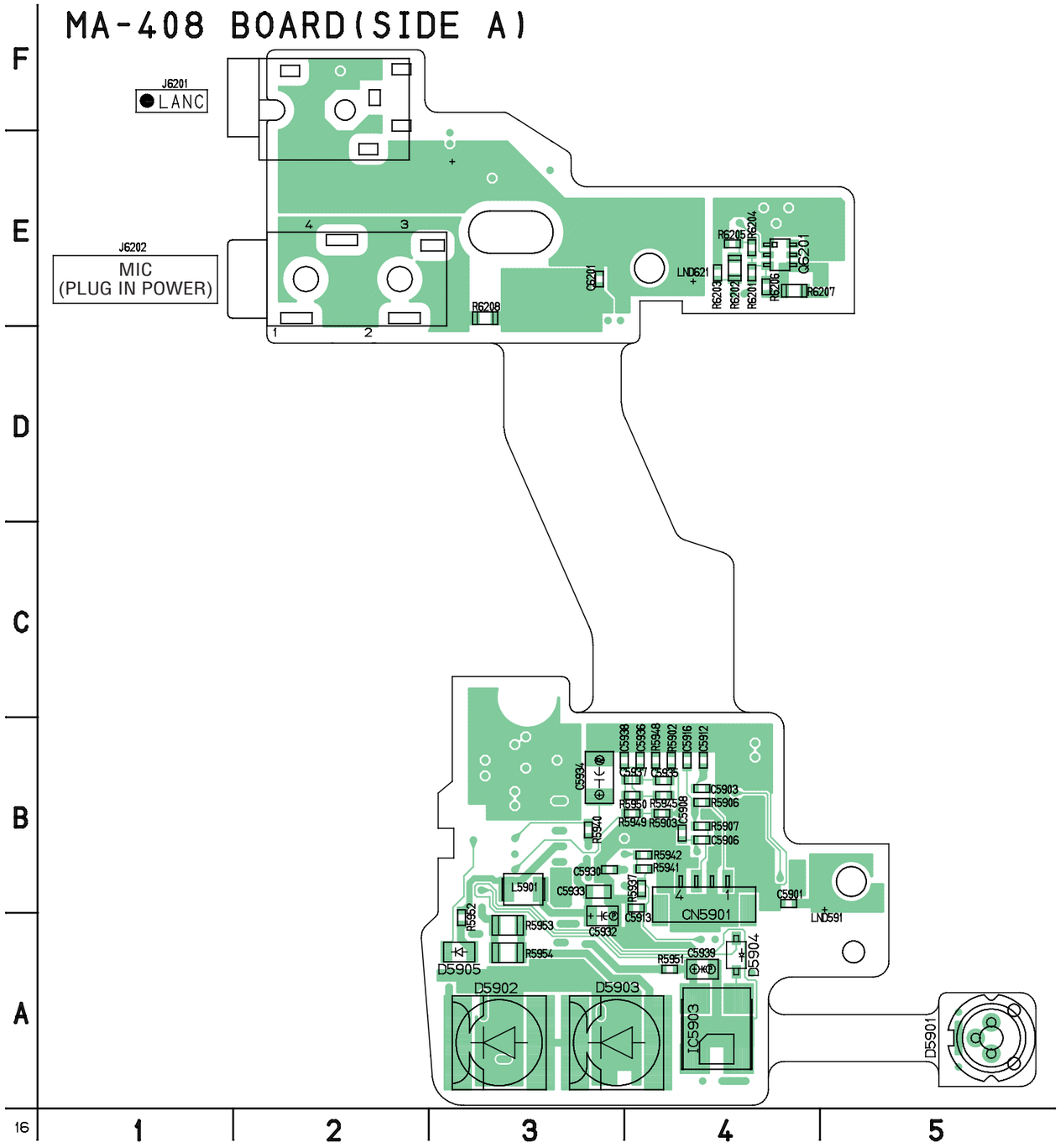
CAUTION :
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.

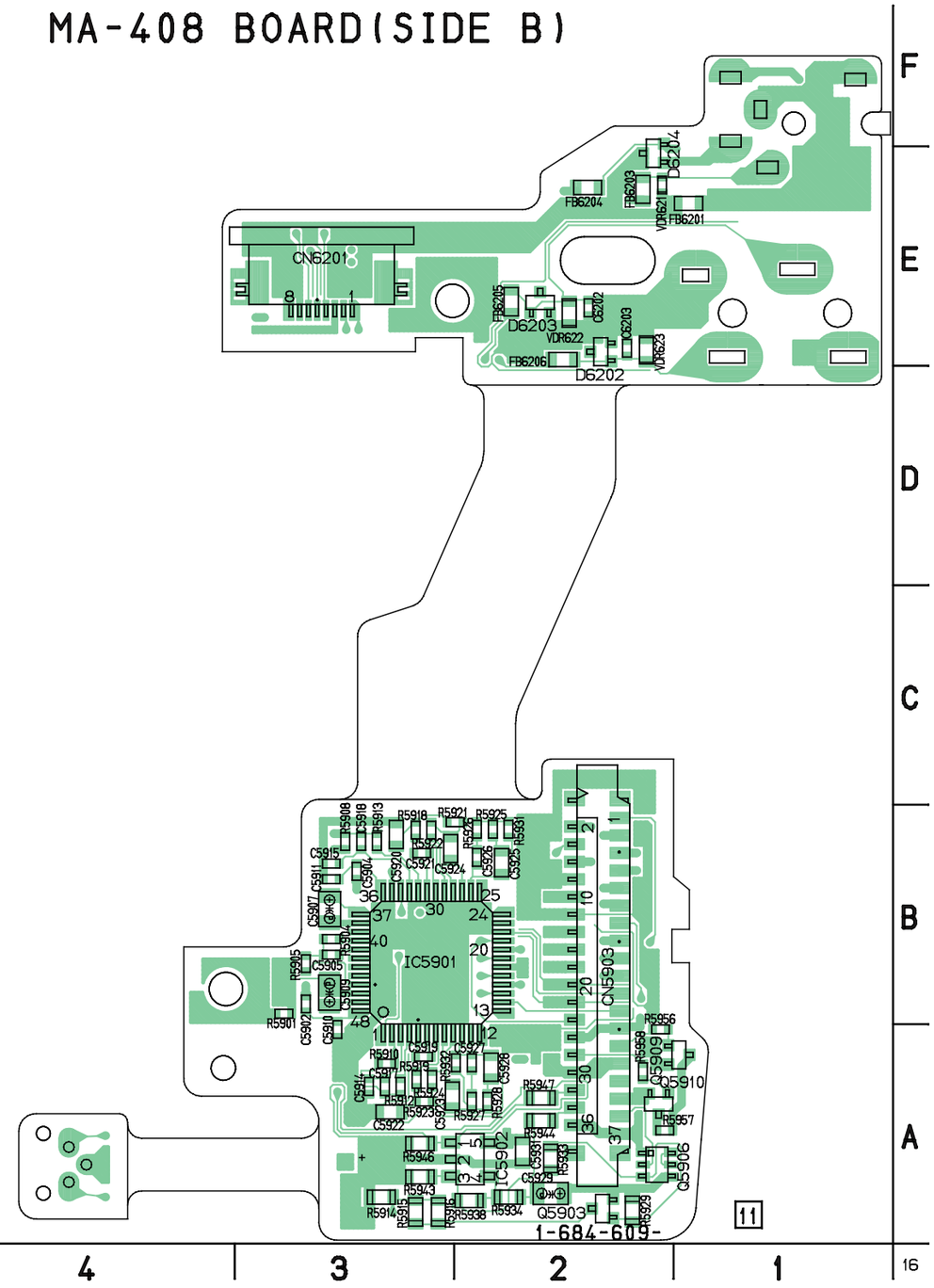
For printed wiring boards
- Refer to page 4-96 for parts location.
- This board is six-layer print board. However, the patterns of layers two to five have not been included in the diagram.

There are a few cases that the part printed on this diagram isn't mounted in this model.

MA-408 (MIC AMP, REMOTE COMMANDER RECEIVER, LANC, EXT MIC) PRINTED WIRING BOARD

• : Uses unleaded solder.





For printed wiring boards

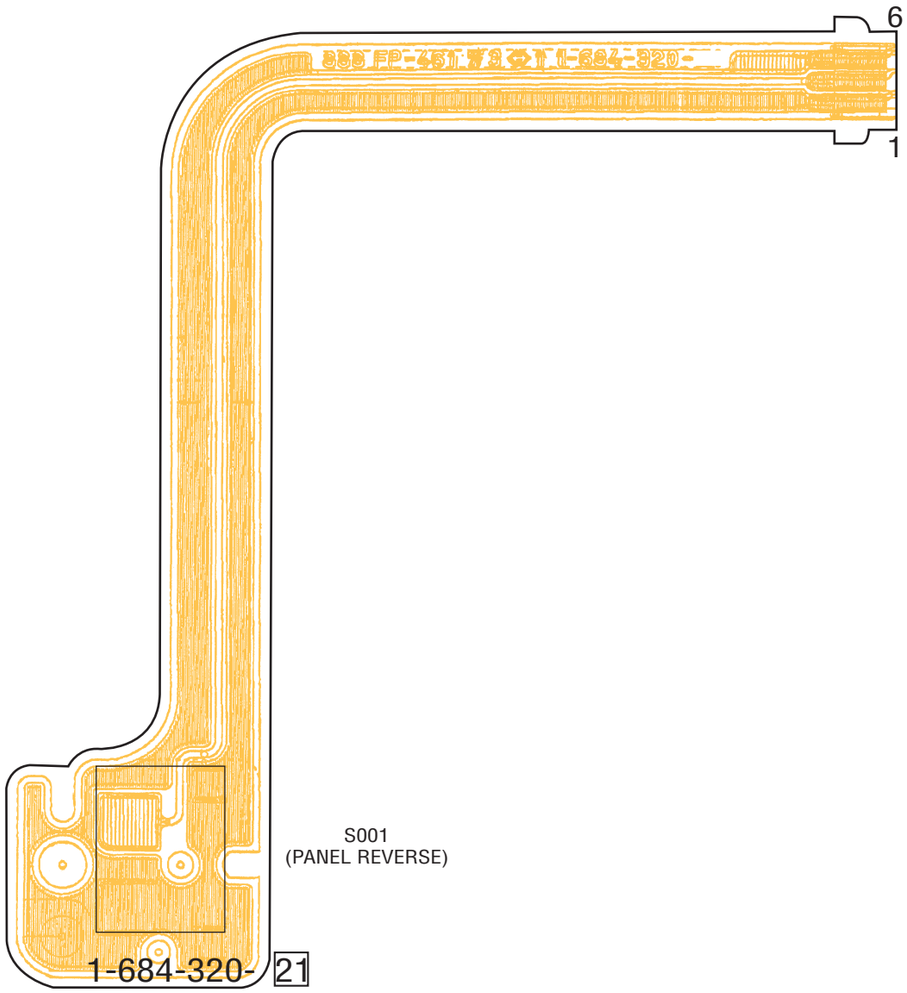
- Refer to page 4-96 for parts location.
- This board is six-layer print board. However, the patterns of layers two to five have not been included in the diagram.

There are a few cases that the part printed on this diagram isn't mounted in this model.

FP-461 FLEXIBLE BOARD

• : Uses unleaded solder.

FP-461 FLEXIBLE

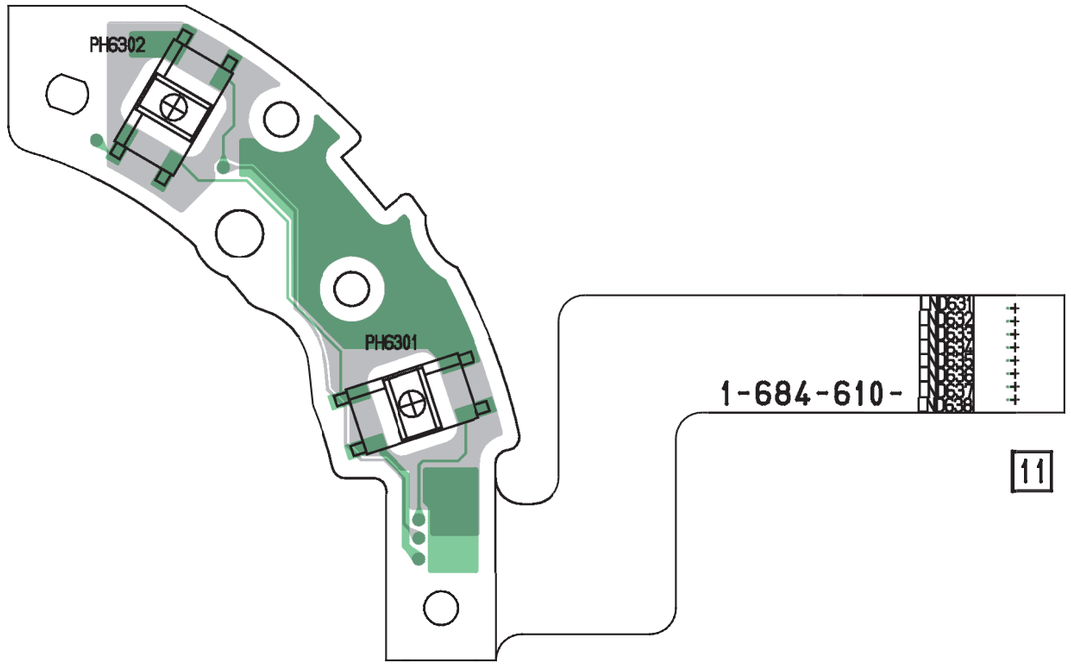


S001
(PANEL REVERSE)

SE-124 (MF SENSOR) PRINTED WIRING BOARD

• : Uses unleaded solder.

SE-124 BOARD



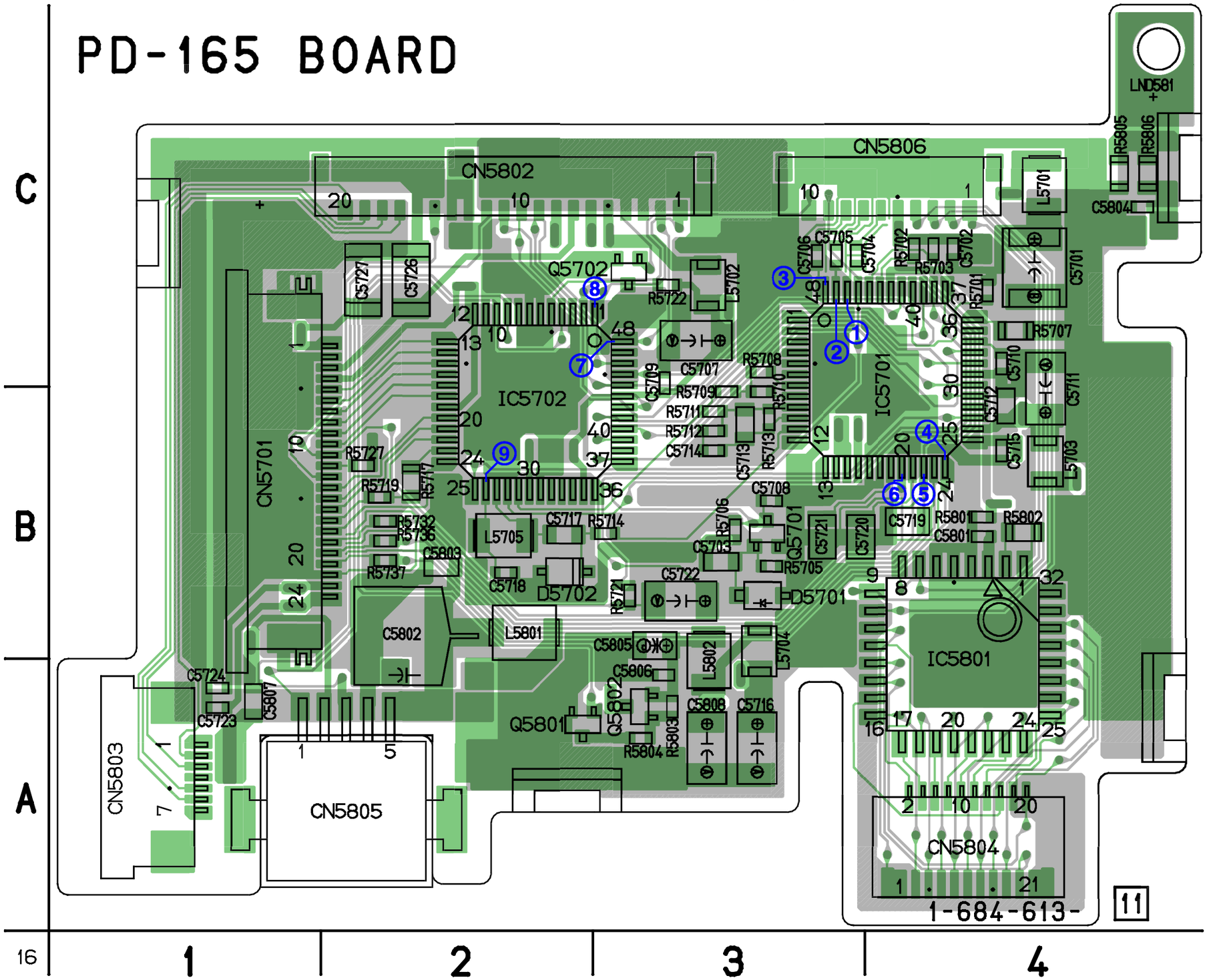
For printed wiring boards

• This board is six-layer print board. However, the patterns of layers two to four have not been included in the diagram.

There are a few cases that the part printed on this diagram isn't mounted in this model.

PD-165 (RGB DRIVE, TIMING GENERATOR, LCD DRIVER, BACK LIGHT) PRINTED WIRING BOARD

• : Uses unleaded solder.



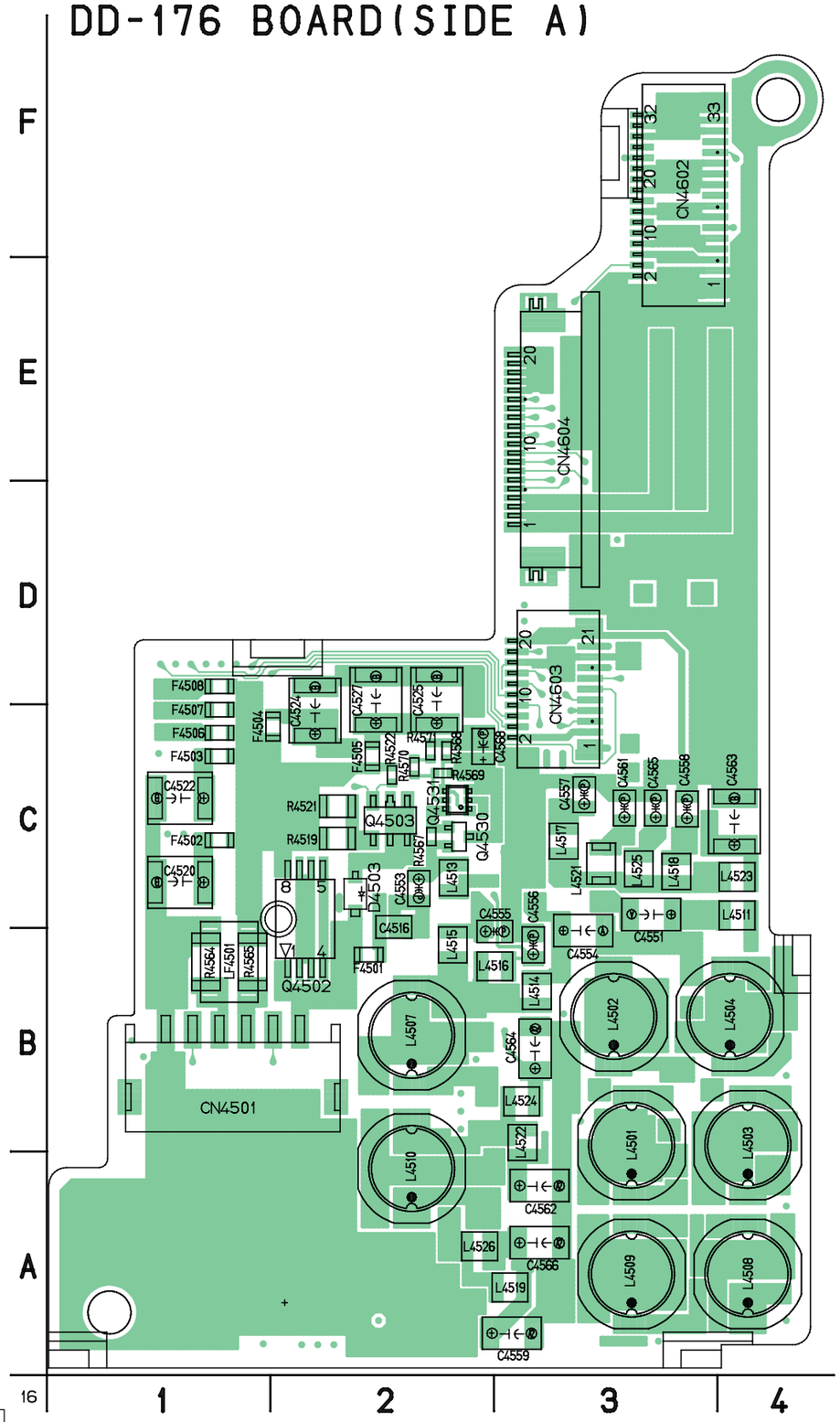
For printed wiring boards

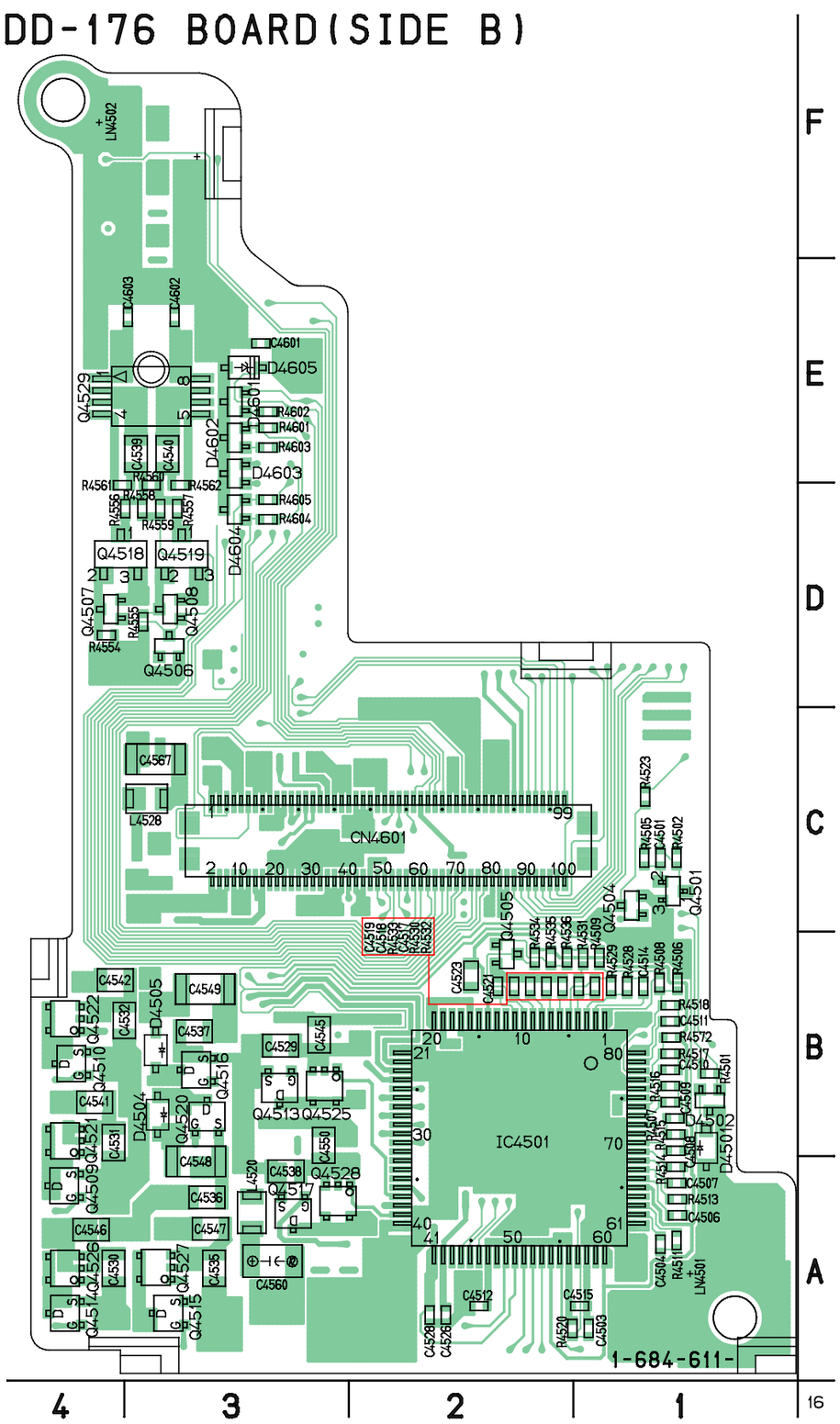
- Refer to page 4-97 for parts location.
- This board is six-layer print board. However, the patterns of layers two to five have not been included in the diagram.

There are a few cases that the part printed on this diagram isn't mounted in this model.

DD-176 (DC/DC CONVERTER, CONNECTOR) PRINTED WIRING BOARD

• : Uses unleaded solder.





For printed wiring boards

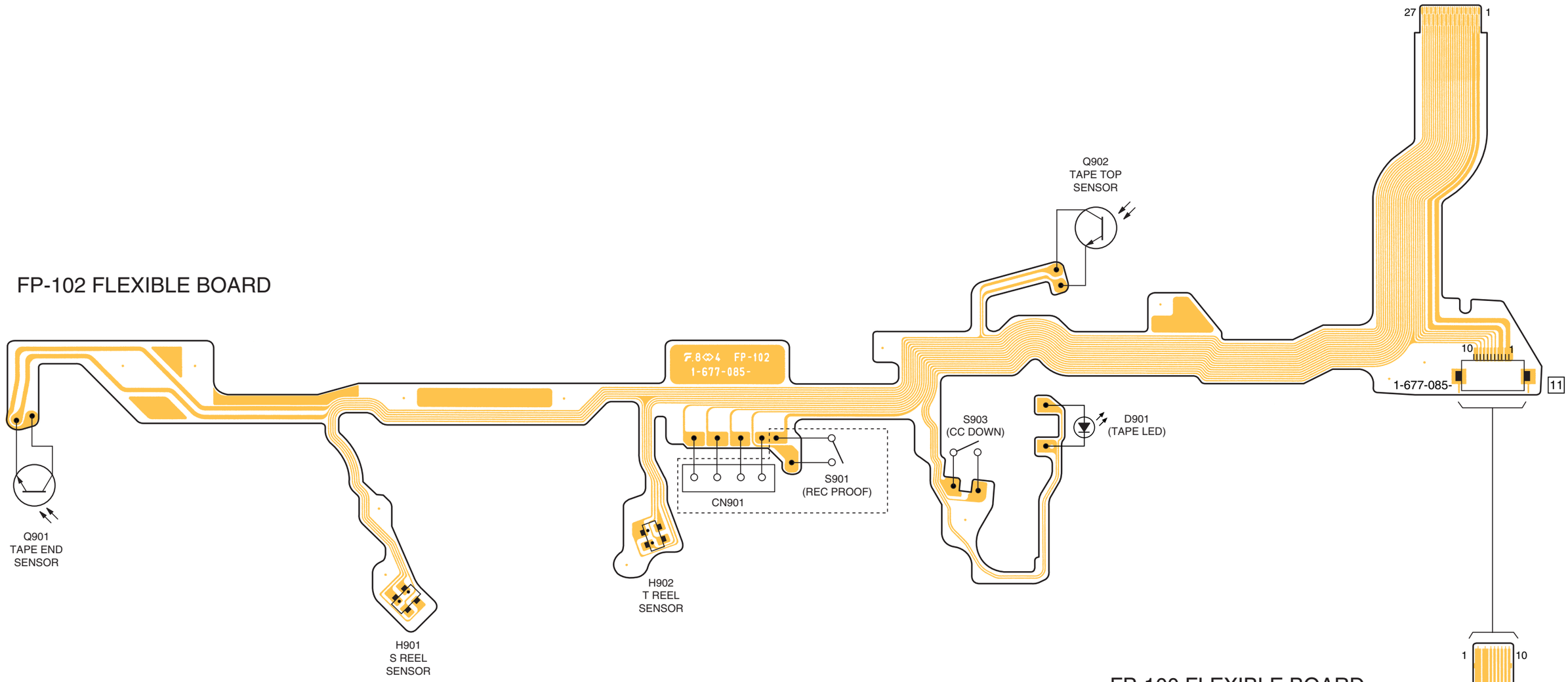
- Refer to page 4-97 for parts location.
- This board is six-layer print board. However, the patterns of layers two to five have not been included in the diagram.

There are a few cases that the part printed on this diagram isn't mounted in this model.

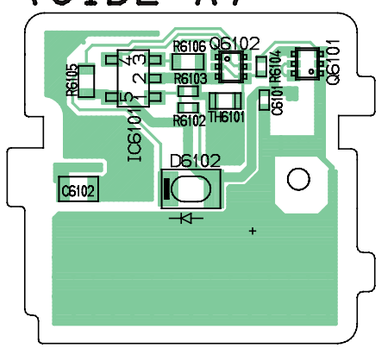
FP-100 (MODE SWITCH), FP-228 (DEW SENSOR), FP-102 (TAPE TOP/END SENSOR, S/T REEL) FLEXIBLE BOARDS
LB-078 (EVF BACK LIGHT) PRINTED WIRING BOARD

- : Uses unleaded solder. (LB-078 board)

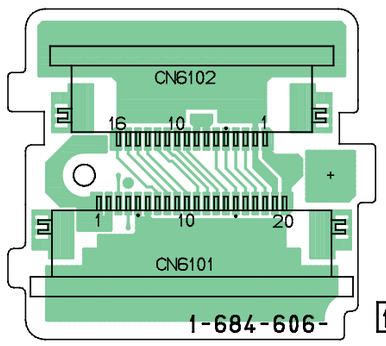
FP-102 FLEXIBLE BOARD



LB-078 BOARD (SIDE A)



LB-078 BOARD (SIDE B)

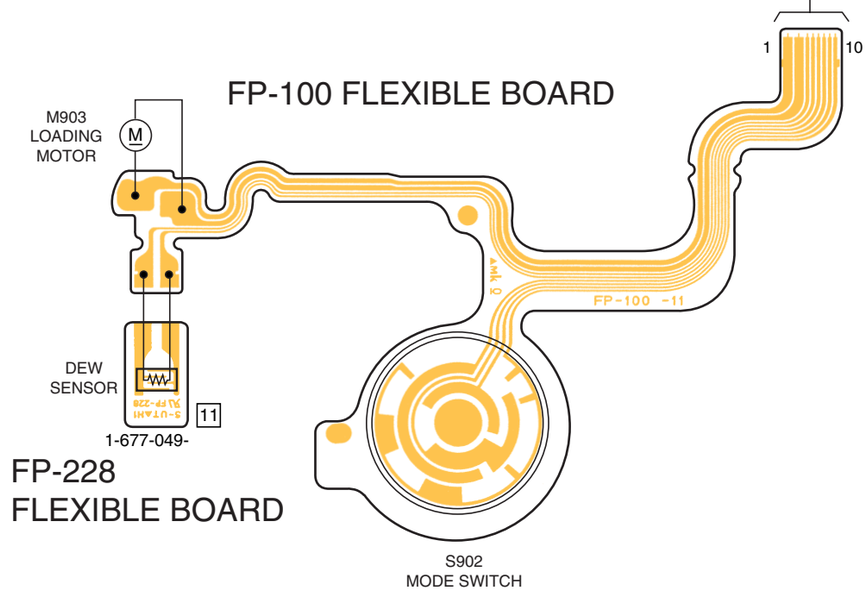


For printed wiring boards

- This board is eight-layer print board. However, the patterns of layers two to seven have not been included in the diagram.

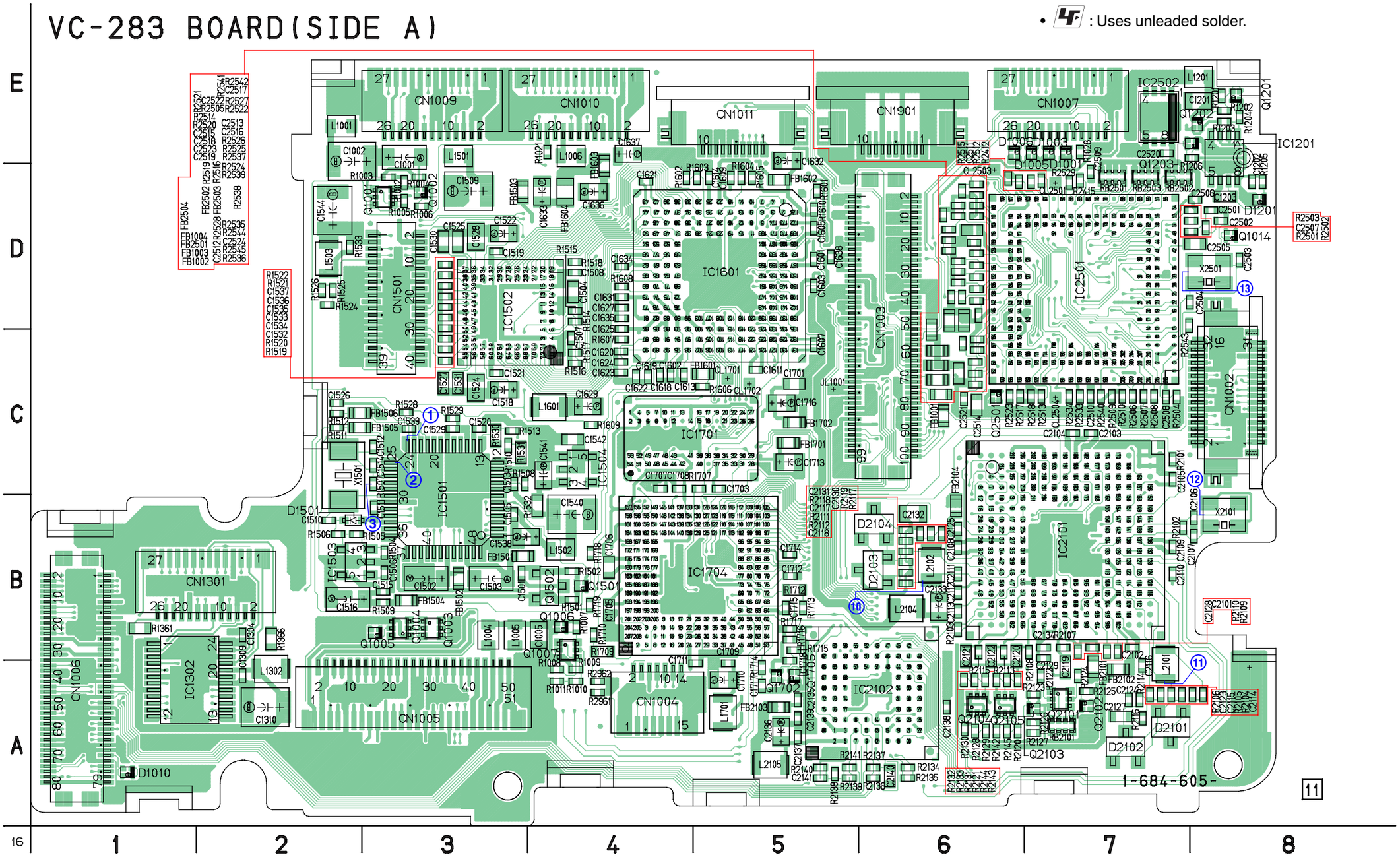
There are a few cases that the part printed on this diagram isn't mounted in this model.

FP-100 FLEXIBLE BOARD



FP-228 FLEXIBLE BOARD

VC-283(A/D CONV, TIMING GENERATOR, EVR, CAMERA PROCESS, FOCUS/ZOOM/IRIS/ND DRIVE, MPEG MOVIE/DIGITAL STILL PROCESS, HI CONTROL, DIGITAL STILL CONTROL, FLASH MEMORY, SDRAM, DV SIGNAL PROCESS, DV INTERFACE, REC/PB AMP, USB I/F, VIDEO A/D CONVERTER, VIDEO IN/OUT, EVF VIDEO, DRUM/CAPSTAN/LOADING DRIVE, CAMERA/MECHA CONTROL, HI CONTROL, AUDIO, DD CONVERTER, LANC, RESET, BEEP, CONNECTOR) PRINTED WIRING BOARD

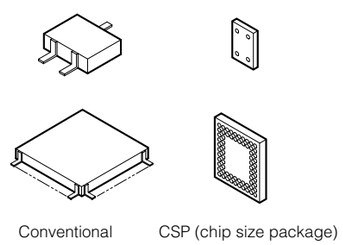


For printed wiring board

- Refer to page 4-98 for parts location.
- This board is eight-layer print board. However, the patterns of layers two to seven have not been included in the diagram.

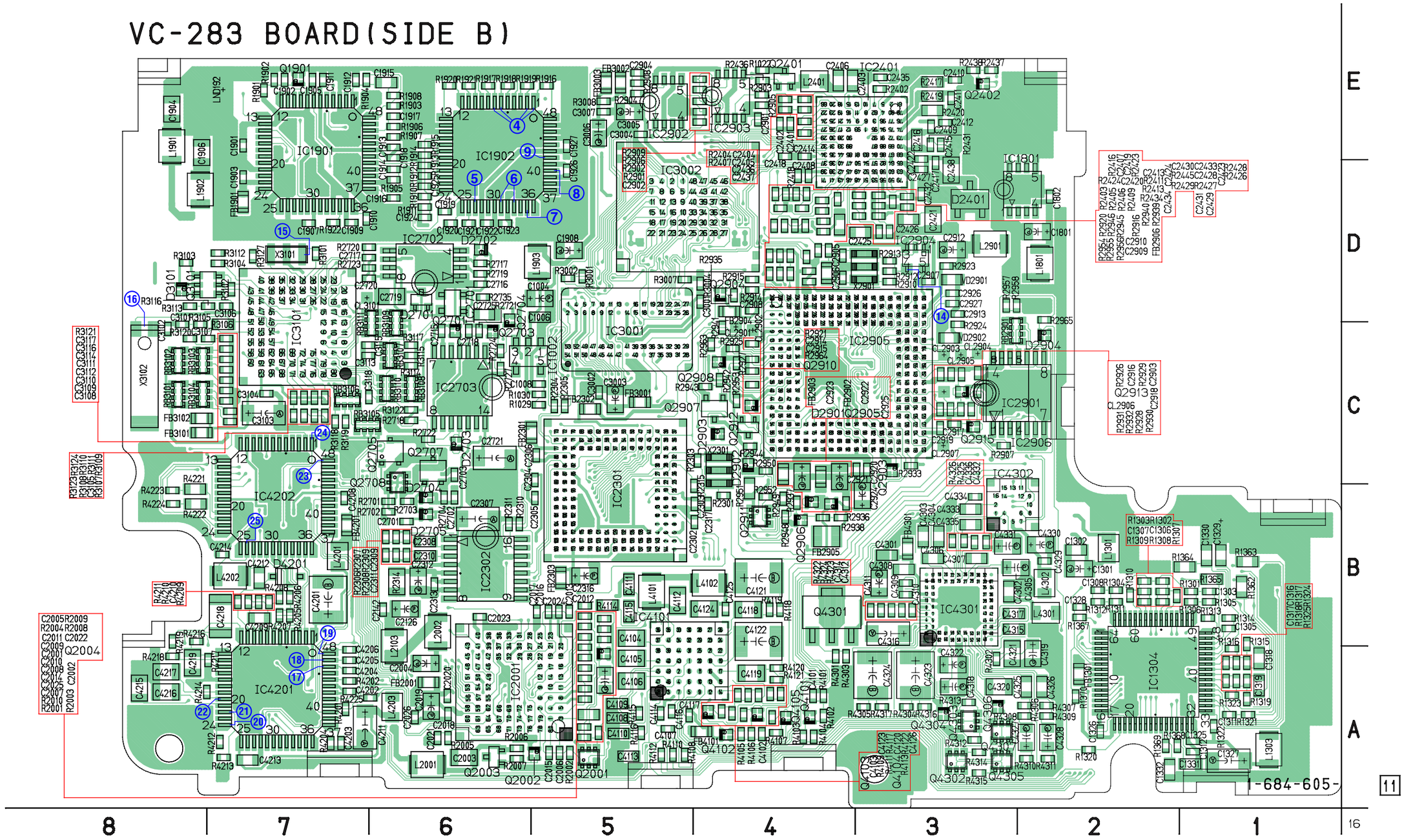
There are a few cases that the part printed on this diagram isn't mounted in this model.

- Replacement of CSP (Chip Size Package) IC used in this set require a tool.
  CSP IC: IC1502, 1601, 1701, 1704, 2001, 2101, 2102, 2301, 2401, 2501, 2905, 3001, 3002, 3101, 4101, 4301, 4302



- : Uses unleaded solder.

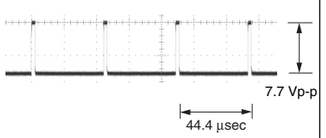
VC-283 BOARD(SIDE B)



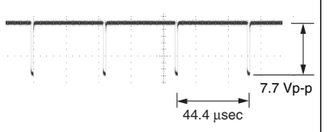
4-4. WAVEFORMS

CD-381 BOARD

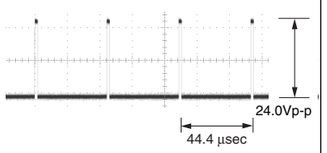
① IC7301 ①,④
CAMERA REC



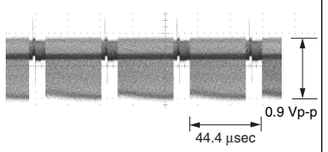
② IC7301 ②,③
CAMERA REC



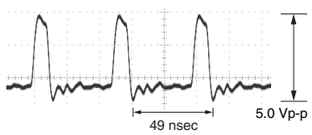
③ IC7301 ⑥
CAMERA REC



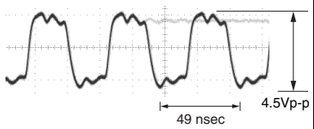
④ IC7301 ⑨,⑯
CAMERA REC



⑤ IC7301 ⑪,⑭
CAMERA REC

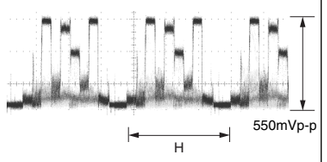


⑥ IC7301 ⑫,⑬
CAMERA REC

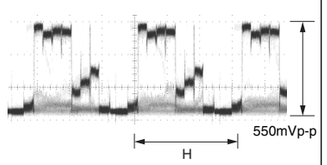


PD-165 BOARD

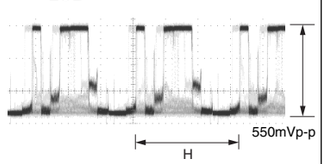
① IC5701 ㊻
LCD



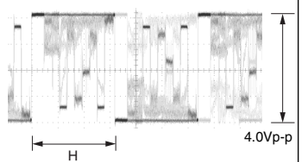
② IC5701 ㊼
LCD



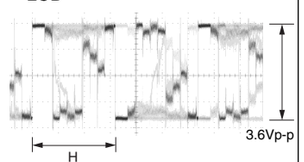
③ IC5701 ㊽
LCD



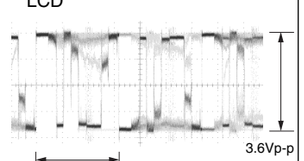
④ IC5701 ㉔
LCD



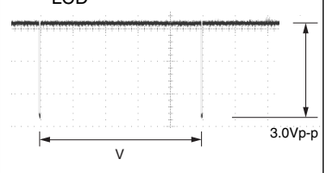
⑤ IC5701 ㉒
LCD



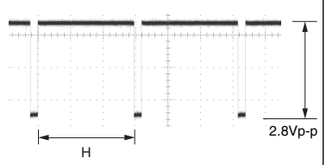
⑥ IC5701 ⑳
LCD



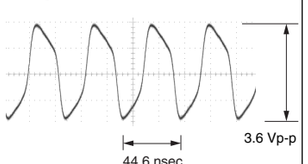
⑦ IC5702 ㊽
LCD



⑧ IC5702 ①
LCD

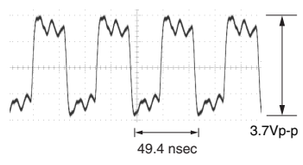


⑨ IC5702 ㉖
LCD

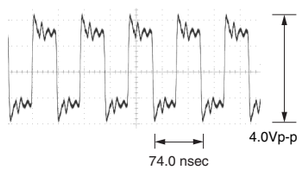


VC-283 BOARD

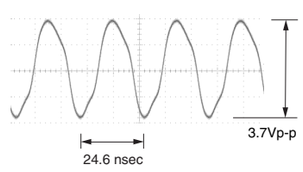
① IC1501 ㉔



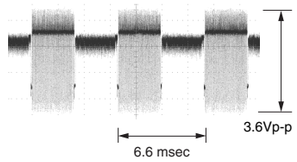
② IC1501 ㉕



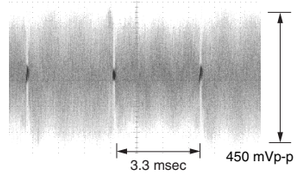
③ X1501 (R1507)



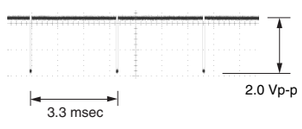
④ IC1902 ①,②,⑥,⑦
REC



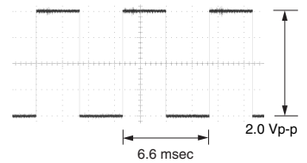
⑤ IC1902 ㉗
PB



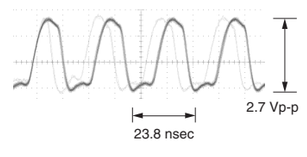
⑥ IC1902 ㉛,㉝
REC



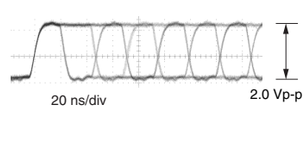
⑦ IC1902 ㉟
REC



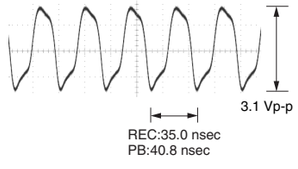
⑧ IC1902 ㊵
REC



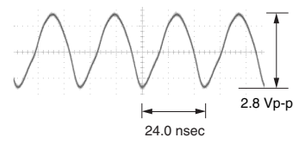
⑨ IC1902 ㊷
REC



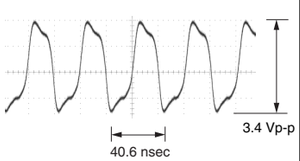
⑩ L2102



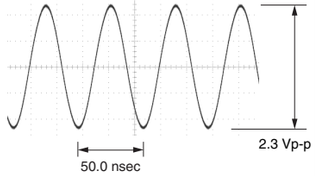
⑪ L2101



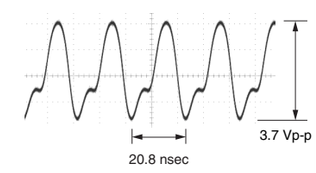
⑫ X2101



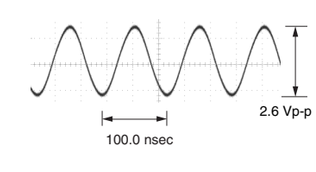
⑬ X2501



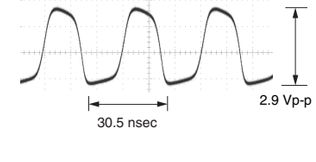
⑭ IC2904 ④



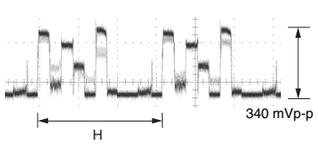
⑮ X3101



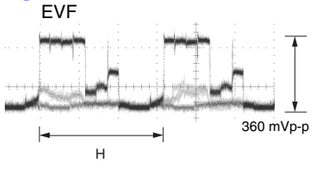
⑯ X3102



⑰ IC4201 ㊻
EVF

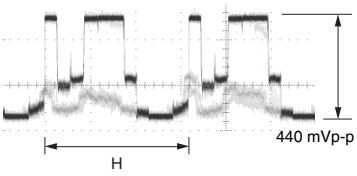


⑱ IC4201 ㊼
EVF

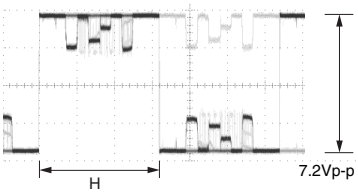


VC-283 BOARD

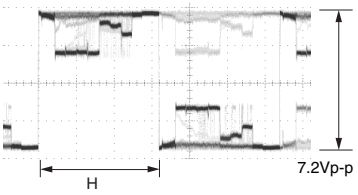
⑲ IC4201 ㊽
EVF



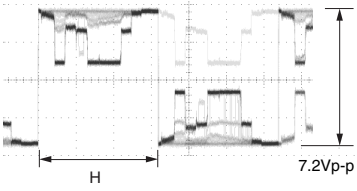
⑳ IC4201 ㉔
EVF



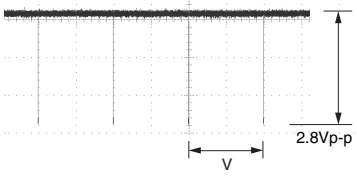
㉑ IC4201 ㉒
EVF



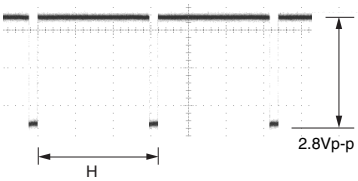
㉒ IC4201 ⑳
EVF



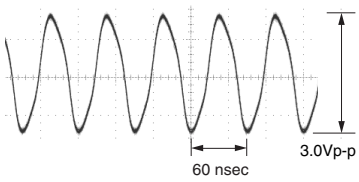
㉓ IC4202 ㊽
EVF



㉔ IC4202 ①
EVF



㉕ IC4202 ㉖
EVF



4-5. MOUNTED PARTS LOCATION

no mark : side A
* mark : side B

CD-381 BOARD

* C7302 B-3
* C7303 A-3
C7304 B-1
C7305 A-1
* C7306 B-1
* C7307 B-1
C7308 B-1
C7309 A-1
C7310 B-1
C7311 B-1
C7312 A-1
C7313 B-2
* C7314 B-3
C7315 B-1
C7316 A-1
* C7317 A-2
* C7318 A-2
* C7319 B-1
C7320 A-1
* C7321 A-1
C7323 B-1
C7325 B-1
C7326 B-1

CN7301 D-1

* D7301 B-3

* FB7301 B-3
FB7302 B-1

* IC7301 B-1
IC7302 B-1

L7301 B-2
* L7302 B-1
* L7303 A-1

* Q7301 A-2
Q7302 A-1
Q7303 B-1

* R7301 B-3
* R7302 A-2
* R7303 A-3
R7304 B-1
R7305 B-1
* R7306 C-3
R7307 B-1
R7309 A-1
R7310 A-1
R7311 A-1
R7312 A-1
R7313 B-1
R7314 B-1
R7315 B-1
R7316 A-1
R7317 B-1
R7318 B-1
R7319 A-1
* R7320 B-3

JK-219 BOARD

* C5351 B-6
* C5352 B-6
* C5353 B-6
* C5354 B-4
* C5355 C-5
* C5356 C-6
* C5357 C-5
* C5358 C-5
* C5359 C-5
* C5360 C-5
* C5361 B-5
* C5362 B-6
* C5363 B-4
* C5364 B-5
* C5365 B-5
* C5366 B-6
* C5367 B-5

CN5301 E-4
CN5302 D-3
* CN5303 A-8

* D5301 C-4
D5302 C-4
* D5303 C-1
D5304 B-1

* FB5301 C-6
* FB5302 C-5
FB5303 C-5
FB5304 C-5
* FB5351 C-5
* FB5352 C-6
* FB5353 B-4
* FB5354 B-5

* IC5351 B-5

J5301 D-5
J5302 E-5
J5303 D-4

* L5351 B-6

* LF5303 C-5

* Q5301 B-1
* Q5302 B-1

R5301 E-4
* R5302 C-5
R5303 E-4
R5304 C-4
R5305 C-5
R5306 C-4
* R5307 B-1
* R5308 C-3
* R5309 B-1
* R5310 C-4
R5311 E-4
R5312 D-4
R5313 C-6
* R5314 C-3
* R5315 B-1
R5316 C-4
* R5317 C-5
* R5318 C-4
* R5355 B-6
* R5356 C-5
* R5357 C-6
* R5358 C-5
* R5359 C-6
* R5360 B-5
* R5361 B-5
* R5362 B-5
* R5363 B-5
* R5364 B-5
* R5365 B-5

* S5301 C-2
* S5302 C-1

SE5351 C-5
SE5352 B-6

* VDR531 C-6
VDR532 E-4
* VDR533 C-5
VDR534 E-4
VDR535 E-4
VDR536 C-5
VDR537 C-5
* VDR538 C-3
VDR539 C-5

CK-115 BOARD

* BT5201 A-1

* C5201 A-2
* C5202 A-2
* C5203 A-3
* C5204 A-3

CN5201 D-1
CN5202 D-4
CN5203 C-3
* CN5204 B-4
* CN5205 B-1
CN5206 D-3
* CN5207 A-3

* D5201 B-3
* D5202 B-3
* D5203 A-3
* D5204 A-3
* D5205 B-2
* D5206 A-2
* D5207 A-2

R5201 D-3
* R5202 A-4
* R5203 A-2
R5204 D-2
R5205 D-2

* S5201 A-5
* S5202 B-3

MA-408 BOARD

C5901 B-4
* C5902 D-3
C5903 B-4
* C5904 D-3
* C5905 D-3
C5906 B-4
* C5907 D-3
C5908 B-4
* C5909 D-3
* C5910 A-3
* C5911 D-3
C5912 B-4
* C5914 A-3
* C5915 D-3
C5916 B-4
* C5917 A-3
* C5918 D-3
* C5919 A-3
* C5920 D-3
* C5921 D-3
* C5922 A-3
* C5923 A-3
* C5924 D-3
* C5925 D-2
* C5926 D-2
* C5927 A-2
* C5928 A-2
* C5929 A-2
C5930 B-3
* C5931 A-2
C5932 A-3
C5933 B-3
C5934 B-3
C5935 B-4
C5936 B-4
C5937 B-4
C5938 B-4
C5939 A-4
C6201 E-3
* C6202 E-2
* C6203 E-2

CN5901 B-4
* CN5903 D-2
* CN6201 E-3

D5901 A-5
D5902 A-3
D5903 A-3
D5904 A-4
D5905 A-3
* D6202 E-2
* D6203 E-2
* D6204 E-2

* FB6201 E-1
* FB6203 E-2
* FB6204 E-2
* FB6205 E-2
* FB6206 E-2

* IC5901 D-3
* IC5902 A-2
IC5903 A-4

J6201 F-2
J6202 E-2

L5901 B-3

* Q5903 A-2
* Q5906 A-2
* Q5909 A-2
* Q5910 A-2
Q6201 E-4

* R5901 D-3
R5902 B-4
R5903 B-4
* R5904 D-3
* R5905 D-3
R5906 B-4
R5907 B-4
* R5908 D-3
* R5910 A-3
* R5912 A-3
* R5913 D-3
* R5914 A-3
* R5915 A-3
* R5916 A-3
* R5918 D-3
* R5919 A-3
* R5921 D-3
* R5922 D-3
* R5923 A-3
* R5924 A-3
* R5925 D-2
* R5926 D-2
* R5927 A-2
* R5928 A-2
* R5929 A-2
* R5931 D-2
* R5932 A-3
* R5933 A-2
* R5934 A-2
R5937 B-4
* R5938 A-2
R5940 B-3
R5941 B-4
R5942 B-4
* R5943 A-3
* R5944 A-2
R5945 B-4
* R5946 A-3
* R5947 A-2
R5948 B-4
R5949 B-4
R5950 B-4
R5951 A-4
R5952 A-3
R5953 A-3
R5954 A-3
* R5956 A-2
* R5957 A-2
* R5958 A-2
R6201 E-4
R6202 E-4
R6203 E-4
R6204 E-4
R6205 E-4
R6206 E-4
R6207 E-4
R6208 E-3

* VDR621 E-2
* VDR622 E-2
* VDR623 E-2

COVER

4-3. PRINTED WIRING BOARDS

no mark : side A
* mark : side B

PD-165 BOARD

C5701	C-4	IC5701	C-4
C5702	C-4	IC5702	B-2
C5703	B-3	IC5801	B-4
C5704	C-3		
C5705	C-3	L5701	C-4
C5706	C-3	L5702	C-3
C5707	C-3	L5703	B-4
C5708	B-3	L5704	B-3
C5709	C-3	L5705	B-2
C5710	C-4	L5801	B-2
C5711	B-4	L5802	A-3
C5712	B-4		
C5713	B-3	Q5701	B-3
C5714	B-3	Q5702	C-3
C5715	B-4	Q5801	A-2
C5716	A-3	Q5802	A-3
C5717	B-2		
C5718	B-2	R5701	C-4
C5719	B-4	R5702	C-4
C5720	B-3	R5703	C-4
C5721	B-3	R5705	B-3
C5722	B-3	R5706	B-3
C5723	A-1	R5707	C-4
C5724	A-1	R5708	C-3
C5726	C-2	R5709	B-3
C5727	C-2	R5710	B-3
C5801	B-4	R5711	B-3
C5802	B-2	R5712	B-3
C5803	B-2	R5713	B-3
C5804	C-4	R5714	B-3
C5805	B-3	R5717	B-2
C5806	A-3	R5719	B-2
C5807	A-1	R5721	B-3
C5808	A-3	R5722	C-3
		R5727	B-2
CN5701	B-1	R5732	B-2
CN5802	C-2	R5736	B-2
CN5803	A-1	R5737	B-2
CN5804	A-4	R5801	B-4
CN5805	A-2	R5802	B-4
CN5806	C-4	R5803	A-3
		R5804	A-3
D5701	B-3	R5805	C-4
D5702	B-2	R5806	C-4

DD-176 BOARD

* C4501	C-1	F4504	C-2	* R4530	B-1
* C4503	A-1	F4505	C-2	* R4531	B-1
* C4504	A-1	F4506	C-1	* R4532	B-1
* C4506	A-1	F4507	C-1	* R4533	B-2
* C4507	A-1	F4508	D-1	* R4534	B-2
* C4508	B-1			* R4535	B-2
* C4509	B-1	* IC4501	B-2	* R4536	B-2
* C4510	B-1			* R4554	D-4
* C4511	B-1	L4501	B-10	* R4555	D-3
* C4512	A-2	L4502	B-9	* R4556	D-4
* C4514	B-1	L4503	B-4	* R4557	D-3
* C4515	A-1	L4504	B-4	* R4558	D-3
C4516	C-2	L4507	B-2	* R4559	D-3
* C4517	B-2	L4508	A-4	* R4560	D-3
* C4518	B-2	L4509	A-3	* R4561	D-4
* C4519	B-2	L4510	A-2	* R4562	D-3
C4520	C-1	L4511	B-4	R4564	B-1
* C4521	B-2	L4513	C-2	R4565	B-1
C4522	C-1	L4514	B-5	R4567	C-2
* C4523	B-2	L4515	B-2	R4568	C-2
C4524	C-2	L4516	B-2	R4569	C-2
C4525	C-2	L4517	C-3	R4570	C-2
* C4526	A-2	L4518	C-3	R4571	C-2
C4527	C-2	L4519	A-3	* R4572	B-1
* C4528	A-2	* L4520	A-3	* R4601	E-3
* C4529	B-3	L4521	C-3	* R4602	E-3
* C4530	A-4	L4522	B-8	* R4603	E-3
* C4531	B-4	L4523	B-4	* R4604	D-3
* C4532	B-4	L4524	B-7	* R4605	D-3
* C4535	A-3	L4525	C-3		
* C4536	A-3	L4526	A-2		
* C4537	B-3	* L4528	C-3		
* C4538	A-3				
* C4539	E-3	LF4501	B-1		
* C4540	E-3				
* C4541	B-4	* Q4501	C-1		
* C4542	B-4	Q4502	B-2		
* C4545	B-3	Q4503	C-2		
* C4546	A-4	* Q4504	C-1		
* C4547	A-3	* Q4505	B-2		
* C4548	A-3	* Q4506	D-3		
* C4549	B-3	* Q4507	D-4		
* C4550	B-3	* Q4508	D-3		
C4551	C-3	* Q4509	A-4		
C4553	C-2	* Q4510	B-4		
C4554	B-4	* Q4513	B-3		
C4555	B-2	* Q4514	A-4		
C4556	B-3	* Q4515	A-3		
C4557	C-3	* Q4516	B-3		
C4558	C-3	* Q4517	A-3		
C4559	A-3	* Q4518	D-4		
* C4560	A-3	* Q4519	D-3		
C4561	C-3	* Q4520	B-3		
C4562	A-3	* Q4521	B-4		
C4563	B-4	* Q4522	B-4		
C4564	B-6	* Q4525	B-3		
C4565	C-3	* Q4526	A-4		
C4566	A-3	* Q4527	A-3		
* C4567	C-3	* Q4528	A-3		
C4568	C-2	* Q4529	E-3		
* C4601	E-3	Q4530	C-2		
* C4602	E-3	Q4531	C-2		
* C4603	E-3				
		* R4501	B-1		
CN4501	B-1	* R4502	C-1		
* CN4601	C-2	* R4505	C-1		
CN4602	F-3	* R4506	B-1		
CN4603	D-3	* R4507	B-1		
CN4604	E-3	* R4508	B-1		
		* R4509	B-1		
* D4501	B-1	* R4511	A-1		
* D4502	B-1	* R4513	A-1		
D4503	C-2	* R4514	A-1		
* D4504	B-3	* R4515	B-1		
* D4505	B-3	* R4516	B-1		
* D4601	E-3	* R4517	B-1		
* D4602	E-3	* R4518	B-1		
* D4603	E-3	R4519	C-2		
* D4604	D-3	* R4520	A-2		
* D4605	E-3	R4521	C-2		
		R4522	C-2		
F4501	B-2	* R4523	C-1		
F4502	C-1	* R4528	B-1		
F4503	C-1	* R4529	B-1		

COVER

4-3. PRINTED WIRING BOARDS

no mark : side A
* mark : side B

VC-283 BOARD

C1001 E-3
C1002 E-2
* C1004 D-5
C1005 B-4
* C1006 D-5
* C1008 C-5
C1201 E-8
C1202 D-8
C1203 D-8
* C1301 B-2
* C1302 B-2
* C1303 B-1
C1304 B-2
* C1305 B-1
* C1306 B-2
* C1307 B-2
* C1308 B-2
C1309 A-2
C1310 A-2
* C1311 A-1
* C1312 A-1
* C1316 A-1
* C1317 A-1
* C1318 A-1
* C1319 A-1
* C1325 A-1
* C1326 A-2
* C1327 A-1
* C1328 B-2
* C1329 B-1
* C1330 B-1
* C1331 A-1
* C1332 A-2
C1501 B-3
C1502 B-3
C1503 B-3
C1504 D-4
C1505 B-3
C1506 B-3
C1507 C-4
C1508 D-4
C1509 D-3
C1510 B-2
C1511 B-3
C1512 C-3
C1513 C-3
C1514 C-3
C1515 B-3
C1516 B-2
C1518 C-3
C1519 D-3
C1520 C-3
C1521 C-3
C1522 D-3
C1524 C-3
C1525 D-3
C1526 C-2
C1527 C-3
C1528 D-3
C1529 C-3
C1530 D-3
C1531 C-3
C1532 C-3
C1533 D-3
C1534 D-3
C1535 D-3
C1536 D-3
C1537 D-3
C1538 B-3
C1539 C-3
C1540 B-4
C1541 C-4
C1542 C-4
C1544 D-2
C1601 D-5
C1602 C-4
C1603 D-5
C1605 D-5
C1607 C-5
C1609 D-5
C1611 C-5
C1613 C-4
C1614 D-5
C1618 C-4
C1619 C-4
C1620 C-4
C1621 D-4
C1622 C-4
C1623 C-4
C1624 C-4
C1625 C-4
C1627 D-4
C1629 C-4
C1631 D-4
C1632 E-5
C1633 D-4
C1634 D-4
C1635 D-4
C1636 D-4
C1637 E-4
C1638 D-5
C1701 C-5
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C1708 C-4
C1709 A-5
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C1711 A-4
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C1713 C-5
C1714 B-5
C1715 B-5
C1716 C-5
C1717 A-5
C1718 A-5
* C1801 D-2
* C1802 D-2
* C1901 E-7
* C1902 E-7
* C1903 D-7
* C1904 E-8
* C1905 E-7
* C1906 E-8
* C1907 D-7
* C1908 D-5
* C1909 D-7
* C1910 D-7
* C1911 E-7
* C1912 E-7
* C1913 E-6
* C1914 D-6
* C1915 E-6
* C1916 D-6
* C1917 E-6
* C1918 E-6
* C1919 D-6
* C1920 D-6
* C1921 D-6
* C1922 D-6
* C1923 D-6
* C1924 D-6
* C1925 D-6
* C1926 D-5
* C1927 E-5
* C2001 A-5
* C2002 A-5
* C2003 A-6
* C2004 A-6
* C2005 B-5
* C2006 A-5
* C2007 A-5
* C2008 A-5
* C2009 A-5
* C2010 A-5
* C2011 B-5
* C2012 B-5
* C2013 B-5
* C2014 A-5
* C2015 A-5
* C2016 B-5
* C2017 B-5
* C2018 A-6
* C2019 A-6
* C2020 A-6
* C2021 A-6
* C2022 B-5
* C2023 B-6
* C2024 B-5
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* C2026 A-6
C2101 B-7
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C2104 C-7
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C2106 B-8
C2107 B-8
C2108 B-6
C2109 B-7
C2110 B-7
C2111 B-6
C2112 B-6
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C2114 A-8
C2115 A-7
C2116 A-7
C2117 B-6
C2118 B-6
C2119 A-7
C2120 B-6
C2121 B-6
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C2124 A-7
C2125 B-6
* C2126 B-6
C2127 A-7
C2128 B-7
C2129 B-7
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C2135 A-5
C2136 A-5
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* C2411 E-3
* C2412 E-3
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* C2414 E-4
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C2510 C-7
C2511 D-6
C2512 C-6
C2513 D-6
C2514 C-6
C2515 D-6
C2516 D-6
C2517 D-6
C2518 D-6
C2519 D-6
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C2524 C-6
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* C2716 D-6
* C2717 D-7
* C2718 C-6
* C2719 D-6
* C2720 D-7
* C2721 C-6
* C2725 D-6
* C2901 E-4
* C2902 E-4
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* C2904 E-5
* C2905 D-4
* C2906 D-4
* C2907 D-3
* C2908 D-4
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* C2913 D-3
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* C2920 C-3
* C2921 C-3
* C2922 C-4
* C2923 C-4
* C2924 B-3
* C2925 B-4
* C2926 D-3
* C2927 D-3
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* C3003 C-5
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* C3005 E-5
* C3006 E-5
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* C4208 B-7
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* C4218 B-7
* C4219 A-8
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* C4319 A-2
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* C4325 A-2
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* C4327 A-2
* C4328 A-2
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* C4330 B-2
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* C4332 B-3
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* C4335 B-3
* C4336 B-3
CN1002 C-8
CN1003 D-6
CN1004 A-4
CN1005 A-3
CN1006 A-1
CN1007 E-7
CN1009 E-3
CN1010 E-4
CN1011 E-5
CN1301 B-2
CN1501 D-3
CN1901 E-6
D1001 E-7
D1003 E-7
D1005 E-7
D1006 E-6
D1010 A-1
D1201 D-8
D1501 B-2
D2101 A-7
D2102 A-7
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D2104 B-6
* D2401 D-3
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* D2702 D-6
* D2703 C-6
* D2704 B-6
* D2705 B-6
* D2901 B-4
* D2902 C-4
* D2903 C-4
* D2904 C-2
* D3101 D-8
* D4201 B-7
FB1001 C-6
FB1002 C-6
FB1003 C-6
FB1004 C-6
* FB1301 A-2
FB1501 B-3
FB1502 B-3
FB1503 D-3
FB1504 B-3
FB1505 C-2
FB1506 C-2
FB1601 C-5
FB1602 D-5
FB1603 D-4
FB1604 D-4
FB1701 C-5
FB1702 C-5
* FB1901 D-7
* FB2001 A-6
FB2101 A-7
FB2102 A-7
FB2103 A-5
FB2104 B-6
* FB2301 C-6
* FB2302 C-5
* FB2303 B-5
FB2501 C-6
FB2502 D-6
FB2503 D-6
FB2504 C-6
* FB2902 C-4
* FB2903 C-4
* FB2904 D-4
* FB2905 B-4
* FB2906 D-4
* FB3001 C-5
* FB3002 E-5
* FB3003 E-5
* FB3101 C-8
* FB3102 C-8
* FB4101 A-4
* FB4201 B-7
* FB4301 B-3
* IC1002 C-6
IC1201 E-8
IC1302 A-1
* IC1304 A-2
IC1501 B-3
IC1502 D-3
IC1503 B-2
IC1504 C-4
IC1601 D-5
IC1701 C-4
IC1704 B-5
* IC1801 D-2
* IC1901 E-7
* IC1902 E-6
* IC2001 A-6
IC2101 B-7
IC2102 A-6
* IC2301 B-5
* IC2302 B-6
* IC2401 E-3
IC2501 D-7
IC2502 E-7
* IC2701 D-6
* IC2702 D-6
* IC2703 C-6
* IC2901 C-3
* IC2902 E-5
* IC2903 E-4
* IC2904 D-3
* IC2905 C-3
* IC2906 C-3
* IC3001 C-5
* IC3002 D-5
* IC3101 C-7
* IC4101 B-5
* IC4201 A-7
* IC4202 B-7
* IC4301 B-3
* IC4302 B-3
L1001 E-2
L1004 B-3
L1005 B-3
L1006 E-4
L1201 E-8
* L1301 B-2
L1302 A-2
* L1303 A-1
L1501 E-3
L1502 B-4
L1503 D-2
L1601 C-4
L1701 A-5
* L1801 D-2
* L1901 E-8
* L1902 D-8
* L1903 D-5
* L2001 A-6
* L2002 B-6
L2101 A-7
L2102 B-6
* L2103 B-6
L2104 B-6
L2105 A-5
* L2401 E-4
* L2901 D-3
* L4101 B-5
* L4102 B-4
* L4201 B-7
* L4202 B-7
* L4203 A-6
* L4301 B-2
* L4302 B-2
Q1001 D-3
Q1002 D-3
Q1003 B-3
Q1004 B-3
Q1005 B-3
Q1006 B-4
Q1007 B-4
Q1014 D-8
Q1201 E-8
Q1202 E-8
Q1203 E-8
Q1501 B-4
Q1502 B-4
Q1702 A-5
Q1705 A-5
* Q1901 E-7
* Q2001 A-5
* Q2002 A-5
* Q2003 A-6
* Q2004 A-5
Q2101 A-7
Q2102 A-7
Q2103 A-7
Q2104 A-6
Q2105 A-6
* Q2401 E-4
* Q2402 E-3
Q2501 C-6
* Q2701 C-6
* Q2703 C-6
* Q2704 C-6
* Q2705 C-6
* Q2707 C-6
* Q2708 C-6
* Q2903 C-3
* Q2904 D-4
* Q2905 B-4
* Q2906 B-4
* Q2907 C-4
* Q2908 C-4
* Q2910 C-4
* Q2911 B-4
* Q2912 C-4
* Q2913 C-3
* Q2915 C-3
* Q3101 D-8
* Q4101 A-4
* Q4102 A-4
* Q4103 A-4
* Q4104 A-4
* Q4105 A-4
* Q4301 B-4
* Q4302 A-3
* Q4303 A-3
* Q4304 A-3
* Q4305 A-3
* Q4306 A-3
* Q4307 A-3
R1002 D-3
R1003 D-3
R1004 D-3
R1005 D-3
R1006 D-3
R1007 B-4
R1008 A-4
R1009 A-4
R1010 A-4
R1011 A-4
R1021 E-4
* R1022 E-4
R1028 E-7
* R1029 C-5
* R1030 C-5
R1201 E-8
R1202 E-8
R1203 E-8
R1204 E-8
R1205 D-8
R1206 E-8
* R1301 B-1
* R1302 B-2
* R1303 B-2
* R1304 B-2
* R1305 B-1

— Continued on next page —

COVER

4-3. PRINTED WIRING BOARDS

no mark : side A
* mark : side B

VC-283 BOARD

* R1306	B-1	* R1904	E-7	* R2315	B-4	* R2901	E-4	* R3124	C-7	* RB3111	C-7				
* R1307	B-2	* R1905	D-6	* R2402	E-3	* R2902	E-4	* R3127	D-7						
* R1308	B-2	* R1906	E-6	* R2403	D-4	* R2903	E-4	* R4101	A-4	* VD2901	D-3				
* R1309	B-2	* R1907	E-6	* R2404	E-4	* R2904	E-5	* R4102	A-4	* VD2902	C-3				
* R1310	B-2	* R1908	E-6	* R2405	D-4	* R2905	E-4	* R4103	A-4						
* R1311	B-2	* R1910	D-6	* R2406	D-4	* R2906	E-4	* R4104	A-4	X1501	C-2				
* R1312	B-2	* R1911	D-6	* R2407	E-4	* R2907	C-3	* R4105	A-4	X2101	B-8				
* R1313	B-1	* R1912	D-6	* R2409	D-4	* R2908	E-5	* R4106	A-4	* X2301	C-4				
* R1314	B-1	* R1913	D-6	* R2411	D-4	* R2909	E-4	* R4107	A-4	X2501	D-8				
* R1315	B-1	* R1914	E-6	R2412	D-7	* R2910	D-3	* R4108	A-5	* X2901	D-3				
* R1316	A-1	* R1915	E-6	* R2413	D-4	* R2912	D-3	* R4109	A-4	* X3101	D-7				
* R1317	A-1	* R1916	E-5	R2415	D-7	* R2913	D-3	* R4110	A-5	* X3102	C-8				
* R1318	A-1	* R1917	E-6	* R2416	D-4	* R2914	D-4	* R4111	A-4						
* R1319	A-1	* R1918	E-6	* R2417	E-3	* R2915	D-4	* R4112	A-5						
* R1320	A-2	* R1919	E-6	* R2418	D-4	* R2916	D-4	* R4113	A-4						
* R1321	A-1	* R1920	E-6	* R2419	E-3	* R2920	D-4	* R4114	B-5						
* R1322	A-1	* R1921	E-6	* R2420	E-3	* R2921	C-4	* R4115	A-5						
* R1323	A-1	* R1922	D-7	* R2423	D-4	* R2923	D-3	* R4116	A-5						
* R1324	A-1	* R2001	A-5	* R2424	D-4	* R2924	C-3	* R4117	A-4						
* R1325	A-1	* R2002	A-5	* R2426	D-3	* R2925	C-4	* R4118	B-4						
R1361	B-1	* R2003	A-5	* R2427	D-3	* R2926	C-3	* R4119	B-4						
* R1362	B-1	* R2004	B-5	* R2428	D-3	* R2927	C-4	* R4120	A-4						
* R1363	B-1	* R2005	A-6	* R2429	D-3	* R2928	C-3	* R4121	A-4						
* R1364	B-1	* R2006	A-6	* R2431	E-3	* R2929	C-3	* R4122	A-4						
* R1365	B-1	* R2007	A-6	* R2434	D-4	* R2930	C-3	* R4201	A-7						
R1366	B-2	* R2008	B-5	* R2436	E-4	* R2931	C-3	* R4202	A-7						
* R1367	B-2	* R2009	B-5	* R2437	E-3	* R2932	C-3	* R4204	A-7						
* R1368	A-2	* R2010	A-5	* R2438	E-3	* R2933	C-3	* R4205	B-7						
* R1369	A-2	R2101	C-7	* R2445	D-3	* R2935	D-4	* R4206	B-7						
* R1370	A-2	R2102	B-7	R2501	D-7	* R2936	B-4	* R4207	B-7						
R1501	B-4	R2103	B-6	R2502	D-8	* R2937	B-4	* R4208	B-7						
R1502	B-4	R2104	A-8	R2503	D-7	* R2938	B-4	* R4209	B-7						
R1504	B-3	R2105	A-7	R2504	C-7	* R2939	D-4	* R4210	B-7						
R1505	B-2	R2106	A-7	R2505	D-6	* R2940	D-4	* R4211	B-7						
R1506	B-2	R2107	B-7	R2506	C-7	* R2941	C-4	* R4212	A-7						
R1507	C-3	R2108	B-7	R2507	C-7	* R2942	C-4	* R4213	A-7						
R1508	C-3	R2109	B-7	R2508	C-7	* R2943	C-4	* R4214	A-8						
R1509	B-3	R2110	B-7	R2509	C-7	* R2944	C-4	* R4216	B-8						
R1510	C-3	R2111	B-6	R2510	C-7	* R2945	D-4	* R4217	A-7						
R1511	C-2	R2112	B-6	R2512	D-7	* R2946	D-4	* R4218	A-8						
R1512	C-2	R2113	B-6	R2513	C-7	* R2948	B-4	* R4219	B-8						
R1513	C-3	R2114	A-7	R2514	D-6	* R2949	B-4	* R4221	B-8						
R1514	D-4	R2115	B-6	R2515	D-6	* R2950	C-4	* R4222	B-8						
R1515	D-4	R2116	A-7	R2516	D-6	* R2951	B-4	* R4223	B-8						
R1516	C-4	R2117	B-6	R2517	C-6	* R2952	B-4	* R4224	B-8						
R1517	C-4	R2118	B-6	R2518	C-7	* R2953	C-4	* R4225	A-7						
R1518	D-4	R2119	B-6	R2519	D-6	* R2954	D-4	* R4301	A-4						
R1519	C-3	R2120	A-6	R2520	D-6	* R2955	D-4	* R4302	A-3						
R1520	C-3	R2121	A-6	R2521	D-6	* R2956	D-4	* R4303	A-4						
R1521	D-3	R2122	A-7	R2522	D-6	* R2957	D-3	* R4304	A-3						
R1522	D-3	R2123	A-7	R2523	C-6	* R2958	D-3	* R4305	A-3						
R1524	D-2	R2124	A-7	R2524	D-6	R2961	A-4	* R4306	A-2						
R1525	D-2	R2125	A-7	R2525	D-6	R2962	A-4	* R4307	A-2						
R1526	D-2	R2126	A-7	R2526	D-6	* R2963	C-4	* R4308	A-2						
R1528	C-3	R2127	A-7	R2527	D-6	* R2964	C-4	* R4309	A-2						
R1529	C-3	R2128	A-6	R2528	C-6	* R2965	D-2	* R4310	A-2						
R1530	C-3	R2129	A-6	R2529	D-7	* R3001	D-5	* R4311	A-2						
R1531	C-3	R2130	A-6	R2533	C-7	* R3002	D-5	* R4312	A-3						
R1532	B-4	R2131	A-6	R2534	C-7	* R3004	D-4	* R4313	A-3						
R1533	D-2	R2132	A-6	R2535	C-6	* R3007	D-5	* R4314	A-3						
R1601	D-5	R2133	A-6	R2536	C-6	* R3008	E-5	* R4315	A-3						
R1602	D-4	R2134	A-6	R2537	D-6	* R3101	D-7	* R4316	A-3						
R1603	D-5	R2135	A-6	R2538	D-6	* R3102	D-7	* R4317	A-3						
R1604	D-5	R2136	A-6	R2539	D-6	* R3103	D-8	* R4322	B-3						
R1605	D-5	R2137	A-6	R2540	C-7	* R3104	D-7	* R4323	B-3						
R1606	C-5	R2138	A-5	R2541	D-6	* R3105	C-8	* R4324	B-3						
R1607	C-4	R2139	A-5	R2542	D-6	* R3106	C-7	* R4325	B-3						
R1608	D-4	R2140	A-5	R2543	C-7	* R3107	C-7	* R4326	B-3						
R1609	C-4	R2141	A-5	R2544	C-6	* R3108	C-7								
R1610	D-5	R2142	A-6	R2545	C-6	* R3109	C-7	RB2101	A-7						
R1707	C-5	R2143	A-6	* R2701	B-6	* R3110	C-7	RB2501	D-7						
R1709	B-4	R2144	A-6	* R2702	B-6	* R3111	C-7	RB2502	D-7						
R1710	B-4	R2145	A-6	* R2703	B-6	* R3112	D-7	RB2503	D-7						
R1712	B-5	* R2301	B-4	* R2704	B-6	* R3113	D-8	* RB2901	C-3						
R1713	B-5	* R2303	C-4	* R2717	D-6	* R3114	C-6	* RB3101	C-8						
R1714	A-5	* R2304	C-5	* R2718	C-6	* R3115	C-6	* RB3102	C-8						
R1715	B-5	* R2305	C-5	* R2719	D-6	* R3116	D-8	* RB3103	C-8						
R1716	B-5	* R2306	B-6	* R2720	D-7	* R3117	C-6	* RB3104	C-8						
R1717	B-5	* R2307	B-6	* R2721	C-6	* R3118	C-7	* RB3105	C-7						
R1718	B-4	* R2308	B-6	* R2722	C-6	* R3119	C-7	* RB3106	C-7						
R1719	B-4	* R2309	B-6	* R2723	D-7	* R3120	C-8	* RB3107	C-6						
* R1901	E-7	* R2310	B-6	* R2724	C-6	* R3121	C-7	* RB3108	C-6						
* R1902	E-7	* R2311	B-6	* R2727	C-6	* R3122	C-6	* RB3109	C-6						
* R1903	E-6	* R2314	B-6	* R2735	D-6	* R3123	C-7	* RB3110	C-6						

COVER

SECTION 5
ADJUSTMENTS

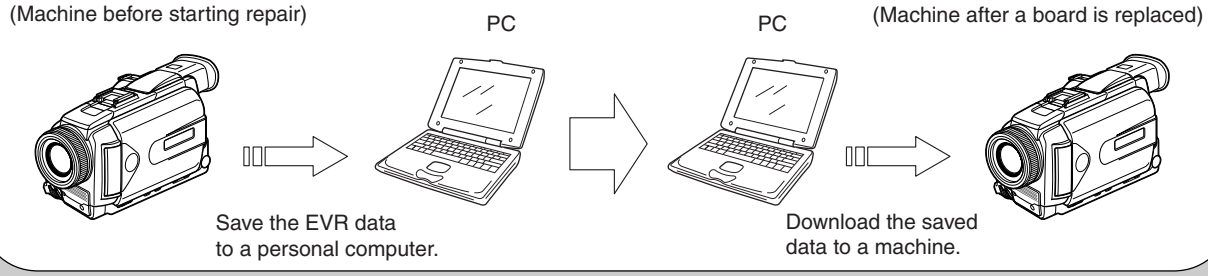
1. Before starting adjustment

EVR Data Re-writing Procedure When Replacing Board

The data that is stored in the repair board, is not necessarily correct.
Perform either procedure 1 or procedure 2 or procedure 3 when replacing board.

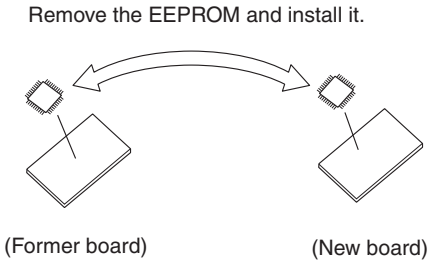
Procedure 1

Save the EVR data of the machine in which a board is going to be replaced. Download the saved data after a board is replaced.



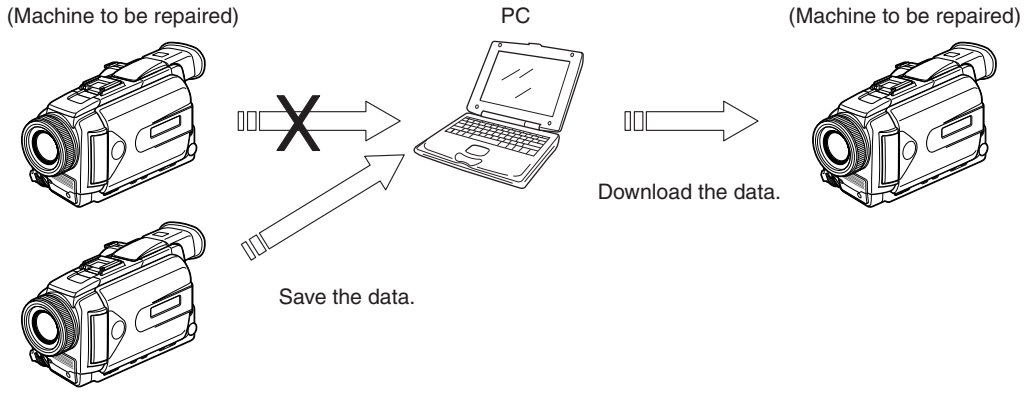
Procedure 2

Remove the EEPROM from the board of the machine that is going to be repaired. Install the removed EEPROM to the replaced board.



Procedure 3

When the data cannot be saved due to defective EEPROM, or when the EEPROM cannot be removed or installed, save the data from the same model of the same destination, and download it.



After the EVR data is saved and downloaded, check the respective items of the EVR data.
(Refer to page 5-3 for the items to be checked.)

1-1. Adjusting items when replacing main parts and boards.

• Adjusting items when replacing main parts

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

Note: When replacing the drum assembly or the mechanism deck, reset the data of page: 7, address: A7 to A9 to "00". (Refer to "Record of Use check" of "5-4. SERVICE MODE")

Adjustment Section	Adjustment	Replaced parts: Block replacement: Lens device	Mechanism deck (Note)	EVF block	LCD block	LCD block	LCD block	LCD block	Mechanism deck	Mechanism deck	Flash unit	Parts replacement: CD-381 board	CD-381 board	VC-283 board	VC-283 board	VC-283 board	VC-283 board	VC-283 board	VC-283 board	VC-283 board	VC-283 board	VC-283 board	LB-078 board	JK-219 board	MA-408 board	PD-165 board	PD-165 board
		Lens device	Mechanism deck (Note)	LCD903 (LCD panel (EVF))	LCD901 (LCD panel (LCD))	ND901 Fluorescent tube (LCD))	TA901 (Touch panel)	Inverter unit	M901 (Drum assy) (Note)	M902 (Capstan motor)	Flash unit	IC7301 (CCD imager)	IC7302 (S/H)	IC1501, X1501 (Timing generator)	IC1502 (A/D conv..)	IC1801 (EVR)	IC2101 (DV signal process)	IC1901 (EQ, A/D conv.. PLL)	IC1902 (REC/PB AMP)	IC4101 (Video IN/OUT)	IC4201 (LCD driver (EVF))	IC4202 (Timing generator (EVF))	D6102 (Back light (EVF))	SE5351/5352 (PITCH/YAW sensor)	D5901 (AF laser diode)	IC5701 (LCD driver (LCD))	IC5702 (Timing generator (LCD))
Initialization of 8, A, B, C, D, E, F, 1B, 1E, 1F page data	Initialization of A, D page data																										
	Initialization of B, 1B page data																										
	Initialization of 8, C page data																										
	Initialization of E, F, 1E, 1F page data																										
Camera	40.5MHz/54MHz origin oscillation adj.													●		●											
	HALL adj.	●																									
	MAX GAIN adj.											●	●		●												
	CCD output 2ch matching adj.											●	●	●	●												
	MR adj.	●																									
	Flange back adj.	●										●															
	Color reproduction adj.											●	●		●												
	AWB & LV standard data input											●	●		●												
	Auto white balance adj.											●	●		●												
	Mechanical shutter adj.	●																									
	Black defective CCD adj.											●															
	Strobe light level adjustment										●																
	Strobe white balance adjustment & check										●	●	●		●												
	AF laser output adj.																								●		
	Steady shot check																							●			
Color EVF	VCO adj.																				●	●					
	RGB AMP adj.																				●						
	Contrast adj.																●				●						
	Back light adj.																				●						
	White balance adj.			●																	●		●				
LCD	VCO adj.																									●	●
	RGB AMP adj.																									●	
	Contrast adj.																●									●	
	COM AMP adj.																									●	
	V COM adj.				●																					●	
	White balance adj.				●	●																				●	
System control	Touch panel adj.						●																				
	Serial No. input																										
Servo, RF	CAP FG duty adj.		●							●																	
	Switching position adj.		●						●																		
	AGC center level adj.		●						●									●	●								
	APC & AEQ adj.		●						●									●	●								
	PLL f0 & LPF f0 adj.		●						●									●	●								
Video	Chroma BPF f0 adj.																			●							
	S VIDEO OUT Y level adj.																●			●							
	S VIDEO OUT chroma level adj.																●			●							
Mechanism	Tape path adj.		●						●	●																	

Table. 5-1-1 (1).

• Adjusting items when replacing a board or EEPROM

When replacing a board or EFPROM, adjust the items indicated by ● in the following table.

Adjustment Section	Adjustment	Board replacement: BT-003 board (COMPLETE) (Note3)	CD-381 board (COMPLETE)	JK-219 board (COMPLETE)	LB-078 board (COMPLETE)	MA-408 board (COMPLETE)	PD-165 board (COMPLETE)	VC-283 board (COMPLETE) (Note4)	EEPROM replacement: VC-283 board IC2502 (EEPROM)	VC-283 board IC2901 (EEPROM)	VC-283 board IC3002 (Flash memory)	Supporting RadarW
Initialization of 8, A, B, C, D, E, F, 1B, 1E, 1F page data	Initialization of A, D page data							●		●		
	Initialization of B, 1B page data							●		●		
	Initialization of 8, C page data							●	●			
	Initialization of E, F, 1E, 1F page data							●	●			
Camera	40.5MHz/54MHz origin oscillation adj.							●	●			
	HALL adj.							●	●			●
	MAX GAIN adj.		*1					●	●			●
	CCD output 2ch matching adj.		*1					●	●			●
	MR adj.							●	●			●
	Flange back adj.		●					●	●			●
	Color reproduction adj.		*1					●	●			
	AWB & LV standard data input		*1					●	●			●
	Auto white balance adj.		*1					●	●			●
	Mechanical shutter adj.							●	●			●
	Black defective CCD adj.		*1					●	●			●
	Strobe light level adjustment							●	●			●
	Strobe white balance adjustment & check		*1					●	●			●
	AF laser output adj.					●		●	●			●
	Steady shot check			●				●	●			
Color EVF	VCO adj.							●	●			
	RGB AMP adj.							●	●			
	Contrast adj.							●	●			
	Back light adj.							●	●			
	White balance adj.				●			●	●			
LCD	VCO adj.						●	●	●			
	RGB AMP adj.						●	●	●			
	Contrast adj.						●	●	●			
	COM AMP adj.						●	●	●			
	V COM adj.						●	●	●			
	White balance adj.						●	●	●			
System control	Touch panel adj.							●	●			
	Serial No. input							●	●			
Servo, RF	CAP FG duty adj.							●	●			●
	Switching position adj.							●	●			●
	AGC center level adj.							●	●			●
	APC & AEQ adj.							●	●			●
	PLL f0 & LPF f0 adj.							●	●			●
Video	Chroma BPF f0 adj.							●	●			
	S VIDEO OUT Y level adj.							●	●			
	S VIDEO OUT chroma level adj.							●	●			
Mechanism	Tape path adj.											

Table. 5-1-1 (2).

Note2: When the repair is finished, confirm the following items.

1. Shoot the all black subject (Attach the lens cap and shoot), and confirm that a vertical line is not displayed in the center of the screen, and that there is no difference in left-right brightness level of the screen.
2. Shoot a subject of low light, and confirm that a vertical line is not displayed in the center of the screen, and that there is no difference in left-right brightness level of the screen.
3. Shoot a subject of normal light, and confirm that a vertical line is not displayed in the center of the screen, and that there is no difference in left-right brightness level of the screen.

   When the above symptom occurs, perform the whole process of "CCD Output 2ch Matching Adjustment".

Note3: DCR-TRV50/TRV50E only.
When the BT-003 board is replaced, perform following procedure and check that the "Self Information" is displayed correctly.

1) Set the POWER switch to MEMORY.
2) Press NETWORK button.
3) Select "Setup" of the network menu, then execute it.
4) Select "Bluetooth Setup", then execute it.
5) Select "Info.", then execute it.
6) Check that the following information is displayed.

Name	SONY DCR-TRV50
Address	08:00:46:XX:XX:XX

Note4: When replacing the VC-283 board, before and after replacing, perform "Writing the Network Default Setting Value" and initialize the personal network information (Mail address, bookmark etc.).
(DCR-TRV50/TRV50E only)
(Refer to "1-2-2. INITIALIZATION OF B, 1B PAGE DATA".)

*1: Perform this adjustment when replace the CCD imager (IC7301)

5-1. CAMERA SECTION ADJUSTMENT

1-1. PREPARATIONS BEFORE ADJUSTMENT (CAMERA SECTION)

1-1-1. List of Service Tools

• Oscilloscope • Color monitor • Vectorscope
• Regulated power supply • Digital voltmeter

Ref. No.	Name	Parts Code	Usage
J-1	Filter for color temperature correction (C14)	J-6080-058-A	Auto white balance adjustment/check White balance adjustment/check
J-2	ND filter 1.0	J-6080-808-A	White balance check
	ND filter 0.4	J-6080-806-A	White balance check
	ND filter 0.1	J-6080-807-A	White balance check
J-3	Pattern box PTB-450	J-6082-200-A	
J-4	Color chart for pattern box	J-6020-250-A	
J-5	Adjustment remote commander (RM-95 upgraded) (Note)	J-6082-053-B	
J-6	Siemens star chart	J-6080-875-A	For checking the flange back
J-7	Clear chart for pattern box	J-6080-621-A	
J-8	Background paper	J-2501-130-A	For adjusting the flash unit
J-9	CPC-7 jig	J-6082-382-A	For adjusting the video section For adjusting the color viewfinder For adjusting the LCD block
J-10	Extension cable (100P, 0.4mm)	J-6082-413-A	For extension between the DD-176 board (CN4601) and the VC-283 board (CN1003)
J-11	Mini pattern box	J-6082-353-B	For adjusting the flange back
J-12	Camera table	J-6082-384-A	For adjusting the flange back

Note: If the micro processor IC in the adjustment remote commander is not the new micro processor (UPD7503G-C56-12), the pages cannot be switched. In this case, replace with the new micro processor (8-759-148-35).

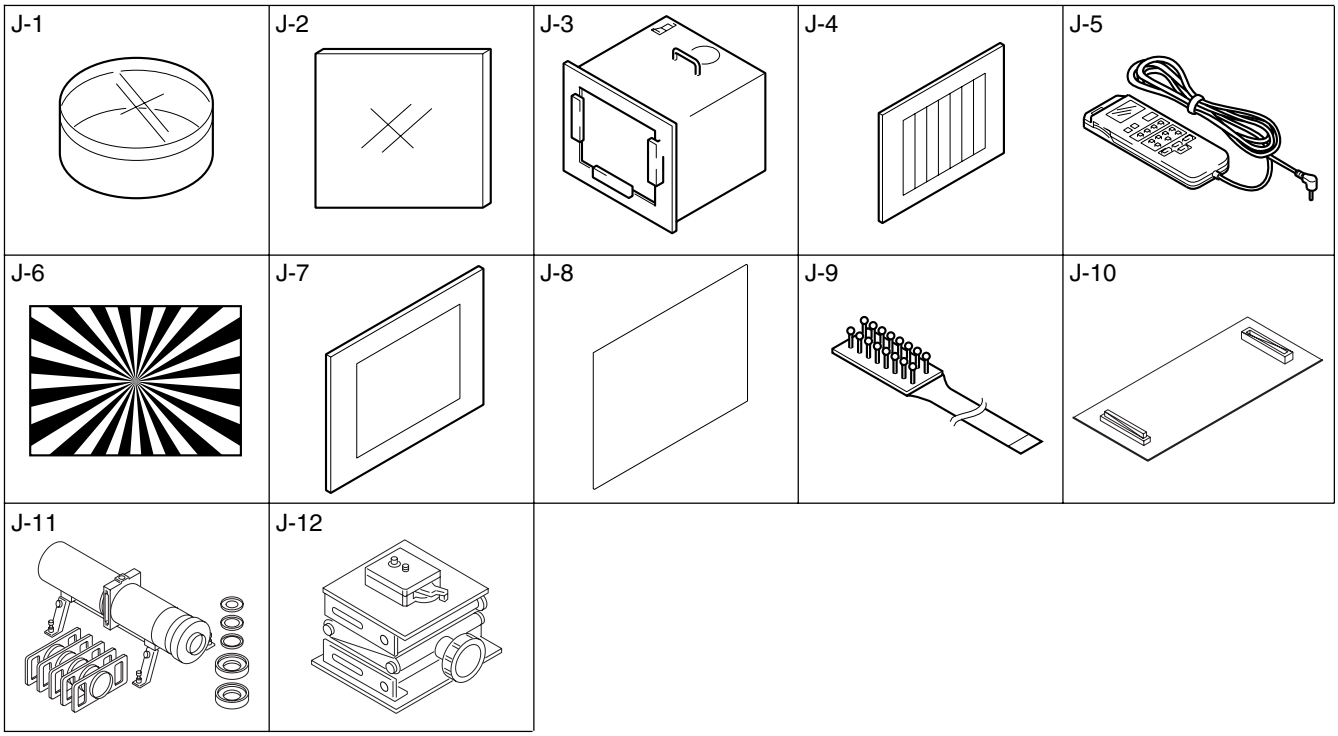


Fig. 5-1-1.

1-1-2. Preparations

Note1: For details of how remove the cabinet and boards, refer to "2. DISASSEMBLY".

Note2: When performing only the adjustments, the lens block and boards need not be disassembled.

Note3: Before performing the adjustments, check the data of page: 0, address: 10 is "00". If not, set data: 00 to this address.

1) Connect the equipment for adjustments according to Fig. 5-1-3.

Note4: As removing the cabinet (R) assembly (removing CN1005 of the VC-283 board) means removing the lithium 3V power supply (BT5201 on the CK-115 board), data such as date, time, user-set menus will be lost. After completing adjustments, reset these data. But the self-diagnosis data and the data on history of use (total drum rotation time etc.) will be kept even if the lithium 3V power supply is removed. (Refer to "5-4.Service Mode" for the self-diagnosis data and the data on history of use.)

Note5: Setting the "Forced Camera Power ON" Mode
1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 10, set data: 01, and press the PAUSE button.

The above procedure will enable the camera power to be turned on with the control switch block (PS-2890, FK-2890) removed. After completing adjustments, be sure to exit the "Forced Camera Power ON Mode".

Note6: Exiting the "Forced Camera Power ON" Mode
1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 10, set data: 00, and press the PAUSE button.
3) Select page: 0, address: 01, and set data: 00.

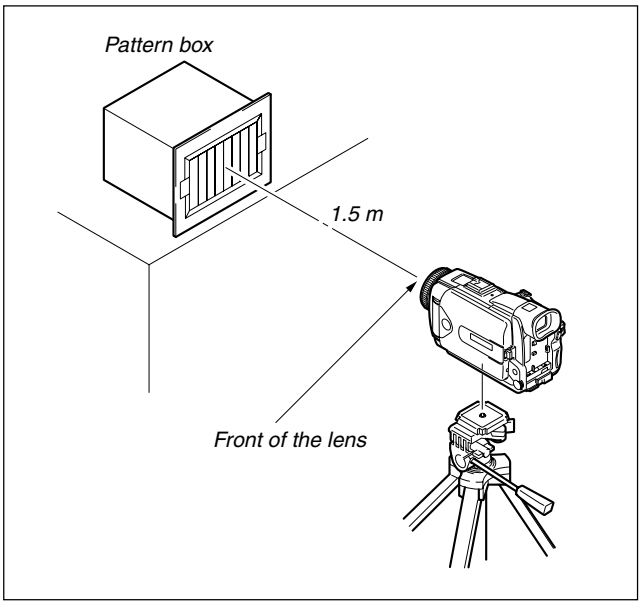


Fig.5-1-2.

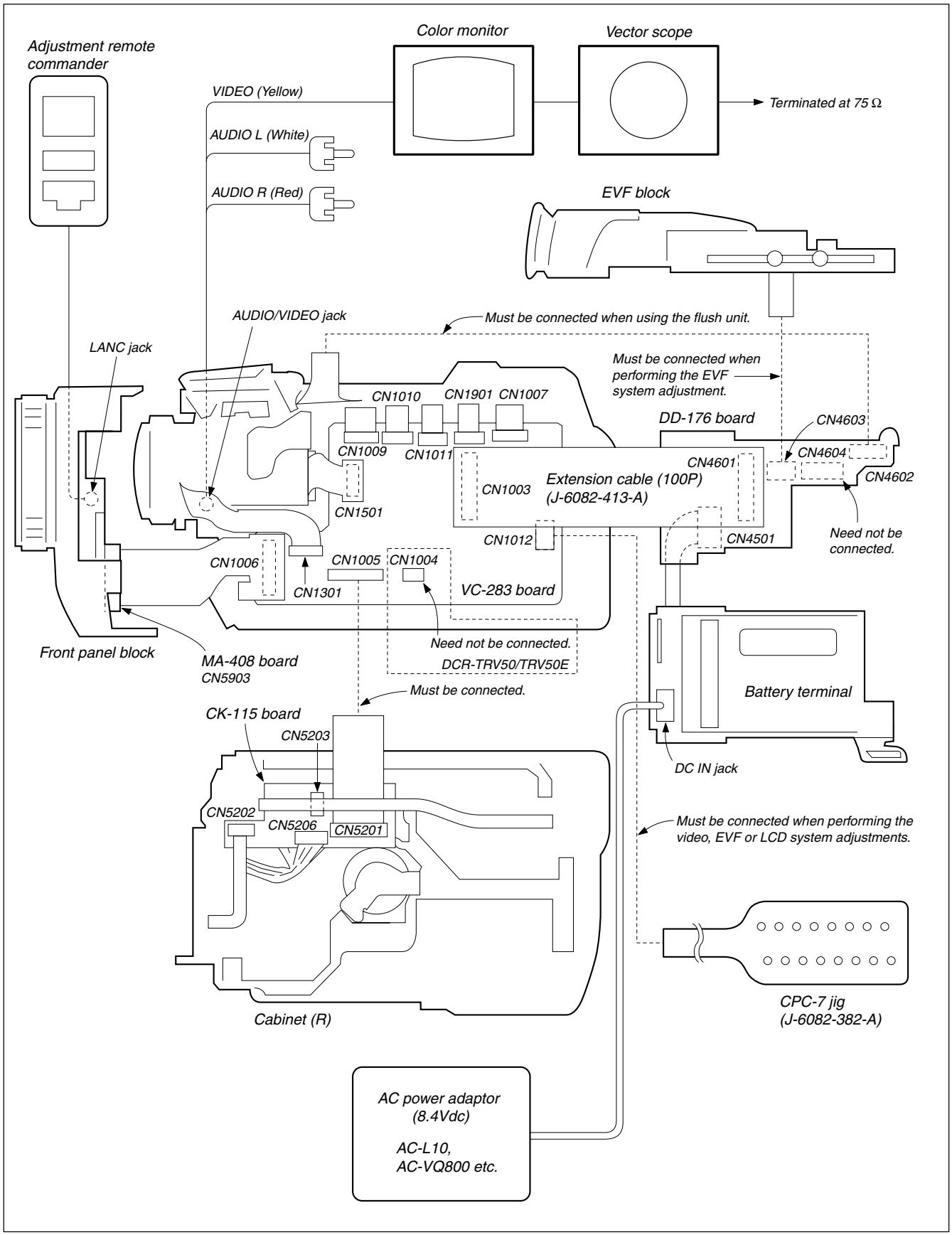

Adjustment remote commander
Color monitor
Vector scope
VIDEO (Yellow)
Terminated at 75 Ω
AUDIO L (White)
AUDIO R (Red)
EVF block
AUDIO/VIDEO jack
Must be connected when using the flush unit.
LANC jack
Must be connected when performing the EVF system adjustment.
CN1010
CN1901
CN1007
DD-176 board
CN4603
CN1009
CN1011
CN4604
CN4601
CN4602
CN1003
Extension cable (100P) (J-6082-413-A)
CN1501
CN1012
CN4501
Need not be connected.
CN1006
CN1005
CN1004
CN1301
VC-283 board
Need not be connected.
DCR-TRV50/TRV50E
Front panel block
MA-408 board
CN5903
Must be connected.
Battery terminal
CK-115 board
CN5203
DC IN jack
CN5202
CN5206
CN5201
Must be connected when performing the video, EVF or LCD system adjustments.
CPC-7 jig (J-6082-382-A)
Cabinet (R)
AC power adaptor (8.4Vdc)
AC-L10, AC-VQ800 etc.

Fig.5-1-3.

1-1-3. Precaution

1. Setting the Switch

Unless otherwise specified, set the switches as follows and perform adjustments without loading cassette.

1. POWER switch (PS-2890 block) ..... CAMERA
2. NIGHT SHOT switch (Lens block) ..... OFF
3. FOCUS switch (KP-2890 block) ..... MANUAL
4. BACK LIGHT switch (KP-2890 block) ..... OFF
5. COLOR SLOW S/ SUPER NS switch (JK-219 board) ... OFF
6. DEMO MODE (Menu setting) ..... OFF
7. STEADY SHOT (Menu setting) ..... OFF
8. DIGITAL ZOOM (Menu setting) ..... OFF
9. 16 : 9 WIDE (Menu setting) ..... OFF
10. PROGRAM AE (KP-2890 block) ..... AUTO
11. PICTURE EFECT (Menu setting) ..... OFF
12. DIGITAL EFECT (Touch panel setting) ..... OFF
13. WHITE BALANCE (Menu setting) ..... AUTO
14. AUTO SHUTTER (Menu setting) ..... OFF
15. DISPLAY (Menu setting) ..... V-OUT/LCD
16. DISPLAY (KP-2890 board) ..... ON

2. Order of Adjustments

Basically carry out adjustments in the order given.

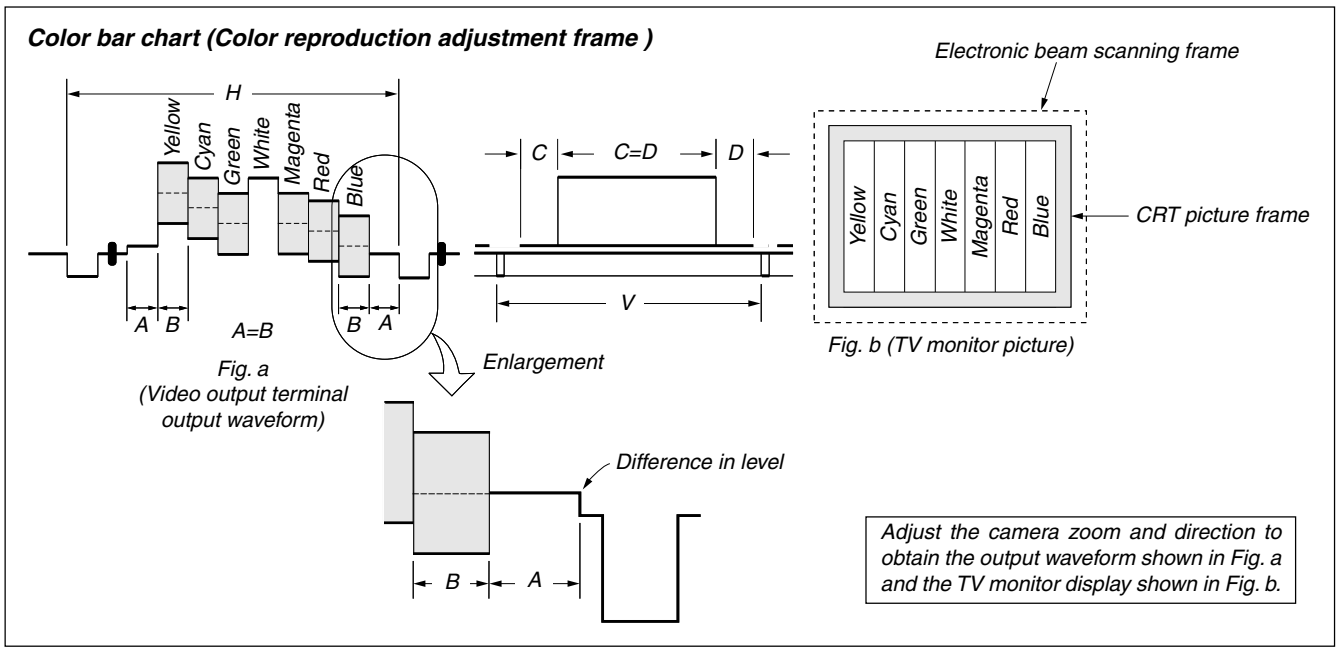


Fig. 5-1-4.

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. 5-1-4. (Color reproduction adjustment frame)
2) Clear chart (Color reproduction adjustment frame)
   Remove the color bar chart from the pattern box and insert a clear chart in its place. (Do not perform zoom operations during this time.)
3) Flange back adjustment chart
   Make the chart shown in Fig. 5-1-5 using A0 size (1189mm × 841mm) black and white vellum paper.

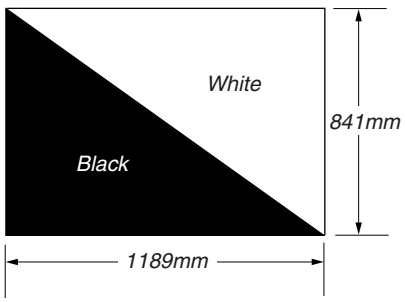


Fig. 5-1-5.

Note: Use matte vellum paper bigger than A0, and make sure the edges of the black and white paper joined together are not rough.

1-2. INITIALIZATION OF 8, A, B, C, D, E, F, 1B, 1E, 1F PAGE DATA

Note: When reading or writing the 1B, 1E or 1F page data, select page: 0, address: 10, and set data: 01, then select B, E or F page. The 1B, 1E or 1F page can be chosen by this data setting.
After reading or writing, reset the data of page: 0, address: 10 to "00".

[Connection of the power supply during the initialization of the data.]

1) Connect the regulated power supply and the digital voltmeter to the battery terminal as shown in Fig. 5-1-6.
2) Adjust the output voltage of the regulated power supply so that the digital voltmeter display is 6.0 ± 0.1Vdc.
3) Turn off the power supply.
4) Turn on the HOLD switch of the adjusting remote commander.
5) Turn on the power supply.
6) Perform the initialization of the data.
   Note: This is normal though the following message is indicated on the LCD screen.
   "FOR InfoLITHIUM BATTERY ONLY"

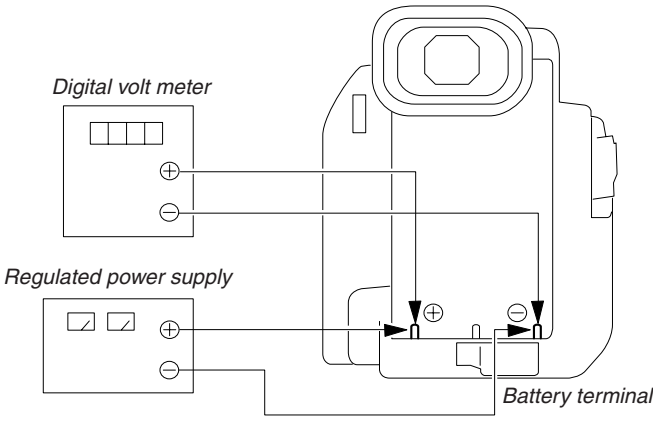


Fig.5-1-6.

[Initialization Procedure]

1. Initialization of A, D page data
2. Initialization of B, 1B page data
3. Initialization of 8, C page data
4. Initialization of E, F, 1E, 1F page data

1-2-1. INITIALIZATION OF A, D PAGE DATA

Note: The data of page: 0, address: 10 must be "00".

1. Initializing the A, D Page Data

Note1: If the A, D page data has been initialized, the following adjustments need to be performed again.
1) Modification of A, D page data
2) Touch panel adjustment

Note2: The power supply voltage must be 6.0 ± 0.1Vdc.

Note3: NTSC model: DCR-TRV40/TRV50
PAL model: DCR-TRV40E/TRV50E

Adjusting page	A
Adjusting Address	10 to D3
Adjusting page	D
Adjusting Address	10 to 67

Initializing Method of the A page:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	0	10	00	Set the data.
3	7	03		Set the following data. 05 (NTSC), 85 (PAL)
4	7	00	20	Set the data.
5	7	01	20	Set the data, and press PAUSE button.
6	7	02		Check that the data changes to "01"
7	2	00	29	Set the data.
8	2	01	29	Set the data, and press PAUSE button.
9				Perform "Modification of A, D Page Data".

Initializing Method of the D page:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	0	10	00	Set the data.
3	7	00	22	Set the data.
4	7	01	22	Set the data, and press PAUSE button.
5	7	02		Check that the data changes to "01"
6	2	00	29	Set the data.
7	2	01	29	Set the data, and press PAUSE button.
8				Perform "Modification of A, D Page Data".

2. Modification of A, D Page Data

If the A, D page data has been initialized, change the data of the "Fixed data-2" address shown in the following tables by manual input.

Modifying Method:

1) Before changing the data, select page: 0, address: 01, and set data: 01.
2) New data for changing are not shown in the tables because they are different in destination. When changing the data, copy the data built in the same model.
   Note: If copy the data built in the different model, the camcorder may not operate.
3) When changing the data, press the PAUSE button of the adjustment remote commander each time when setting new data to write the data in the non-volatile memory.

Processing after Completing Modification of A, D Page data

Order	Page	Address	Data	Procedure
1	2	00	29	Set the data.
2	2	01	29	Set the data, and press PAUSE button.

Note: If the following symptoms occur after completing of the "Modification of A, D page data", check that the data of the "Fixed data-2" addresses of A and D page are same as those of the same model of the same destination.
1) The self-diagnosis code "E:20:00" on the LCD screen is displayed.
2) The power is shut off so that unit cannot operate.

3. A Page Table

Note1: The data of page: 0, address: 10 must be "00".

Note2: Fixed data-1: Initialized data. (Refer to "1. Initializing the A, D Page Data".)
Fixed data-2: Modified data. (Refer to "2. Modification of A, D Page Data").

Address	Initial value		Remark
	NTSC	PAL	
00 to 0F			
10 to 16			Fixed data-1
17			Fixed data-2
18			
19 to 2E			Fixed data-1
2F			Fixed data-2
30 to 41			Fixed data-1
42			Fixed data-2
43 to 51			Fixed data-1
52			Fixed data-2
53			Fixed data-1
54			Fixed data-2
55			Fixed data-1
56			Fixed data-2
57 to 61			Fixed data-1
62			Fixed data-2
63			
64 to 8F			Fixed data-1
90	D8	DA	Touch panel adj.
91	26	24	
92	E3	D3	
93	1A	25	

A page

Address	Initial value		Remark
	NTSC	PAL	
94 to C1			Fixed data-1
C2			Fixed data-2
C3 to D3			Fixed data-1

Table. 5-1-2.

4. D Page Table

Note1: The data of page: 0, address: 10 must be “00”.
Note2: Fixed data-1: Initialized data. (Refer to “1. Initializing the A, D Page Data”.)
Fixed data-2: Modified data. (Refer to “2. Modification of A, D Page Data”).

Address	Initial value	Remark
00 to 0F		
10	00	Test mode
11		Fixed data-1
12		Fixed data-2
13 to 15		Fixed data-1
16		Fixed data-2
17 to 19		Fixed data-1
1A		Fixed data-2 (Modified data. Copy the data built in the same model.)
1B		
1C		
1D		
1E		
1F to 21		Fixed data-1
22		Fixed data-2 (Modified data. Copy the data built in the same model.)
23		
24		
25		
26		
27		Fixed data-1
28		Fixed data-2 (Modified data. Copy the data built in the same model.)
29		
2A		
2B		
2C to 2E		Fixed data-1
2F		Fixed data-2
30		
31 to 36		Fixed data-1
37		Fixed data-2
38		Fixed data-1
39		Fixed data-2
3A		
3B to 3C		Fixed data-1
3D		Fixed data-2
3E to 42		Fixed data-1
43		Fixed data-2 (Modified data. Copy the data built in the same model.)
44		
45		
46		
47		
48		
49		Fixed data-1
4A		Fixed data-2 (Modified data. Copy the data built in the same model.)
4B		
4C		
4D		
4E		
4F to 53		Fixed data-1
54		Fixed data-2
55		
56		Fixed data-1
57		Fixed data-2
58		Fixed data-1
59		Fixed data-2 (Modified data. Copy the data built in the same model.)
5A		
5B		
5C		
5D		
5E		
5F		
60		
61		
62 to 67		Fixed data-1

Table. 5-1-3.

1-2-2. INITIALIZATION OF B, 1B PAGE DATA

Note: When reading or writing the B page data, select page: 0, address: 10, and set data: 00.
When reading or writing the 1B page data, select page: 0, address: 10, and set data: 01, then select B page. The 1B page can be chosen by this data setting.
After reading or writing, reset the data of page: 0, address: 10 to "00".

1. Initializing the B, 1B Page Data

Note1: If "Initializing the B, 1B Page Data" is performed, all data of the B page and 1B page will be initialized. (It is impossible to initialize a single page.)

Note2: If the B, 1B page data has been initialized, the following adjustments need to be performed again.
1) Modification of B, 1B page data

Note3: The power supply voltage must be 6.0 ± 0.1Vdc.

Adjusting page	B
Adjusting Address	00 to FF
Adjusting page	1B
Adjusting Address	00 to FF

Initializing Method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	0	10	00	Set the data.
3	5	02	FF	Set the data.
4	5	01	F3	Set the data, and press PAUSE button.
5	5	00	01	Set the data, and press PAUSE button.
6	5	02		Check that the data changes to "00".
7	2	00	29	Set the data.
8	2	01	29	Set the data, and press PAUSE button.
9				Perform "Modification of B, 1B Page Data" and "Loader writing inhibit mode setting."

2. Modification of B, 1B Page Data

If the B, 1B page data has been initialized, change the data of the "Fixed data-2" address shown in the following tables by manual input.

Modifying Method:

1) Before changing the data, select page: 0, address: 01, and set data: 01.
2) When changing the B page data, select page: 0, address: 10, and set data: 00.
3) When changing the 1B page data, select page: 0, address: 10, and set data: 01.
   After completing the modification of 1B page data, reset the data of this address to "00".
4) New data for changing are not shown in the tables because they are different in destination. When changing the data, copy the data built in the same model.
   Note: If copy the data built in the different model, the camcorder may not operate.
5) When changing the data, press the PAUSE button of the adjustment remote commander each time when setting new data to write the data in the non-volatile memory.

Processing after Completing Modification of B, 1B Page data:

Order	Page	Address	Data	Procedure
1	0	10	00	Set the data.
2	2	00	29	Set the data.
3	2	01	29	Set the data, and press PAUSE button.

3. Loader Writing Inhibit Mode Setting

Setting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	0	10	00	Set the data.
3	5	0E	00	Set the data, and press PAUSE button.
4	5	03	20	Set the data, and press PAUSE button.
5	5	01	FA	Set the data, and press PAUSE button.
6	5	00	01	Set the data, and press PAUSE button.
7	5	0E		Check that the data is "01".
8	2	00	29	Set the data
9	2	01	29	Set the data, and press PAUSE button.

4. Writing the Network Default Setting Value (DCR-TRV50/TRV50E)

Switch setting: NETWORK ..... OFF

Writing method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	0	10	00	Set the data.
3	5	01	E7	Set the data, and press PAUSE button.
4	5	09	80	Set the data, and press PAUSE button.
5	5	0A		Set the following data, and press PAUSE button. 03: US model 04: Europe model 01: Others model
6	5	00	01	Set the data, and press PAUSE button.
7	5	0E		Check that the data is "01".
8	0	01	00	Set the data.

5. B Page Table

Note1: The data of page: 0, address: 10 must be "00".
Note2: Fixed data-1: Initialized data. (Refer to "1. Initializing the B, 1B Page Data".)
Fixed data-2: Modified data. (Refer to "2. Modification of B, 1B Page Data").

Address	Remark
00 to AF	Fixed data-1
B0	Fixed data-2
B1 to B3	Fixed data-1
B4	Fixed data-2
B5	(Modified data. Copy the data
B6	built in the same model.)
B7 to FF	Fixed data-1

Table. 5-1-4.

6. 1B Page Table

Note1: When reading or writing the 1B page data, select page: 0, address: 10, and set data: 01, then select B page. The 1B page can be chosen by this data setting.
After reading or writing, reset the data of page: 0, address: 10 to "00".
Note2: Fixed data-1: Initialized data. (Refer to "1. Initializing the B, 1B Page Data".)
Fixed data-2: Modified data. (Refer to "2. Modification of B, 1B Page Data").

Address	Remark
00 to FF	Fixed data-1

Table. 5-1-5.

1-2-3. INITIALIZATION OF 8, C PAGE DATA

Note: The data of page: 0, address: 10 must be "00".

1. Initializing the 8, C Page Data

Note1: If "Initializing the 8, C Page Data" is performed, all data of the 8 page and C page will be initialized. (It is impossible to initialize a single page.)

Note2: If the 8, C page data has been initialized, following adjustments need to be performed again.
1) Modification of 8, C page data
2) Serial No. input
3) Viewfinder system adjustments
4) LCD system adjustments
5) Servo and RF system adjustments
6) Video system adjustments

Note3: The power supply voltage must be 6.0 ± 0.1Vdc.

Adjusting page	8
Adjusting Address	00 to A3
Adjusting page	C
Adjusting Address	10 to FF

Initializing Method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	0	10	00	Set the data.
3	3	81		Check that the data is "00".
4	3	80	0C	Set the data, and press PAUSE button.
5	3	80		Check that the data changes to "1C".
6				Perform "Modification of 8, C Page Data".

2. Modification of 8, C Page Data

If the 8, C page data has been initialized, change the data of the "Fixed data-2" address shown in the following table by manual input.

Modifying Method:

1) Before changing the data, select page: 0, address: 01, and set data: 01.
2) New data for changing are not shown in the tables because they are different in destination. When changing the data, copy the data built in the same model.
   Note: If copy the data built in the different model, the camcorder may not operate.
3) When changing the data, press the PAUSE button of the adjustment remote commander each time when setting new data to write the data in the non-volatile memory.
4) Check that the data of adjustment addresses is the initial value. If not, change the data to the initial value.

Processing after Completing Modification of 8, C Page data

Order	Page	Address	Data	Procedure
1	2	00	29	Set the data.
2	2	01	29	Set the data, and press PAUSE button.

3. 8 Page Table

Note1: The data of page: 0, address: 10 must be "00".
Note2: Fixed data-1: Initialized data. (Refer to "1. Initializing the 8, C Page Data".)
Fixed data-2: Modified data. (Refer to "2. Modification of 8, C Page Data").

Address	Initial value	Remark
00 to 18		Fixed data-1
19		Fixed data-2
1A to 2E		Fixed data-1
2F		Fixed data-2
30 to 3A		Fixed data-1
3B		Fixed data-2
3C to 49		Fixed data-1
4A		Fixed data-2
4B to 51		Fixed data-1
52		Fixed data-2
53 to 59		Fixed data-1
5A		Fixed data-2
5B to 79		Fixed data-1
7A		Fixed data-2 (Modified data. Copy the data built in the same model.)
7B		
7C		
7D		
7E		
7F		
80		
81		
82		
83		
84 to 89		Fixed data-1
8A		Fixed data-2
8B		Fixed data-1
8C	08	Serial No. input
8D	00	
8E	46	
8F	01	
90	02	
91	00	
92	00	
93	00	
99		Fixed data-1
9A		Fixed data-2
9B		
9C		Fixed data-1
9D		Fixed data-2 (Modified data. Copy the data built in the same model.)
9E		
9F		
A0		
A1		
A2		
A3		Fixed data-1

Table. 5-1-6.

4. C Page Table

Note1: The data of page: 0, address: 10 must be "00".

Note2: Fixed data-1: Initialized data. (Refer to "1. Initializing the 8, C Page Data".)
Fixed data-2: Modified data. (Refer to "2. Modification of 8, C Page Data").

Address	Initial value		Remark
	NTSC	PAL	
00 to 0F			
10	EE	EE	Switching position adj.
11	00	00	
12	00	00	
13	00	00	
14 to 15			Fixed data-1
16	E0	E0	CAP FG duty adj.
17			Fixed data-1
18	2A	2A	AEQ adj.
19	2A	2A	
1A			Fixed data-1
1B	32	32	AEQ adj.
1C	32	32	
1D			Fixed data-1
1E	25	25	AGC center level adj.
1F	3E	3E	PLL fo adj.
20	3E	3E	
21	DC	DC	APC adj.
22	99	99	LPF fo adj.
23 to 24			Fixed data-1
25	88	88	S VIDEO out Y level adj.
26	E3	E3	S VIDEO out Cr level adj.
27	A1	A1	S VIDEO out Cb level adj.
28	04	04	Chroma BPF fo adj.
29	20	20	PLL fo adj.
2A to 2B			Fixed data-1
2C	03	03	APC adj.
2D to 4E			Fixed data-1
4F	64	64	Back light adj. (EVF)
50	CA	CA	
51	5D	7D	VCO adj. (EVF)
52	5D	7D	
53			Fixed data-2
54	AC	AC	RGB AMP adj. (EVF)
55			Fixed data-1
56	80	80	White balance adj. (EVF)
57	80	80	
58	1D	1D	Contrast adj. (EVF)
59			Fixed data-1
5A			Fixed data-2 (Modified data. Copy the data built in the same model.)
5B			
5C			
5D			
5E			
5F			
60			
61	98	98	VCO adj. (LCD)
62	98	98	
63	91	91	V COM adj. (LCD)
64	2C	2C	RGB AMP adj. (LCD)
65			Fixed data-1
66	A1	A1	COM AMP adj. (LCD)
67	7F	7F	White balance adj. (LCD)
68	87	87	
69	3F	3F	Contrast adj. (LCD)
6A			Fixed data-2 (Modified data. Copy the data built in the same model.)
6B			
6C			
6D			
6E			
6F			
70			
71			Fixed data-1
72			Fixed data-2
73 to 75			
76			Fixed data-2
77 to 79			Fixed data-1
7A			Fixed data-2
7B to 80			Fixed data-1
81			Fixed data-2
82			
83 to 88			Fixed data-1
89			Fixed data-2
8A			
8B			Fixed data-1
8C			Fixed data-2
8D to A9			
AA			Fixed data-2
AB to AB			Fixed data-1
AC			Fixed data-2 (Modified data. Copy the data built in the same model.)
AD			
AE			
AF			
B0 to C0			Fixed data-1
C1			Fixed data-2 (Modified data. Copy the data built in the same model.)
C2			
C3			
C4			
C5			
C6			
C7 to C8			Fixed data-1
C9			Fixed data-2 (Modified data. Copy the data built in the same model.)
CA			
CB			
CC			
CD			
CE			
CF to D0			Fixed data-1
D1			Fixed data-2 (Modified data. Copy the data built in the same model.)
D2			
D3			
D4			Fixed data-1
D5			Fixed data-2

C page

Address	Initial value		Remark
	NTSC	PAL	
D6			Fixed data-2
D7			Fixed data-1
D8			Fixed data-2 (Modified data. Copy the data built in the same model.)
D9			
DA			
DB			
DC			
DD			
DE			
DF to E1			Fixed data-1
E2			Fixed data-2
E3			
E4 to E5			Fixed data-1
E6			Fixed data-2
E7			Fixed data-1
E8			Fixed data-2
E9 to F3			Fixed data-1
F4	00	00	Emergency memory address
F5	00	00	
F6	00	00	
F7	00	00	
F8	00	00	
F9	00	00	
FA	00	00	
FB	00	00	
FC	00	00	
FD	00	00	
FE	00	00	
FF	00	00	

Table. 5-1-7.

1-2-4. INITIALIZATION OF E, F, 1E, 1F PAGE DATA

Note: When reading or writing the E, F page data, select page: 0, address: 10, and set data: 00.
When reading or writing the 1E or 1F page data, select page: 0, address: 10, and set data: 01, then select E or F page. The 1E or 1F page can be chosen by this data setting.
After reading or writing, reset the data of page: 0, address: 10 to "00".

1. Initializing the E, F, 1E, 1F Page Data

Note1: If "Initializing the E, F, 1E, 1F Page Data" is performed, all data of the E page, F page, 1E page and 1F page will be initialized. (It is impossible to initialize a single page.)

Note2: If the E, F, 1E, 1F page data has been initialized, following adjustments need to be performed again.
1) Modification of E, F, 1E, 1F page data
2) 40.5MHz/54MHz origin osc. adjustment
3) Camera system adjustments

Note3: The power supply voltage must be 6.0 ± 0.1Vdc.

Note4: NTSC model: DCR-TRV40/TRV50
PAL model: DCR-TRV40E/TRV50E

Adjusting page	E
Adjusting Address	00 to FF
Adjusting page	F
Adjusting Address	10 to FF
Adjusting page	1E
Adjusting Address	00 to BF
Adjusting page	1F
Adjusting Address	00 to FF

Initializing Method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	0	10	00	Set the data.
3	6	01		Set the following data, and press PAUSE button. 2D (NTSC), 2F (PAL)
4	6	03	01	Set the data, and press PAUSE button.
5	6	02		Check that the data changes to "01".
6				Perform "Modification of E, F, 1E, 1F Page Data".

2. Modification of E, F, 1E, 1F Page Data

If the E, F, 1E, 1F page data has been initialized, change the data of the "Fixed data-2" address shown in the following table by manual input.

Modifying Method:

1) Before changing the data, select page: 0, address: 01, and set data: 01.
2) When changing the E, F page data, select page: 0, address: 10, and set data: 00.
3) When changing the 1E, 1F page data, select page: 0, address: 10, and set data: 01.
   After completing the modification of 1E, 1F page data, reset the data of this address to "00".
4) New data for changing are not shown in the tables because they are different in destination. When changing the data, copy the data built in the same model.
   Note: If copy the data built in the different model, the camcorder may not operate.
5) When changing the data, press the PAUSE button of the adjustment remote commander each time when setting new data to write the data in the non-volatile memory.
4) Check that the data of adjustment addresses is the initial value. If not, change the data to the initial value.

Processing after Completing Modification of E, F, 1E, 1F Page data

Order	Page	Address	Data	Procedure
1	0	10	00	Set the data.
2	2	00	29	Set the data.
3	2	01	29	Set the data, and press PAUSE button.
4				Perform "40.5MHz/54MHz Origin Osc. Adjustment" of the camera system adjustment.

3. E Page Table

Note1: The data of page: 0, address: 10 must be "00".
Note2: Fixed data-1: Initialized data. (Refer to "1. Initializing the E, F, 1E, 1F Page Data".)
Fixed data-2: Modified data. (Refer to "2. Modification of E, F, 1E, 1F Page Data").

Address	Remark
00 to 04	Fixed data-1
05	Fixed data-2
06 to 08	Fixed data-1
09	Fixed data-2
0A	
0B to 0C	Fixed data-1
0D	Fixed data-2
0E to 0F	Fixed data-1
10	Fixed data-2
11 to 1F	Fixed data-1
20	Fixed data-2 (Modified data. Copy the data built in the same model.)
21	
22	
23	
24	Fixed data-1
25	Fixed data-2
26 to 2F	Fixed data-1
30	Fixed data-2 (Modified data. Copy the data built in the same model.)
31	
32	
33 to 37	Fixed data-1
38	Fixed data-2
39	
3A to 3B	Fixed data-1
3C	Fixed data-2
3D	
3E	Fixed data-1
3F	Fixed data-2
40 to 41	Fixed data-1
42	Fixed data-2
43 to 45	Fixed data-1
46	Fixed data-2
47	
48 to 5A	Fixed data-1
5B	Fixed data-2
5C to 6E	Fixed data-1
6F	Fixed data-2 (Modified data. Copy the data built in the same model.)
70	
71	
72 to 74	Fixed data-1
75	Fixed data-2
76 to 85	Fixed data-1
86	Fixed data-2
87 to D5	Fixed data-1
D6	Fixed data-2
D7	
D8 to DF	Fixed data-1
E0	Fixed data-2 (Modified data. Copy the data built in the same model.)
E1	
E2	
E3	
E4	
E5	
E6	
E7	
E8	
E9	
EA	
EB	
EC to FF	Fixed data-1

Table. 5-1-8.

4. F Page Table

Note1: The data of page: 0, address: 10 must be "00".
Note2: Fixed data-1: Initialized data. (Refer to "1. Initializing the E, F, 1E, 1F Page Data".)
Fixed data-2: Modified data. (Refer to "2. Modification of E, F, 1E, 1F Page Data").

Address	Initial value		Remark
	NTSC	PAL	
00 to FF			
10	40	40	40.5MHz/54MHz origin osc. adj.
11 to 12			Fixed data-1
13	42	42	HALL adj.
14	92	8E	
15	28	28	
16	4E	4E	
17	77	77	
18	D8	D8	
19	C0	D6	MAX GAIN adj.
1A	77	75	AWB & LV standard data input
1B	90	8E	
1C to 25			Fixed data-1
26	00	00	CCD output 2ch matching adj.
27	00	00	
28	00	00	
29	00	00	
2A	00	00	
2B	00	00	
2C	00	00	
2D	00	00	
2E to 2F			Fixed data-1
30	4D	4D	AWB & LV standard data input
31	3E	3E	
32	64	64	
33	59	59	
34	96	96	Auto white balance adj.
35	7A	7A	
36			Fixed data-1
37	41	41	Color reproduction adj.
38			Fixed data-1
39	2D	2D	Color reproduction adj.
3A to 3D			Fixed data-1
3E	2D	2D	Strobe white balance adj.
3F	64	64	
40	02	02	Color reproduction adj.
41	DE	DE	
42 to 44			Fixed data-1
45			Fixed data-2
46			Fixed data-1
47			Fixed data-2
48	4A	4A	Flange back adj.
49	84	84	
4A	47	47	
4B	AD	AD	
4C	21	21	
4D	F0	F0	
4E	00	00	
4F	00	00	
50	00	00	Flange back adj.
51	00	00	
52	6E	6E	
53	19	19	
54	19	19	
55	1B	1B	
56	00	00	
57	06	06	
58	00	00	
59			Fixed data-1
5A	80	80	MR adj.
5B	80	80	
5C	80	80	
5D	80	80	
5E	40	40	
5F	C0	C0	
60	40	40	
61	C0	C0	
62	40	40	
63	C0	C0	
64	40	40	
65	C0	C0	
66	20	20	AF laser output adj.
67	00	00	
68	00	00	
69	00	00	
6A	00	00	
6B	00	00	
6C	00	00	
6D to 71			Fixed data-1
72			Fixed data-2
73			
74 to 75			Fixed data-1
76	40	40	Mechanical shutter adj.
77	00	00	
78	34	34	
79	00	00	
7A	30	30	
7B	00	00	
7C	2A	2A	
7D	00	00	
7E	28	28	
7F	00	00	
80	40	40	
81	3A	3A	
82	31	31	
83	31	31	
84	35	35	
85	1E	1E	
86	80	80	
87	80	80	
88	80	80	
89	80	80	
8A	80	80	
8B	80	80	

Address	Initial value		Remark
	NTSC	PAL	
8C	03	03	Strobe light level adjustment
8D	80	80	
8E	80	80	
8F	80	80	
90	80	80	
91	20	20	
92 to 98	Fixed data-1		
99	Fixed data-2		
9A			
9B	Fixed data-1		
9C	Fixed data-2		
9D to A0	Fixed data-1		
A1	Fixed data-2		
A2 to AA	Fixed data-1		
AB	Fixed data-2		
AC to CC	Fixed data-1		
CD	Fixed data-2		
CE			
CF	Fixed data-1		
D0	Fixed data-2		
D1 to D6	Fixed data-1		
D7	Fixed data-2		
D8 to F6	Fixed data-1		
F7	Fixed data-2		
F8 to F9	Fixed data-1		
FA	Fixed data-2		
FB to FF	Fixed data-1		

Table. 5-1-9.

5. 1E Page Table

Note1: When reading or writing the 1E page data, select page: 0, address: 10, and set data: 01, then select E page. The 1E page can be chosen by this data setting.
After reading or writing, reset the data of page: 0, address: 10 to "00".

Note2: Fixed data-1: Initialized data. (Refer to "1. Initializing the E, F, 1E, 1F Page Data".)
Fixed data-2: Modified data. (Refer to "2. Modification of E, F, 1E, 1F Page Data").

Address	Initial value	Remark
00	Fixed data-2	
01	Fixed data-1	
02	Fixed data-2	
03	Fixed data-1	
04	Fixed data-2	
05	(Modified data. Copy the data	
06	built in the same model.)	
07 to 0A	Fixed data-1	
0B	Fixed data-2	
0C to 0D	Fixed data-1	
0E	Fixed data-2	
0F to 13	Fixed data-1	
14	Fixed data-2	
15	(Modified data. Copy the data	
16	built in the same model.)	
17 to 1C	Fixed data-1	
1D	Fixed data-2	
1E		
1F	Fixed data-1	
20	00	Black defective CCD adj.
21	00	
22	00	
23	00	
24	00	
25	00	
26	00	
27	00	
28	00	
29	00	
2A	00	
2B	00	
2C	00	
2D	00	
2E	00	
2F	00	
2F	00	
30 to 71	Fixed data-1	
72	Fixed data-2	
73		
74 to 81	Fixed data-1	
82	Fixed data-2	
83 to 85	Fixed data-1	
86	Fixed data-2	
87 to 9D	Fixed data-1	
9E	Fixed data-2	
9F to AF	Fixed data-1	

Address	Initial value / Remark
B0	Fixed data-2
B1 to B8	Fixed data-1
B9	Fixed data-2
BA to BC	Fixed data-1
BD	Fixed data-2
BE	Fixed data-1
BF	Fixed data-2

Table. 5-1-10.

6. 1F Page Table

Note1: When reading or writing the 1F page data, select page: 0, address: 10, and set data: 01, then select F page. The 1F page can be chosen by this data setting.
After reading or writing, reset the data of page: 0, address: 10 to "00".

Note2: Fixed data-1: Initialized data. (Refer to "1. Initializing the E, F, 1E, 1F Page Data".)
Fixed data-2: Modified data. (Refer to "2. Modification of E, F, 1E, 1F Page Data").

Address	Remark
00 to 38	Fixed data-1
39	Fixed data-2
3A to 67	Fixed data-1
68	Fixed data-2
69 to 6F	Fixed data-1
70	Fixed data-2
71	
72 to 80	Fixed data-1
81	Fixed data-2
82 to 87	Fixed data-1
88	Fixed data-2
89 to 8B	Fixed data-1
8C	Fixed data-2
8D	
8E	Fixed data-1
8F	Fixed data-2
90	
91 to 93	Fixed data-1
94	Fixed data-2
95	Fixed data-1
96	Fixed data-2
97 to 9B	Fixed data-1
9C	Fixed data-2
9D	
9E to AB	Fixed data-1
AC	Fixed data-2 (Modified data. Copy the data built in the same model.)
AD	
AE	
AF	
B0 to C9	Fixed data-1
CA	Fixed data-2 (Modified data. Copy the data built in the same model.)
CB	
CC	
CD to CE	Fixed data-1
CF	Fixed data-2
D0 to F2	Fixed data-1
F3	Fixed data-2
F4 to FF	Fixed data-1

Table. 5-1-11.

1-3. CAMERA SYSTEM ADJUSTMENTS

Before perform the camera system adjustments (except for "40.5MHz/54MHz Origin Oscillation Adjustment"), check that the specified values of "VIDEO SYSTEM ADJUSTMENTS" are satisfied.

And check that the data of page: 0, address: 10 is "00". If not, set data: 00 to this address.

Note: NTSC model: DCR-TRV40/TRV50
PAL model: DCR-TRV40E/TRV50E

1. 40.5MHz/54MHz Origin Oscillation Adjustment (VC-283 board)

Set 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 ㉔ of IC1501
Measuring Instrument	Frequency counter
Adjustment Page	F
Adjustment Address	10
Specified Value	f=27000000 ± 135Hz (NTSC) f=20250000 ± 101Hz (PAL)

Note: The data of page: 0, address: 10 must be "00".

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	F	10		Change the data and set the frequency (f) to the specified value.
3	F	10		Press PAUSE button.
4	0	01	00	Set the data.

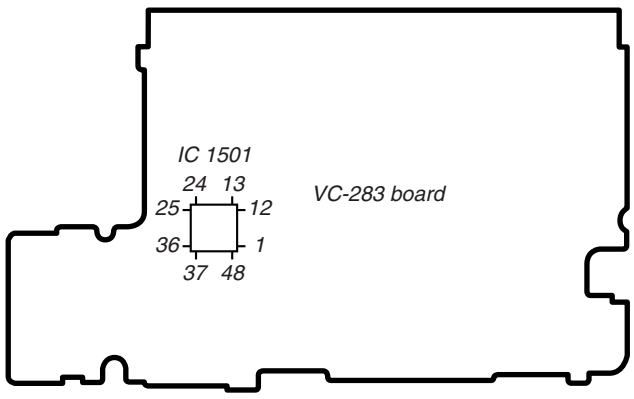


Fig.5-1-7.

2. HALL Adjustment RadarW

For detecting the position of the lens iris and ND filter, adjust AMP gain and offset.

Subject	Not required
Measurement Point	Display data of page 1 (Note1)
Measuring Instrument	Adjustment remote commander
Adjustment Page	F
Adjustment Address	13 to 18
Specified Value 1	26 to 2A
Specified Value 2	D6 to DA
Specified Value 3	D6 to DA
Specified Value 4	26 to 2A

Note1: Displayed data of page 1 of the adjustment remote commander.

1 : XX : XX
- XX: IRIS display data
- XX: ND display data

Note2: The data of page: 0, address: 10 must be "00".

Switch setting:

POWER ..... CAMERA

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	6	01	6D	Set the data, and press PAUSE button.
3	6	02		Check that the data changes to "01". (Note3)
4	6	01	00	Set the data, and press PAUSE button.

Note3: The adjustment data will be automatically input to page: F, address: 13 to 18.

Checking method:

Order	Page	Address	Data	Procedure
1	0	03	03	Set the data.
2	6	01	01	Set the data, and press PAUSE button.
3	1			Check that the IRIS display data (Note1) satisfies the specified value 1.
4	6	01	03	Set the data, and press PAUSE button.
5	1			Check that the IRIS display data (Note1) satisfies the specified value.2.
6	6	01	69	Set the data, and press PAUSE button.
7	1			Check that the ND display data (Note1) satisfies the specified value 3.
8	6	01	6B	Set the data, and press PAUSE button.
9	1			Check that the ND display data (Note1) satisfies the specified value.4.

Processing after Completing Adjustments:

Order	Page	Address	Data	Procedure
1	6	94	00	Set the data.
2	6	95	00	Set the data.
3	6	01	00	Set the data, and press PAUSE button.
4	0	03	00	Set the data.
5	0	01	00	Set the data.

3. MAX GAIN Adjustment RadarW

Setting the minimum illumination.
If it is not consistent, the image level required for taking subjects in low illuminance will not be produced (dark).

Subject	Clear chart (Approx. 1m from the front of the lens) (Note1)
Adjustment Page	F
Adjustment Address	19

Note1: Shoot the clear chart with the zoom WIDE end. And adjust the direction of the camera so that the chart is located in the center of the screen.
Note2: The data of page: 0, address: 10 must be "00".

Switch setting:

1) POWER ..... CAMERA
2) NIGHT SHOT ..... OFF
3) ZOOM ..... WIDE end
4) DIGITAL ZOOM (Menu display) ..... OFF
5) STEADY SHOT (Menu display) ..... OFF

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	6	2C	01	Set the data.
3	6	40	01	Set the data.
4	6	96		Set the following data. 33 (NTSC), 2B (PAL)
5	6	97	00	Set the data.
6	6	01	6F	Set the data, and press PAUSE button.
7	6	02		Check that the data changes to "01". (Note3)

Note3: The adjustment data will be automatically input to page: F, address: 19.

Processing after Completing Adjustments

Order	Page	Address	Data	Procedure
1	6	2C	00	Set the data.
2	6	40	00	Set the data.
3	6	96	00	Set the data.
4	6	97	00	Set the data.
5	6	01	00	Set the data, and press PAUSE button.
6	0	01	00	Set the data.

4. CCD Output 2ch Matching Adjustment (1) RadarW

Correct the dispersion of the black level between the left-right channels of the CCD imager.

Subject	Arbitrary
Adjustment Page	F
Adjustment Address	26, 27

Note1: This adjustment should be carried out upon completion of the following adjustments.
"HALL Adjustment", "MAX GAIN Adjustment"
Note2: The data of page: 0, address: 10 must be "00".
Note3: Check that the data of page: 6, address: 02 is "00". If not, to page: 6, address: 01, set data: 00, and press the PAUSE button.

Switch setting:

1) POWER ..... CAMERA
2) NIGHT SHOT ..... OFF

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	6	01	F3	Set the data, and press PAUSE button.
3	6	02		Check that the data changes to "01". (Note4)

Note4: The adjustment data will be automatically input to page: F, address: 26, 27.

Processing after Completing Adjustments

Order	Page	Address	Data	Procedure
1	6	01	00	Set the data, and press PAUSE button.
2				Perform "CCD Output 2ch Matching Adjustment (2)".

5. CCD Output 2ch Matching Adjustment (2) RadarW

Correct the dispersion between the left-right channels of the CCD imager.

Subject	Clear chart (All white) (Note1)
Adjustment Page	F
Adjustment Address	29 to 2D

Note1: Shoot the clear chart with the zoom TELE end.
Note2: This adjustment should be carried out upon completion of the following adjustments.
CCD Output 2ch Matching adjustment (1)
Note3: The data of page: 0, address: 10 must be "00".
Note4: Check that the data of page: 6, address: 02 is "00". If not, to page: 6, address: 01, set data: 00, and press the PAUSE button.

Switch setting:

1) POWER ..... CAMERA
2) NIGHT SHOT ..... OFF
3) ZOOM ..... TELE end

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	F	19		Write down the data.
3	F	19	C0	Set the data.
4	6	2C	01	Set the data.
5	6	40	01	Set the data.
6	6	01	F5	Set the data, and press PAUSE button.
7	6	02		Check that the data changes to "00" in about 50 seconds after pressing PAUSE button.
8	F	19		Set the data that is written down at step 2, and press PAUE button.

Note4: The adjustment data will be automatically input to page: F, address: 29 to 2D

Processing after Completing Adjustments

Order	Page	Address	Data	Procedure
1	6	01	00	Set the data, and press PAUSE button.
2	6	2C	00	Set the data.
3	6	40	00	Set the data.
4	0	01	00	Set the data.

6. MR Adjustment RadarW

The MR (Magnet resistor) adjustment of the inner focus lens is carried out automatically. In whichever case, the focus will be deviated during auto focusing/manual focusing.

Subject	Not required
Measurement Point	Adjustment remote commander
Measuring Instrument	
Adjustment Page	F
Adjustment Address	58, 5A to 65
Specified Value1	40 to C0
Specified Value2	03 to 78
Specified Value3	88 to F8

Note1: Make the lens horizontal and perform this adjustment.
Note2: Perform this adjustment before "Flange Back Adjustment".
Note3: The data of page: 0, address: 10 must be "00".
Note4: Check that the data of page: 6, address: 02 is "00". If not, to page: 6, address: 01, set data: 00, and press the PAUSE button.

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	6	01	BD	Set the data, and press PAUSE button.
3	6	02		Check that the data changes to "01". (Note5)
4	F	5A		Check that the data satisfies the specified value 1.
5	F	5B		Check that the data satisfies the specified value 1.
6	F	5C		Check that the data satisfies the specified value 1.
7	F	5D		Check that the data satisfies the specified value 1.
8	F	5E		Check that the data satisfies the specified value 2.
9	F	5F		Check that the data satisfies the specified value 3.
10	F	60		Check that the data satisfies the specified value 2.
11	F	61		Check that the data satisfies the specified value 3.
12	F	62		Check that the data satisfies the specified value 2.
13	F	63		Check that the data satisfies the specified value 3.
14	F	64		Check that the data satisfies the specified value 2.
15	F	65		Check that the data satisfies the specified value 3.

Note5: The adjustment data will be automatically input to page: F, address: 58, 5A to 65.

Processing after Completing Adjustments:

Order	Page	Address	Data	Procedure
1	6	01	00	Set the data, and press PAUSE button.
2	0	01	00	Set the data.

7. Flange Back Adjustment (Using Minipattern Box)

The inner focus lens flange back adjustment is carried out automatically. In whichever case, the focus will be deviated during auto focusing/manual focusing.

Subject	Siemens star chart with ND filter for the minipattern box (Note1)
Measurement Point	Adjustment remote commander
Measuring Instrument	
Adjustment Page	F
Adjustment Address	48 to 58
Specified Value	Data of page: F, address: 57 is “00” to “0E”.

Note1: Dark Siemens star chart.
Note2: This adjustment should be carried out upon completion of the following adjustments.
“HALL Adjustment”, “MR Adjustment”
Note3: Make the lens horizontal and perform this adjustment.
Note4: The data of page: 0, address: 10 must be “00”.
Note5: Check that the data of page: 6, address: 02 is “00”. If not, to page: 6, address: 01, set data: 00, and press the PAUSE button.

Switch setting:

1) POWER ..... CAMERA
2) NIGHT SHOT ..... OFF
3) COLOR SLOW SHUTTER ..... OFF

Preparations:

1) The minipattern box is installed as shown in the following figure.
Note: The attachment lenses are not used.
2) Install the minipattern box so that the distance between it and the front of the lens of the camcorder is less than 3cm.
3) Make the height of the minipattern box and the camcorder equal.
4) Check that the output voltage of the regulated power supply is the specified voltage.
5) Check that at both the zoom lens TELE end and WIDE end, the center of the Siemens star chart and center of the exposure screen coincide.

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

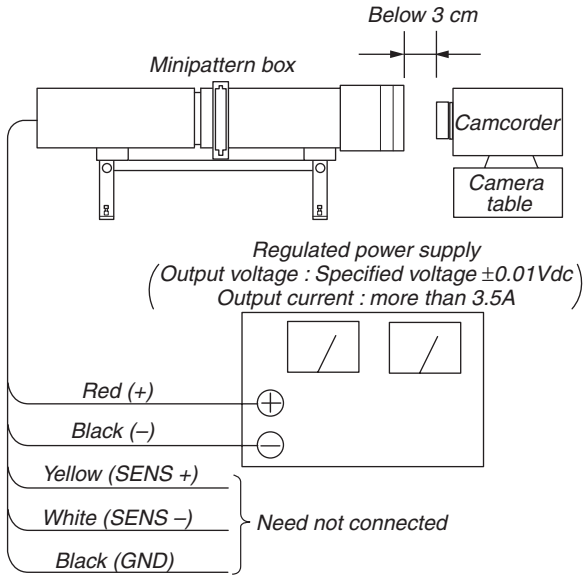


Fig. 5-1-8.

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	6	01	13	Set the data, and press PAUSE button. (Note3)
3	6	01	27	Set the data, and press PAUSE button.
4	6	02		Check that the data changes to “01”. (Note6)
5	F	57		Check the data is “00” to “0E”.

Note6: The adjustment data will be automatically input to page: F, address: 48 to 58.

Processing after Completing Adjustments:

Order	Page	Address	Data	Procedure
1	6	01	00	Set the data, and press PAUSE button.
2	6	01	25	Set the data, and press PAUSE button.
3	6	01	00	Set the data, and press PAUSE button.
4	0	01	00	Set the data.
5				Perform “Flange Back Check”.

8. Flange Back Adjustment (Using Flange Back Adjustment Chart and Subject More Than 500m Away)

The inner focus lens flange back adjustment is carried out automatically. In whichever case, the focus will be deviated during auto focusing/manual focusing.

8-1. Flange Back Adjustment (1) RadarW

Subject	Flange back adjustment chart (2.0 m from the front of the protection glass) (Luminance: 350 ± 50 lux)
Measurement Point	Adjustment remote commander
Measuring Instrument	
Adjustment Page	F
Adjustment Address	48 to 58
Specified Value	Data of page: F, address: 57 is "00" to "0E".

Note1: This adjustment should be carried out upon completion of the following adjustments.
"HALL Adjustment", "MR Adjustment"
Note2: Make the lens horizontal and perform this adjustment.
Note3: The data of page: 0, address: 10 must be "00".
Note4: Check that the data of page: 6, address: 02 is "00". If not, to page: 6, address: 01, set data: 00, and press the PAUSE button.

Switch setting:

1) POWER ..... CAMERA
2) NIGHT SHOT ..... OFF
3) COLOR SLOW SHUTTER ..... OFF

Preparations:

1) Check that at both the zoom lens TELE end and WIDE end, the center of the chart for the flange back adjustment and center of the exposure screen coincide.

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	6	01	13	Set the data, and press PAUSE button. (Note2)
3	6	01	15	Set the data, and press PAUSE button.
4	6	02		Check that the data changes to "01". (Note5)
5	F	57		Check the data is "00" to "0E".

Note5: The adjustment data will be automatically input to page: F, address: 48 to 58.

Processing after Completing Adjustments:

Order	Page	Address	Data	Procedure
1	6	01	00	Set the data, and press PAUSE button.
2	6	01	25	Set the data, and press PAUSE button.
3	6	01	00	Set the data, and press PAUSE button.
4	0	01	00	Set the data.
5				Perform "Flange Back Adjustment (2)"

8-2. Flange Back Adjustment (2) RadarW

Perform this adjustment after performing "Flange Back Adjustment (1)".

Subject	Subject more than 500m away (Subjects with clear contrast such as buildings, etc.)
Measurement Point	Check operation on TV monitor
Measuring Instrument	
Adjustment Page	F
Adjustment Address	48 to 58

Note1: Make the lens horizontal and perform this adjustment.
Note2: The data of page: 0, address: 10 must be "00".
Note3: Check that the data of page: 6, address: 02 is "00". If not, to page: 6, address: 01, set data: 00, and press the PAUSE button.

Switch setting:

1) POWER ..... CAMERA
2) NIGHT SHOT ..... OFF
3) COLOR SLOW SHUTTER ..... OFF

Preparations:

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

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	6	01	13	Set the data, and press PAUSE button. (Note2)
3				Place a ND filter on the lens so that the optimum image is obtain.
4	6	01	29	Set the data, and press PAUSE button.
5	6	02		Check that the data changes to "01". (Note4)

Note4: The adjustment data will be automatically input to page: F, address: 48 to 58.

Processing after Completing Adjustments:

Order	Page	Address	Data	Procedure
1	6	01	00	Set the data, and press PAUSE button.
2	6	01	25	Set the data, and press PAUSE button.
3	6	01	00	Set the data, and press PAUSE button.
4	0	01	00	Set the data.
5				Perform "Flange Back Check"

9. Flange Back Check

Subject	Siemens star (2.0m from the front of the lens) (Luminance : approx. 200 lux)
Measurement Point	Check operation on TV monitor
Measuring Instrument	
Specified Value	Focused at the TELE end and WIDE end.

Note1: The data of page: 0, address: 10 must be "00".

Switch setting:

1) POWER ..... CAMERA
2) NIGHT SHOT (Menu display) ..... OFF

Note2: When the auto focus is ON, the lens can be checked if it is focused or not by observing the data on the page 1 of the adjustment remote commander.

1) Select page: 0, address: 03, and set data: 0F.
2) Page 1 shows the state of the focus.

1 : 00 : XX
- Odd: Focused
- Even: Unfocused

Checking method:

1) Select page: 6, address: 40, and set data: 01.
2) Select page: 6, address: 41, and set data: 01.
3) Place the Siemens star 2.0m from the front of the lens.
4) To open the IRIS, decrease the luminous intensity to the Siemens star up to a point before noise appear on the image.
5) Shoot the Siemens star with the zoom TELE end.
6) Turn on the auto focus.
7) Check that the lens is focused (Note2).
8) Select page: 6, address: 21, and set data: 10.
9) Shoot the Siemens star with the zoom WIDE end.
10) Observe the TV monitor and check that the lens is focused.

Processing after Completing Adjustments:

1) Select page: 6, address: 21, and set data: 00.
2) Select page: 6, address: 40, and set data: 00.
3) Select page: 6, address: 41, and set data: 00.
4) Select page: 0, address: 03, and set data: 00.

10. Picture Frame Setting

Subject	Color bar chart (Color reproduction adjustment frame) (1.5m from the front of the lens)
Measurement Point	Video output terminal
Measuring Instrument	Oscilloscope and TV monitor
Specified Value	A=B, C=D, E=F

Note1: The following adjustments should be carried out upon completion of "Flange Back Adjustment".
Note2: The data of page: 0, address: 10 must be "00".

Switch setting:

1) POWER ..... CAMERA
2) NIGHT SHOT ..... OFF
3) DIGITAL ZOOM (Menu display) ..... OFF
4) STEADY SHOT (Menu display) ..... OFF

Setting method:

1) Adjust the zoom and the camera direction, and set to the specified position.
2) Mark the position of the picture frame on the monitor display, and adjust the picture frame to this position in following adjustments using "Color reproduction adjustment frame".

Check on the oscilloscope

1. Horizontal period

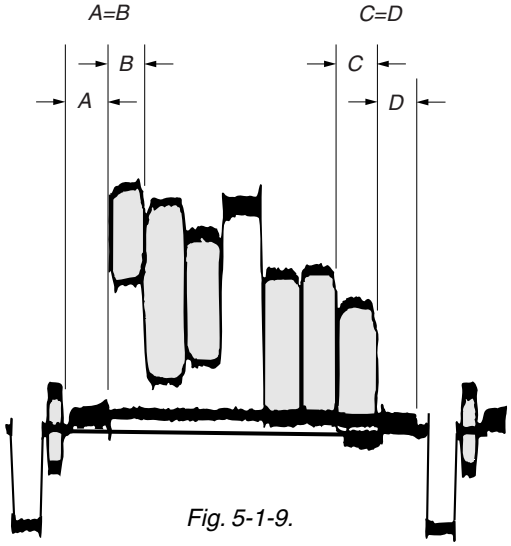


Fig. 5-1-9.

2. Vertical period

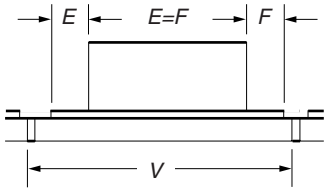


Fig. 5-1-10.

Check on the monitor TV (Underscanned mode)

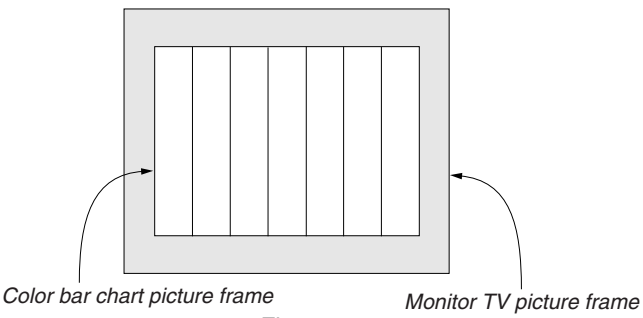


Fig. 5-1-11.

11. Color Reproduction Adjustment

Adjust the color Separation matrix coefficient so that proper color reproduction is produced.

Subject	Color bar chart (Color reproduction adjustment frame)
Measurement Point	Video output terminal
Measuring Instrument	Vectorscope
Adjustment Page	F
Adjustment Address	37, 39, 40, 41
Specified Value	All color luminance points should settle within each color reproduction frame.

Note1: The data of page: 0, address: 10 must be “00”.
Note2: NTSC model: DCR-TRV40/TRV50
PAL model: DCR-TRV40E/TRV50E

Switch setting:

1) POWER ..... CAMERA
2) NIGHT SHOT ..... OFF
3) DIGITAL ZOOM (Menu display) ..... OFF
4) STEADY SHOT (Menu display) ..... OFF

Adjusting method:

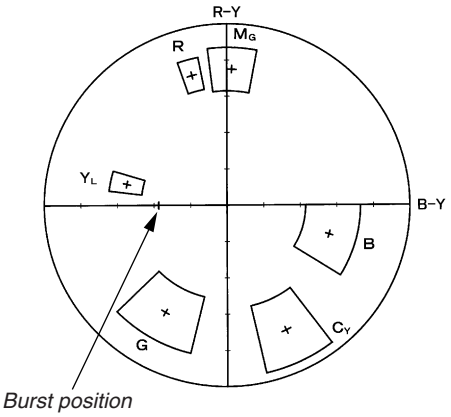
1) Select page: 0, address: 01, and set data: 01.
2) Select page: 6, address: 9D, and set data: 1D.
3) Select page: 6, address: 01, set data: 3D, and press the PAUSE button.
4) Select page: F, address: F0, set the following data, and press the PAUSE button.
   37 (NTSC), B7 (PAL)
5) Adjust the GAIN and PHASE of the vectorscope, and adjust the burst luminance point to the burst position of the color reproduction frame.
6) Change the data of page: F, address: 37, 39, 40 and 41, and settle each color luminance point in each color reproduction frame.

Note: Be sure to press the PAUSE button of the adjustment remote commander before changing the addresses. If not, the new data will not be written to the memory.

Processing after Completing Adjustments:

1) Select page: 6, address: 01, set data: 00, and press the PAUSE button.
2) Select page: 6, address: 9D, and set data: 00.
3) Select page: 0, address: 01, and set data: 00.

For NTSC model



For PAL model

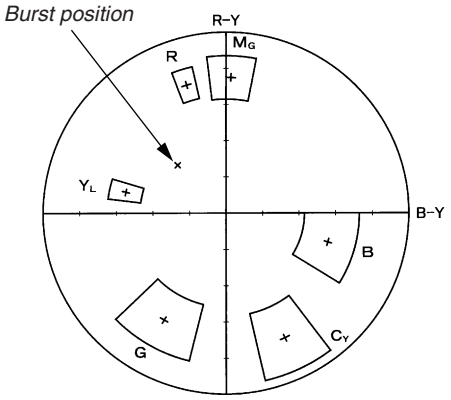


Fig. 5-1-12.

12. Auto White Balance & LV Standard Data Input RadarW

Adjust the white balance reference at 3200K, and adjust the normal coefficient of the light value.

Subject	Clear chart (Color reproduction adjustment frame)
Measurement Point	Display data of page 1 (Note5)
Measuring Instrument	Adjustment remote commander
Adjustment Page	F
Adjustment Address	1A, 1B, 30 to 33
Specified Value	0FF0 to 1010

Note1: This adjustments should be carried out upon completion of "Color Reproduction Adjustment".

Note2: After the power is turned on, this adjustment can be done only once.

Note3: The data of page: 0, address: 10 must be "00".

Note4: Check that the data of page: 6, address: 02 is "00". If not, to page: 6, address: 01, set data: 00, and press the PAUSE button.

Note5: Displayed data of page 1 of the adjustment remote commander.

1 : XX : XX
└── Display data

Switch setting:

1) POWER ..... CAMERA
2) NIGHT SHOT ..... OFF
3) DIGITAL ZOOM (Menu display) ..... OFF
4) STEADY SHOT (Menu display) ..... OFF

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2				Wait for 2 sec.
3	6	01	11	Set the data, and press PAUSE button.
4	6	01	0D	Set the data, and press PAUSE button.
5	6	02		Check that the data changes to "01". (Note6)
6	0	03	1E	Set the data.
7	1			Check that the display data (Note5) satisfies the specified value.

Note6: The adjustment data will be automatically input to page: F, address: 1A, 1B, 30 to 33.

Processing after Completing Adjustments

Order	Page	Address	Data	Procedure
1	6	01	00	Set the data, and press PAUSE button.
2	0	03	00	Set the data.
3	0	01	00	Set the data.
4				Perform "Auto White Balance Adjustment".

13. Auto White Balance Adjustment RadarW

Adjust to the proper auto white balance output data.
If it is not correct, auto white balance and color reproducibility will be poor.

Subject	Clear chart (Color reproduction adjustment frame)
Filter	Filter C14 for color temperature correction
Measurement Point	Display data of page 1 (Note4)
Measuring Instrument	Adjustment remote commander
Adjustment Page	F
Adjustment Address	34, 35
Specified Value	R ratio: 2B80 to 2C80 B ratio: 5B40 to 5C40

Note1: This adjustments should be carried out upon completion of "Auto White Balance & LV Standard Data Input".
Note2: After the power is turned on, this adjustment can be done only once.
Note3: The data of page: 0, address: 10 must be "00".
Note4: Displayed data of page 1 of the adjustment remote commander.

1 : XX : XX
└── Display data

Switch setting:

1) POWER ..... CAMERA
2) NIGHT SHOT ..... OFF
3) DIGITAL ZOOM (Menu display) ..... OFF
4) STEADY SHOT (Menu display) ..... OFF

Adjusting method:

Order	Page	Address	Data	Procedure
1				Place the C14 filter for color temperature correction on the lens.
2	0	01	01	Set the data.
3	F	44		Write down the data.
4	F	44	2C	Set the data, and press PAUSE button.
5	F	45		Write down the data.
6	F	45	00	Set the data, and press PAUSE button.
7	F	46		Write down the data.
8	F	46	5B	Set the data, and press PAUSE button.
9	F	47		Write down the data.
10	F	47	C0	Set the data, and press PAUSE button.
11	6	01	83	Set the data, and press PAUSE button.
12	6	01	81	Set the data, and press PAUSE button.
13	6	02		Check that the data changes to "01". (Note5)
14	6	01	3F	Set the data, and press PAUSE button.
15	0	03	04	Set the data.
16	1			Check that the display data (Note4) satisfies the R ratio specified value.
17	0	03	05	Set the data.
18	1			Check that the display data (Note4) satisfies the B ratio specified value.

Note5: The adjustment data will be automatically input to page: F, address: 34, 35.

Processing after Completing Adjustments:

Order	Page	Address	Data	Procedure
1	F	44		Set the data that is written down at step 3, and press PAUSE button.
2	F	45		Set the data that is written down at step 5, and press PAUSE button.
3	F	46		Set the data that is written down at step 7, and press PAUSE button.
4	F	47		Set the data that is written down at step 9, and press PAUSE button.
5	6	01	00	Set the data, and press PAUSE button.
6	0	03	00	Set the data.
7	0	01	00	Set the data.

14. White Balance Check RadarW

Subject	Clear chart (Color reproduction adjustment frame)
Filter	Filter C14 for color temperature correction ND filter 1.0 and 0.4 and 0.1
Measurement Point	Video output terminal
Measuring Instrument	Vectorscope
Specified Value	Fig. 5-1-13. A to B

Note1: The data of page: 0, address: 10 must be "00".

Switch setting:

1) POWER ..... CAMERA
2) NIGHT SHOT ..... OFF
3) DIGITAL ZOOM (Menu display) ..... OFF
4) STEADY SHOT (Menu display) ..... OFF

Checking method:

Order	Page	Address	Data	Procedure
				Indoor white balance check
1				Check that the lens is not covered with either filter.
2	6	01	0F	Set the data, and press PAUSE button.
3				Check that the center of the white luminance point is within the circle shown Fig. 5-1-13. A.
4	6	01	00	Set the data, and press PAUSE button.
				Outdoor white balance check
5				Place the C14 filter on the lens.
6	6	01	3F	Set the data, and press PAUSE button.
7				Check that the center of the white luminance point is within the circle shown Fig. 5-1-13. B.
8				Remove the C14 filter.
				LV data check
9				Place the ND filter 1.5 (1.0+0.1+0.4) on the lens.
10	6	01	00	Set the data, and press PAUSE button.
11	0	03	06	Set the data.
12	1			Check that the display data (Note2) satisfies the specified value. Specified value: 8000 to 8BC0

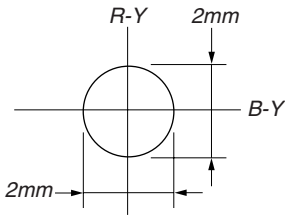


Fig. 5-1-13 (A).

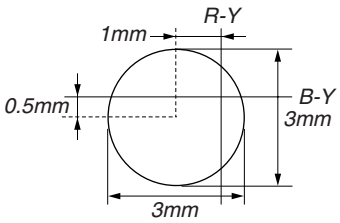


Fig. 5-1-13 (B).

Note2: Displayed data of the adjustment remote commander.

1 : XX : XX
└── Display data

Processing after Completing Adjustments

Order	Page	Address	Data	Procedure
1	6	01	00	Set the data, and press PAUSE button.
2	0	03	00	Set the data.

15. Mechanical Shutter Adjustment RadarW

Adjustment Page	F
Adjustment Address	76 to 8B

Note: The data of page: 0, address: 10 must be "00".

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Input the following data to page: F, addresses: 76 to 8B.

Note: Press the PAUSE button of the adjustment remote commander each time to set the data.

Address	Data	
	NTSC	PAL
76	59	49
77	87	9D
78	43	37
79	94	76
7A	38	2E
7B	81	75
7C	2F	27
7D	7B	8D
7E	27	20
7F	70	76
80	47	47
81	52	52
82	50	4E
83	48	47
84	3B	39
85	1D	1E
86	80	7C
87	85	81
88	83	84
89	85	85
8A	87	8B
8B	80	7C

3) Select page: 0, address: 01, and set data: 00.

16. Black Defective CCD Adjustment RadarW

Detect the black defective positions of the CCD imager.

Subject	Clear chart (All white) (Approx. 40cm from the front of the lens)
Adjustment Page	1E (Note1)
Adjustment Address	20 to 2F

Note1: When reading or writing the 1E page data, select page: 0, address: 10, and set data: 01, then select E page. The 1E page can be chosen by this data setting.
After reading or writing, reset the data of page: 0, address: 10 to "00".

Note2: Check that the data of page: 6, address: 02 is "00". If not, to page: 6, address: 01, set data: 00, and press the PAUSE button.

Note3: This adjustment should be carried out upon completion of "Flange Back Adjustment".

Switch setting:

1) POWER ..... CAMERA
2) NIGHT SHOT ..... OFF

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	0	10	00	Set the data.
3	6	2C	01	Set the data.
4	6	9C	01	Set the data.
5	6	90	C0	Set the data.
6	6	91	01	Set the data.
7	6	92	00	Set the data.
8	6	93	01	Set the data.
9	6	01	79	Set the data, and press PAUSE button.
10				Adjust the direction of the camera so that the whole of the screen is white.
11	6	01	8D	Set the data, and press PAUSE button.
12	6	02		Check that the data changes to "01". (Note4)

Note4: The adjustment data will be automatically input to page: 1E, address: 20 to 2F

Processing after Completing Adjustments

Order	Page	Address	Data	Procedure
1	0	10	00	Set the data.
2	6	01	00	Set the data, and press PAUSE button.
3	6	2C	00	Set the data.
4	6	9C	00	Set the data.
5	6	90	00	Set the data.
6	6	91	00	Set the data.
7	6	93	00	Set the data.
8	0	01	00	Set the data.

17. Strobe Light Level Adjustment RadarW

Adjust the light level when the strobe light flashes.

Subject	Paper which reflection rate is 18% (50cm from the front of the lens) (Note1)
Adjustment Page	F
Adjustment Address	8C to 91
Specified Value	Data of page: 6, address: B8 is “00”.

Note1: Background paper (J-250-130-A). Perform this adjustment in the dark room or use a dark box.
Note2: Any light other than the strobe light should not light up the plate.
Note3: This adjustment should be carried out upon completion of “HALL Adjustment” , “Flange Back Adjustment”.
Note4: The data of page: 0, address: 10 must be “00”.
Note5: Check that the data of page: 6, address: 02 is “00”. If not, to page: 6, address: 01, set data: 00, and press the PAUSE button.

Switch setting:

1) POWER ..... CAMERA
2) FLASH ..... OPEN
(Press FLASH (ϟ) button and set to the forced flash mode (ϟ), and press PHOTO button.)
3) NIGHT SHOT ..... OFF

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	7	05	04	Set the data. (Note6)
3	6	01	67	Set the data, and press PAUSE button.
4				Check the flashing.
5	6	02		Check that the data is “01”. (Note7)
6	6	B8		Check that the data is “00”.

Note6: Use the STOP button of the adjustment remote commander.
Note7: The adjustment data will be automatically input to page: F, address: 8C to 91.

Processing after Completing Adjustments:

Order	Page	Address	Data	Procedure
1	6	01	00	Set the data, and press PAUSE button.
2	7	05	00	Set the data.
3	0	01	00	Set the data.

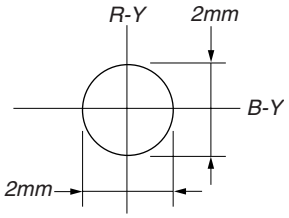


Fig. 5-1-14.

18. Strobe White Balance Adjustment & Check RadarW

Adjust and check the white balance when the strobe light flashes.

Subject	Paper which reflection rate is 18% (50cm from the front of the lens) (Note1)
Measurement Point	Video output terminal
Measuring Instrument	Vectorscope
Adjustment Page	F
Adjustment Address	3E, 3F
Specified Value	Fig. 5-1-14.

Note1: Background paper (J-250-130-A). Perform this adjustment in the dark room or use a dark box.
Note2: Any light other than the strobe light should not light up the plate.
Note3: This adjustment should be carried out upon completion of “HALL Adjustment”, “Flange Back Adjustment”, “Auto White Balance & LV Standard Data Input”, “Auto White Balance Adjustment”, “Strobe Light Level Adjustment”
Note4: The data of page: 0, address: 10 must be “00”.
Note5: Check that the data of page: 6, address: 02 is “00”. If not, to page: 6, address: 01, set data: 00, and press the PAUSE button.

Switch setting:

1) POWER ..... CAMERA
2) FLASH ..... OPEN
(Press FLASH (ϟ) button and set to the forced flash mode (ϟ), and press PHOTO button.)
3) NIGHT SHOT ..... OFF

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	7	05	04	Set the data. (Note6)
3	6	01	B9	Set the data, and press PAUSE button.
4				Check the flashing.
5	6	02		Check that the data is “01”. (Note7)
6	6	02	00	Set the data.
7	6	01	E7	Set the data, and press PAUSE button.
8				Check the flashing.
9	6	02		Check that the data is “01”.
10				Wait for 3 sec.
11				Check that the center of the white luminance point is within the circle shown Fig. 5-1-13. A.

Note6: Use the STOP button of the adjustment remote commander.
Note7: The adjustment data will be automatically input to page: F, address: 3E, 3F.

Processing after Completing Adjustments:

Order	Page	Address	Data	Procedure
1	6	01	00	Set the data, and press PAUSE button.
2	7	05	00	Set the data.
3	0	01	00	Set the data.

19. AF Laser Output Adjustment RadarW

Set the AF laser output to an appropriate level.

Subject	Paper which reflection rate is 18% (50cm from the front of the lens) (Note1)
Measurement Point	Adjustment remote commander
Measuring Instrument	
Adjustment Page	F
Adjustment Address	66 to 6C
Specified Value	Data of address: 66 is “10” to “FF”. Data of address: 67 is “00” to “58”. Data of address: 68 is “0A” to “FF”. Data of address: 6B is “3E” to “5D”.

Note1: Background paper (J-250-130-A). Perform this adjustment in the dark room or use a dark box.
Note2: Any light other than the laser light should not light up the plate.
Note3: This adjustment should be carried out upon completion of the following adjustments.
“HALL Adjustment”, “Flange Back Adjustment”
Note4: The data of page: 0, address: 10 must be “00”.
Note5: Check that the data of page: 6, address: 02 is “00”. If not, to page: 6, address: 01, set data: 00, and press the PAUSE button.

Switch setting:

1) POWER ..... CAMERA
2) NIGHT SHOT ..... OFF

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	6	01	AF	Set the data, and press PAUSE button.
3				Check the laser light is output.
4	6	02		Check that the data is “01”. (Note6)
5	F	66		Check that the data is “10” to “FF”.
6	F	67		Check that the data is “00” to “58”.
7	F	68		Check that the data is “0A” to “FF”.
8	F	6B		Check that the data is “3E” to “5D”.

Note5: The adjustment data will be automatically input to page: F, address: 66 to 6C.

Processing after Completing Adjustments:

Order	Page	Address	Data	Procedure
1	6	01	00	Set the data, and press PAUSE button.
2	0	01	00	Set the data.

20. AF Laser Check RadarW

Subject	Paper which reflection rate is 18% (1m from the front of the lens) (Note1)
Measurement Point	Check operation on LCD screen
Measuring Instrument	
Specified Value	Two or more hologram lines are perfectly within the inspection frame. The hologram lines can be seen at every outside of the inspection frame.

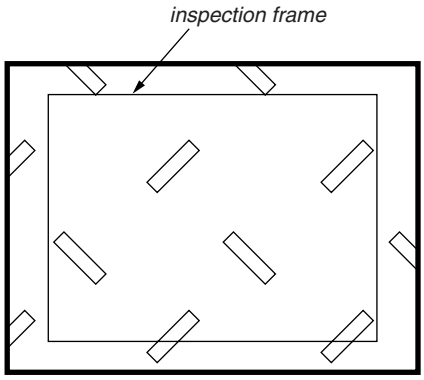


Fig. 5-1-15.

Note1: Background paper (J-250-130-A). Perform this adjustment in the dark room or use a dark box.
Note2: The data of page: 0, address: 10 must be “00”.

Switch setting:

1) POWER ..... MEMORY
2) NIGHT SHOT ..... OFF
3) FOCUS ..... MANUAL

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	E	EF	82	Set the data.
3	6	23	04	Set the data.
4	6	5B	B4	Set the data.
5	6	5C	B4	Set the data.
6	6	90	DB	Set the data.
7	6	91	02	Set the data.
8	6	92	B0	Set the data.
9	6	93	2A	Set the data.
10	6	01	79	Set the data, and press PAUSE button.
11	6	01	78	Set the data, and press PAUSE button.
12				Check that two or more hologram lines are perfectly within the inspection frame on the LCD screen.
13				Check that the hologram lines can be seen at every outside of the inspection frame (the top, the bottom, the left and the right).

Processing after Completing Adjustments:

Order	Page	Address	Data	Procedure
1	E	EF	00	Set the data.
2	6	23	00	Set the data.
3	6	5B	00	Set the data.
4	6	5C	00	Set the data.
5	6	90	00	Set the data.
6	6	91	00	Set the data.
7	6	92	00	Set the data.
8	6	93	00	Set the data.
9	6	01	00	Set the data, and press PAUSE button.
10	0	01	00	Set the data.

21. Steady Shot Check RadarW

Precautions on the Parts Replacement
There are two types of repair parts.
Type A: ENC03LA
Type B: ENC03LB
Replace the broken sensor with a same type sensor. If replace with other type parts, the image will vibrate up and down or left and right during hand-shake correction operations.

Precautions on Angular Velocity Sensor
The sensor incorporates a precision oscillator. Handle it with care as if it dropped, the balance of the oscillator will be disrupted and operations will not be performed properly.

Subject	Arbitrary
Measurement Point	Display data of page 1 (Note1)
Measuring Instrument	Adjustment remote commander
Specified Value	3600 to 4000

Note1: Displayed data of the adjustment remote commander.
1 : XX : XX
└── Display data

Note2: The data of page: 0, address: 10 must be “00”.

Switch setting:
1) STEADY SHOT (Menu display) ..... ON
2) ZOOM ..... TELE end

Adjusting method:

Order	Page	Address	Data	Procedure
				Pitch sensor check (JK-219 board SE5351)
1	0	03	11	Set the data.
2	1			Check that the display data (Note1) satisfies the specified value. (Note3)
				Yaw sensor check (JK-219 board SE5352)
3	0	03	12	Set the data.
4	1			Check that the display data (Note1) satisfies the specified value. (Note3)
5	0	03	00	Set the data.
6				Move the camcorder, and check that the steady shot operations have been performed normally

Note3: Don’t move the camcorder.

1-4. COLOR ELECTRONIC VIEWFINDER SYSTEM ADJUSTMENT

Note1: When replacing the LCD unit, be careful to prevent damages caused by static electricity.

Note2: Before performing the adjustments, check the data of page: 0, address: 10 is "00". If not, set data: 00 to this address.

Note3: As the PANEL CLOSE switch is attached to the cabinet (R), this cabinet must be attached when performing adjustments.
If you perform the adjustments with cabinet (R) removed, set the following data.
1) Select page: 3, address: C4, and set data: 67.
2) Select page: 3, address: C5, and set data: 01.
Reset the data after completing adjustment.
1) Select page: 3, address: C4, and set data: 00.
2) Select page: 3, address: C5, and set data: 00.

Note4: NTSC model: DCR-TRV40/TRV50
PAL model: DCR-TRV40E/TRV50E

[Adjusting connector]

Most of the measuring points for adjusting the viewfinder system are concentrated in CN1012 of VC-283 board.
Connect the Measuring Instruments via the CPC-7 jig (J-6082-382-A).
The following table shows the Pin No. and signal name of CN1012.

Pin No.	Signal Name	Pin No.	Signal Name
1	N. C.	9	PANEL VG
2	RF MON	10	GND
3	RF IN/LANC JACK IN	11	EVF VCO
4	SWP	12	GND
5	PANEL COM	13	EVF VG
6	GND	14	EXT DA
7	H START	15	LANC SIG
8	GND	16	N. C.

Table. 5-1-9.

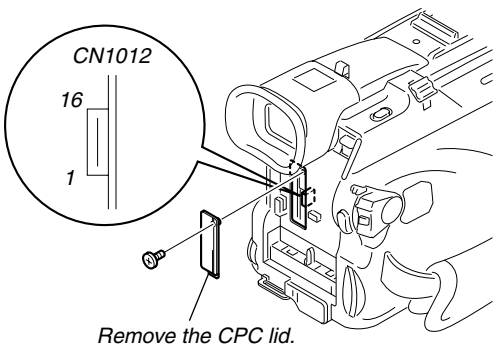


Fig. 5-1-16.

1. VCO Adjustment (VC-283 board)

Set the VCO free-run frequency. If deviated, the EVF screen will be blurred.

Mode	Camera
Subject	Arbitrary
Measurement Point	Pin ⑪ of CN1012 (EVF VCO)
Measuring Instrument	Frequency counter
Adjustment Page	C
Adjustment Address	51, 52
Specified Value	f = 15734 ± 30Hz (NTSC) f = 15625 ± 30Hz (PAL)

Note1: The data of page: 0, address: 10 must be "00".

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	C	51		Change the data and set the VCO frequency (f) to the specified value.
3	C	51		Press PAUSE button.
4	C	51		Read the data, and this data is named D_{51}.
5				Convert D_{51} to decimal notation, and obtain D_{51}'. (Note2)
6				Calculate D_{52}' using following equations (Decimal calculation) [NTSC model] When $D_{51}' \leqq 231$ $D_{52}'=D_{51}'+24$ When $D_{51}'>231$ $D_{52}'=255$ [PAL model] When $D_{51}' \geqq 24$ $D_{52}'=D_{51}'-24$ When $D_{51}'<24$ $D_{52}'=0$
7				Convert D_{52}' to a hexadecimal number, and obtain D_{52}. (Note2)
8	C	52	D_{52}	Set the data, and press PAUSE button.
9	0	01	00	Set the data.

Note2: Refer to "Table 5-4-1. Hexadecimal-decimal Conversion Table".

2. RGB AMP Adjustment (VC-283 board)

Set the D range of the RGB driver used to drive the LCD to the specified value. If deviated, the LCD screen will become blackish or saturated (whitish).

Mode	Camera
Subject	Arbitrary
Measurement Point	Pin ⑬ of CN1012 (EVF VG)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	54
Specified Value	A = 7.00 ± 0.05V

Note: The data of page: 0, address: 10 must be "00".

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	C	54		Change the data and set the voltage (A) between the reversed waveform pedestal and non-reversed waveform pedestal to the specified value.
3	C	54		Press PAUSE button.
4	0	01	00	Set the data.

3. Contrast Adjustment (VC-283 board)

Set the level of the VIDEO signal for driving the LCD to the specified value. If deviated, the screen image will be blackish or saturated (whitish).

Mode	Camera
Subject	Arbitrary
Measurement Point	Pin ⑬ of CN1012 (EVF VG)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	58
Specified Value	A = 2.40 ± 0.05V

Note: The data of page: 0, address: 10 must be "00".

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	C	58		Change the data and set the voltage (A) between the 3 steps peak and 0 IRE (pedestal) to the specified value. (The data should be "00" to "7F".)
3	C	58		Press PAUSE button.
4	0	01	00	Set the data.

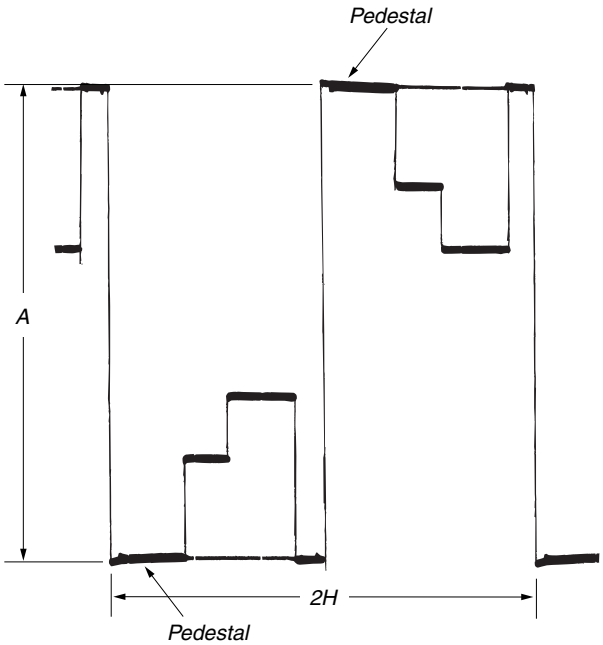


Fig. 5-1-17.

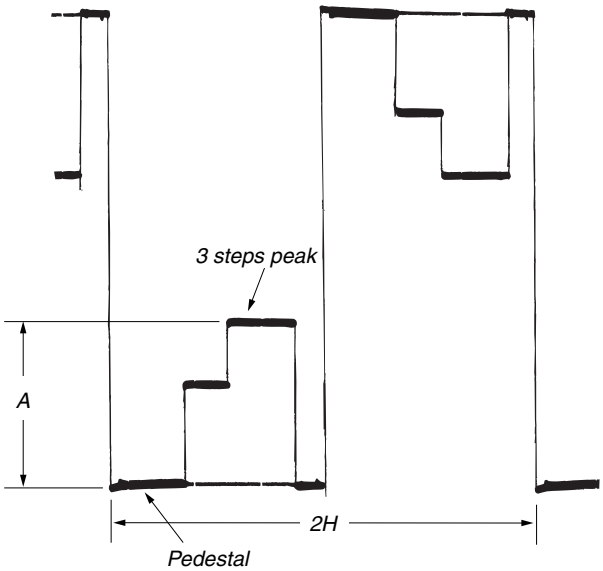


Fig. 5-1-18.

4. Backlight Adjustment (VC-283 board)

Set the backlight luminance.
If deviated, the image may become dark or bright.

Mode	Camera
Subject	Arbitrary
Measurement Point	Pin ⑭ of CN1012 (EXT DA)
Measuring Instrument	Digital voltmeter
Adjustment Page	C
Adjustment Address	4F, 50
Specified Value	NORMAL mode : A=1.12 ± 0.05Vdc BRIGHT mode : B=2.10 ± 0.05Vdc

Note: The data of page: 0, address: 10 must be "00".

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	C	4F		Change the data and set the EXT DA voltage (A) to the specified value of NORMAL mode.
3	C	4F		Press PAUSE button.
4	C	50		Change the data and set the EXT DA voltage (B) to the specified value of BRIGHT mode.
5	C	50		Press PAUSE button.
6	0	01	00	Set the data.

5. White Balance Adjustment (VC-283 board)

Correct the white balance.
If deviated, the reproduction of the EVF screen may degenerate.

Mode	Camera
Subject	Arbitrary
Measurement Point	Check on EVF screen
Measuring Instrument	
Adjustment Page	C
Adjustment Address	56, 57
Specified Value	The EVF screen should not be colored.

Note1: Check the white balance only when replacing the following parts. If necessary, adjust them.
1. LCD panel
2. Light induction plate
3. IC4201

Note2: The data of page: 0, address: 10 must be "00".

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	C	56	80	Set the data, and press PAUSE button.
3	C	57	80	Set the data, and press PAUSE button.
4	C	57		Check that the EVF screen is not colored. If not colored, proceed to step 10.
5	C	56		Change the data so that the EVF screen is not colored.
6	C	56		Press PAUSE button.
7	C	57		Change the data so that the EVF screen is not colored.
8	C	57		Press PAUSE button.
9	C	57		If the EVF screen is colored, repeat steps 5 to 9.
10	0	01	00	Set the data.

1-5. LCD SYSTEM ADJUSTMENT

Note1: The back light (fluorescent tube) is driven by a high voltage AC power supply. Therefore, do not touch the back light holder to avoid electrical shock.
Note2: When replacing the LCD unit, be careful to prevent damages caused by static electricity.
Note3: Before performing the adjustments, check the data of page: 0, address: 10 is "00". If not, set data: 00 to this address.
Note4: NTSC model: DCR-TRV40/TRV50
PAL model: DCR-TRV40E/TRV50E

Switch setting:
LCD BRIGHT(Menu setting)..... Center.

[Adjusting connector]
Most of the measuring points for adjusting the LCD system are concentrated in CN1012 of the VC-283 board. Connect the measuring instruments via the multi CPC-7 jig (J-6082-382-A). The following table shows the Pin No. and signal name of CN1012.

Pin No.	Signal Name	Pin No.	Signal Name
1	N. C.	9	PANEL VG
2	RF MON	10	GND
3	RF IN/LANC JACK IN	11	EVF VCO
4	SWP	12	GND
5	PANEL COM	13	EVF VG
6	GND	14	EXT DA
7	H START	15	LANC SIG
8	GND	16	N. C.

Table. 5-1-10.

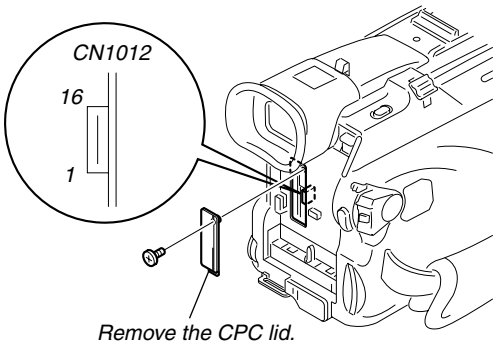


Fig. 5-1-19.

1. VCO Adjustment (PD-165 board)

Set the VCO free-run frequency. If deviated, the LCD screen will be blurred.

Mode	VTR stop
Signal	No signal
Measurement Point	Pin ⑦ of CN1012 of VC-283 board (H START)
Measuring Instrument	Frequency counter
Adjustment Page	C
Adjustment Address	61, 62
Specified Value	f = 15734 ± 30Hz (NTSC) f = 15625 ± 30Hz (PAL)

Note: The data of page: 0, address: 10 must be "00".

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	C	61		Change the data and set the VCO frequency (f) to the specified value.
3	C	61		Press PAUSE button.
4	C	61		Read the data, and this data is named D_{61}.
5	C	62	D_{61}	Set the data, and press PAUSE button.
6	0	01	00	Set the data.

2. RGB AMP Adjustment (PD-165 board)

Set the D range of the RGB decoder used to drive the LCD to the specified value. If deviated, the LCD screen will become blackish or saturated (whitish).

Mode	VTR stop
Signal	No signal
Measurement Point	Pin ⑨ of CN1012 of VC-283 board (PANEL VG) Ext. trigger: Pin ⑤ of CN1012 of VC-283 board (PANEL COM)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	64
Specified Value	A = 3.50 ± 0.05V

Note: The data of page: 0, address: 10 must be “00”.

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	C	64		Change the data and set the voltage (A) between the reversed waveform pedestal and non-reversed waveform pedestal to the specified value. (The data should be “00” to “3F”.)
3	C	64		Press PAUSE button.
4	0	01	00	Set the data.
5				Perform “Contrast Adjustment”, “COM AMP Adjustment” and “V COM Adjustment”.

3. Contrast Adjustment (PD-165 board)

Set the level of the VIDEO signal for driving the LCD to the specified value. If deviated, the screen image will be blackish or saturated (whitish).

Mode	VTR stop
Signal	No signal
Measurement Point	Pin ⑨ of CN1012 of VC-283 board (PANEL VG) Ext. trigger: Pin ⑤ of CN1012 of VC-283 board (PANEL COM)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	69
Specified Value	A = 3.45 ± 0.05V

Note: The data of page: 0, address: 10 must be “00”.

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	C	69		Change the data and set the voltage (A) between the 100 IRE and 0 IRE (pedestal) to the specified value. (The data should be “00” to “7F”.)
3	C	69		Press PAUSE button.
4	0	01	00	Set the data.
5				Perform “COM AMP Adjustment” and “V COM Adjustment”.

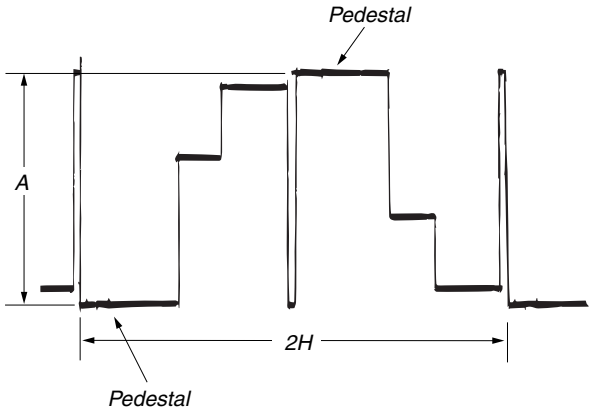


Fig. 5-1-20.

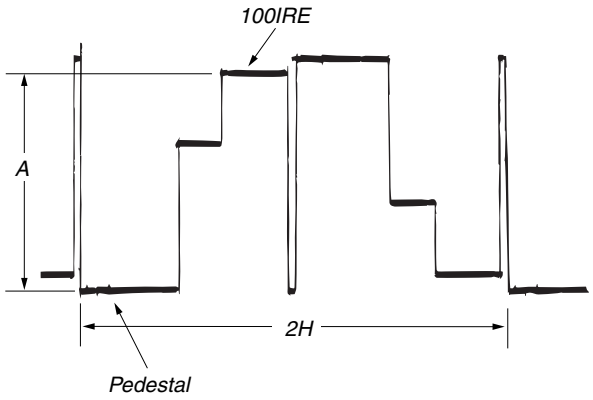


Fig. 5-1-21.

4. COM AMP Adjustment (PD-165 board)

Set the common electrode drive signal level of LCD to the specified value.

Mode	VTR stop
Signal	No signal
Measurement Point	Pin ⑤ of CN1012 of VC-283 board (PANEL COM)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	66
Specified Value	A = 5.60 ± 0.05V (NTSC) A = 5.40 ± 0.05V (PAL)

Note: The data of page: 0, address: 10 must be "00".

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	C	66		Change the data and set the PANEL COM signal level (A) to the specified value.
3	C	66		Press PAUSE button.
4	0	01	00	Set the data.
5				Perform "V COM Adjustment".

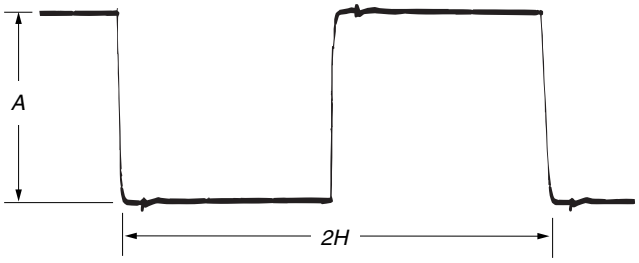


Fig. 5-1-22.

5. V COM Adjustment (PD-165 board)

Set the DC bias of the common electrode drive signal of LCD to the specified value.

If deviated, the LCD display will move, producing flicker and conspicuous vertical lines.

Mode	VTR stop
Signal	No signal
Measurement Point	Check on LCD display
Measuring Instrument	
Adjustment Page	C
Adjustment Address	63
Specified Value	The brightness difference between the section A and section B is minimum.

Note1: This adjustment should be carried out upon completion of the following adjustments.
RGB AMP Adjustment
Contrast Adjustment
COM AMP Adjustment

Note2: The data of page: 0, address: 10 must be "00".

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	C	63		Change the data so that the brightness of the section A and that of the section B is equal.
3	C	63		Subtract 8 from the data.
4	C	63		Press PAUSE button.
5	0	01	00	Set the data.

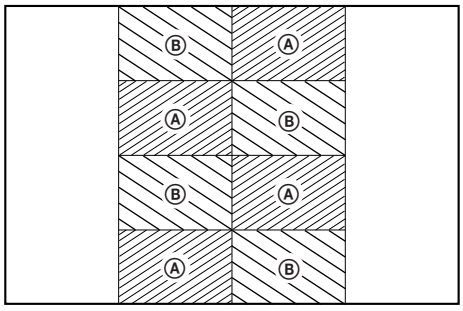


Fig. 5-1-23.

6. White Balance Adjustment (PD-165 board)

Correct the white balance.
If deviated, the reproduction of the LCD screen may degenerate.

Mode	VTR stop
Signal	No signal
Measurement Point	Check on LCD screen
Measuring Instrument	
Adjustment Page	C
Adjustment Address	67, 68
Specified Value	The LCD screen should not be colored.

Note1: Check the white balance only when replacing the following parts. If necessary, adjust them.
1. LCD panel
2. Light induction plate
3. IC5501

Note2: The data of page: 0, address: 10 must be “00”.

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	C	67	7F	Set the data, and press PAUSE button.
3	C	68	87	Set the data, and press PAUSE button.
4	C	68		Check that the LCD screen is not colored. If not colored, proceed to step 10.
5	C	67		Change the data so that the LCD screen is not colored.
6	C	67		Press PAUSE button.
7	C	68		Change the data so that the LCD screen is not colored.
8	C	68		Press PAUSE button.
9	C	68		If the LCD screen is colored, repeat steps 5 to 9.
10	0	01	00	Set the data.

5-2. MECHANISM SECTION ADJUSTMENT

On the mechanism section adjustment

For detail of mechanism section adjustments, checks, and replacement of mechanism parts, refer to the separate volume "DV MECHANICAL ADJUSTMENT MANUAL VI J Mechanism".

Note: Before performing the adjustments, check the data of page: 0, address: 10 is "00". If not, set data: 00 to this address.

2-1. HOE TO ENTER RECORD MODE WITHOUT CASSETTE

1) Connect the adjustment remote commander to the LANC jack.
2) Turn the HOLD switch of the adjustment remote commander to the ON position.
3) Close the cassette compartment without the cassette.
4) Select page: 3, address: 01, and set data: 0C, and press the PAUSE button of the adjustment remote commander.
   (The mechanism enters the record mode automatically.)
   Note: The function buttons becomes inoperable.
5) To quit the record mode, select page: 3, address: 01, set data: 00, and press the PAUSE button of the adjustment remote commander. (Whenever you want to quit the record mode, be sure to quit following this procedure.)

2-2. HOE TO ENTER PLAYBACK MODE WITHOUT CASSETTE

1) Connect the adjustment remote commander to the LANC jack.
2) Turn the HOLD switch of the adjustment remote commander to the ON position.
3) Close the cassette compartment without the cassette.
4) Select page: 3, address: 01, and set data: 0B, and press the PAUSE button of the adjustment remote commander.
   (The mechanism enters the playback mode automatically.)
   Note: The function buttons becomes inoperable.
5) To quit the playback mode, select page: 3, address: 01, set data: 00, and press the PAUSE button of the adjustment remote commander. (Whenever you want to quit the playback mode, be sure to quit following this procedure.)

2-3. TAPE PATH ADJUSTMENT

1. Preparation for Adjustment

1) Clean the tape running side (tape guide, drum, capstan shaft, pinch roller, etc.).
2) Connect the adjustment remote commander to the LANC jack.
3) Turn the HOLD switch of the adjustment remote commander to the ON position.
4) Connect an oscilloscope to VC-283 board CN1012 via the CPC-7 jig (J-6082-382-A).
   Channel 1: VC-283 board, CN1012 Pin ② (Note)
   External trigger: VC-283 board, CN1012 Pin ④
   Note: Connect a 75Ω resistor between Pins ② of CN1012 and ⑥ (GND).
5) Playback the alignment tape for tracking. (XH2-1)
6) Select page: 3, address: 33, and set data: 08.
7) Select page: 3, address: 26, and set data: 31.
8) Check that the oscilloscope RF waveform is normal at the entrance and exit.
   If not normal, adjust according to the separate volume "DV MECHANICAL ADJUSTMENT MANUAL VI J Mechanism".

CN1012 of VC-283 board

Pin No.	Signal Name	Pin No.	Signal Name
1	N. C.	9	PANEL VG
2	RF MON	10	GND
3	RF IN/LANC JACK IN	11	EVF VCO
4	SWP	12	GND
5	PANEL COM	13	EVF VG
6	GND	14	EXT DA
7	H START	15	LANC SIG
8	GND	16	N. C.

Table. 5-2-1.

2. Processing after Completing Operations:

1) Connect the adjustment remote commander to the LANC jack and set the HOLD switch to the ON position.
2) Select page: 3, address: 26, and set data: 00.
3) Select page: 3, address: 33, and set data: 00.

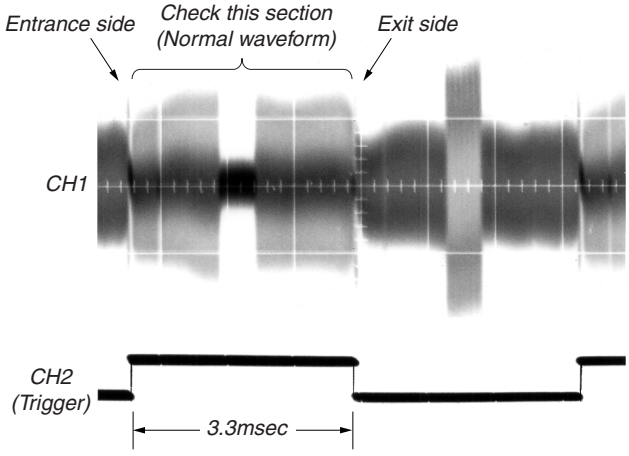


Fig. 5-2-1.

5-3. VIDEO SECTION ADJUSTMENT

NTSC model: DCR-TRV40/TRV50
PAL model: DCR-TRV40E/TRV50E

3-1. PREPARATIONS BEFORE ADJUSTMENTS

Use the following measuring instruments for video section adjustments.

3-1-1. Equipment to Required

1) TV monitor
2) Oscilloscope (dual-phenomenon, band width above 30 MHz with delay mode) (Unless specified otherwise, use a 10 : 1 probe.)
3) Frequency counter
4) Pattern generator with video output terminal
5) Digital voltmeter
6) Audio generator
7) Audio level meter
8) Audio distortion meter
9) Audio attenuator
10) Regulated power supply
11) Alignment tapes
    - Tracking standard (XH2-1)
      Parts code: 8-967-997-01
    - SW/OL standard (XH2-3)
      Parts code: 8-967-997-11
    - Audio operation check for NTSC (XH5-3)
      Parts code: 8-967-997-51
    - System operation check for NTSC (XH5-5)
      Parts code: 8-967-997-61
    - Audio operation check for PAL (XH5-3P)
      Parts code: 8-967-997-55
    - System operation check for PAL (XH5-5P)
      Parts code: 8-967-997-66
12) Adjustment remote commander (J-6082-053-B)
13) CPC-7 jig (J-6082-382-A)
14) Extension cable (100P 0.4mm) (J-6082-413-A)
    For extension between the DD-176 board (CN4601) and the VC-283 board (CN1003)

3-1-2. Precautions on Adjusting

Note1: Before performing the adjustments, check the data of page: 0, address: 10 is "00". If not, set data: 00 to this address.

1) The adjustments of this unit are performed in the VTR mode or camera mode.
   To set to the VTR mode, set the power switch to "VCR" (or "PLAYER") or set the "Forced VTR Power ON mode" using the adjusting remote commander (Note2).
   To set to the Camera mode, set the power switch to "CAMERA" or set the "Forced Camera Power ON mode" using the adjusting remote commander (Note3).
   After completing adjustments, be sure to exit the "Forced VTR Power ON Mode" or "Forced Camera Power ON Mode". (Note5)
2) The front panel block (MA-408 board (microphone amplifier, remote commander receiver, infrared LED, AF laser LED), SE-124 board (MF sensor)) must be assembled for connecting the adjusting remote commander. To remove it, disconnect the following connector.
   MA-408 board CN5903 (37P, 0.5mm)
3) Cabinet (R) (CK-115board, LCD block) need not be connected. But removing the cabinet (R) (removing the VC-283 board CN1005) means removing the lithium 3V power supply (CK-115 board, BT5201) , data such as date, time, user-set menus will be lost. After completing adjustments, reset these data.
   But, the self-diagnosis data and the data on history of use (total drum rotation time etc.) will be kept even if the cabinet (R) has been removed. (Refer to "5-4.Service Mode" for the data on the history use and the self-diagnosis data.)
   To remove the cabinet (R), disconnect the following connectors.
   VC-283 board CN1005 (51P, 0.3mm)
4) Only for DCR-TRV50/TRV50E model, the BT-003 board is need not be connected. To remove it, disconnect the following connector.
   BT-003 board CN102 (Bluetooth antenna terminal)
   VA-283 board CN1004 (15P, 0.3mm)
5) The intelligent accessory shoe is need not be connected. To remove it, disconnect the following connector.
   DD-176 board CN4604 (20P, 0.5mm)
6) The EVF block (LB-078 board) is need not be connected. To remove it, disconnect the following connector.
   DD-176 board CN4603 (21P, 0.3mm)
7) To open the DD-176 board, use the following extension cable between the DD-176 board CN4601 and VC-283 board CN1003.
   J-6082-413-A (100P, 0.4mm)
8) The lens block (CD-381 board) is need not be connected. To remove it, disconnect the following connectors.
   VC-283 board CN1301 (27P, 0.3mm)
   VC-283 board CN1501 (40P, 0.5mm)
9) By setting the "Forced VTR Power ON mode", the video section can be operate even if the control switch block (FK-2890, PS-2890) has been removed. When removing it, disconnect the following connector.
   VC-283 board CN1007 (27P, 0.3mm)

Note2: Setting the "Forced VTR Power ON" mode (VTR mode)
1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 10, set data: 02, and press the PAUSE button of the adjusting remote commander.
   The above procedure will enable the VTR power to be turned on with the control switch block (PS-2890 block) removed.
   After completing adjustments, be sure to exit the "Forced Power ON mode".

Note3: Setting the "Forced Camera Power ON" mode (Camera mode)
1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 10, set data: 01, and press the PAUSE button of the adjusting remote commander.
   The above procedure will enable the camera power to be turned on with the control switch block (PS-2890 block) removed.
   After completing adjustments, be sure to exit the "Forced Power ON mode".

Note4: Setting the "Forced Memory Power ON" mode (Memory mode)
1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 10, set data: 05, and press the PAUSE button of the adjusting remote commander.
   The above procedure will enable the memory power to be turned on with the control switch block (PS-2890 block) removed.
   After completing adjustments, be sure to exit the "Forced Power ON mode".

Note5: Exiting the "Forced Power ON" mode
1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 10, set data: 00, and press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00.

3-1-3. Adjusting Connectors

Some of the adjusting points of the video section are concentrated at VC-283 board CN1012. Connect the measuring instruments via the CPC-7 jig (J-6082-382-A). The following table lists the pin numbers and signal names of CN1012.

Pin No.	Signal Name	Pin No.	Signal Name
1	N. C.	9	PANEL VG
2	RF MON	10	GND
3	RF IN/LANC JACK IN	11	EVF VCO
4	SWP	12	GND
5	PANEL COM	13	EVF VG
6	GND	14	EXT DA
7	H START	15	LANC SIG
8	GND	16	N. C.

Table. 5-3-1.

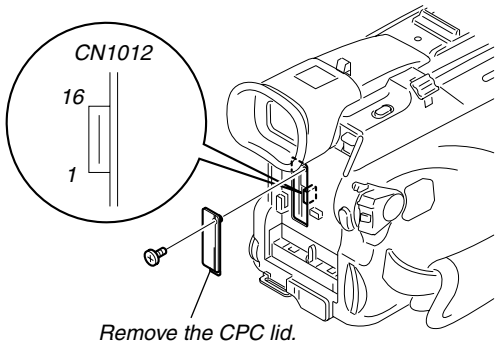


Fig. 5-3-1.

3-1-4. Connecting the Equipment

Connect the measuring instruments as shown in Fig. 5-3-2., and perform the adjustments.

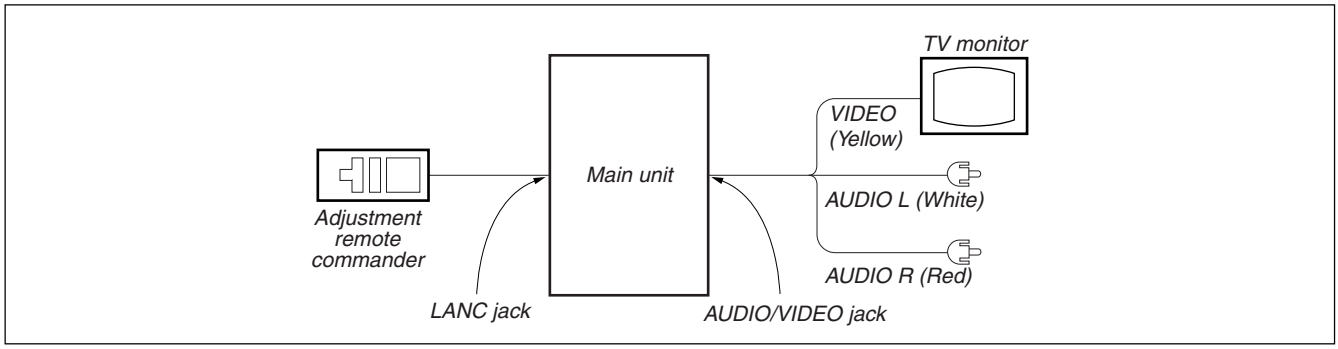


Fig. 5-3-2.

3-1-5. Alignment Tapes

Use the alignment tapes shown in the following table.
Use tapes specified in the signal column of each adjustment.

Name	Use
Tracking standard (XH2-1)	Tape path adjustment
SW/OL standard (XH2-3)	Switching position adjustment
Audio operation check (XH5-3 (NTSC), XH5-3P (PAL))	Audio system adjustment
System operation check (XH5-5 (NTSC), XH5-5P (PAL))	Operation check

Fig. 5-3-3 shows the 75% color bar signals recorded on the alignment tape for Audio Operation Check.

Note: Measure with video terminal (Terminated at 75Ω)

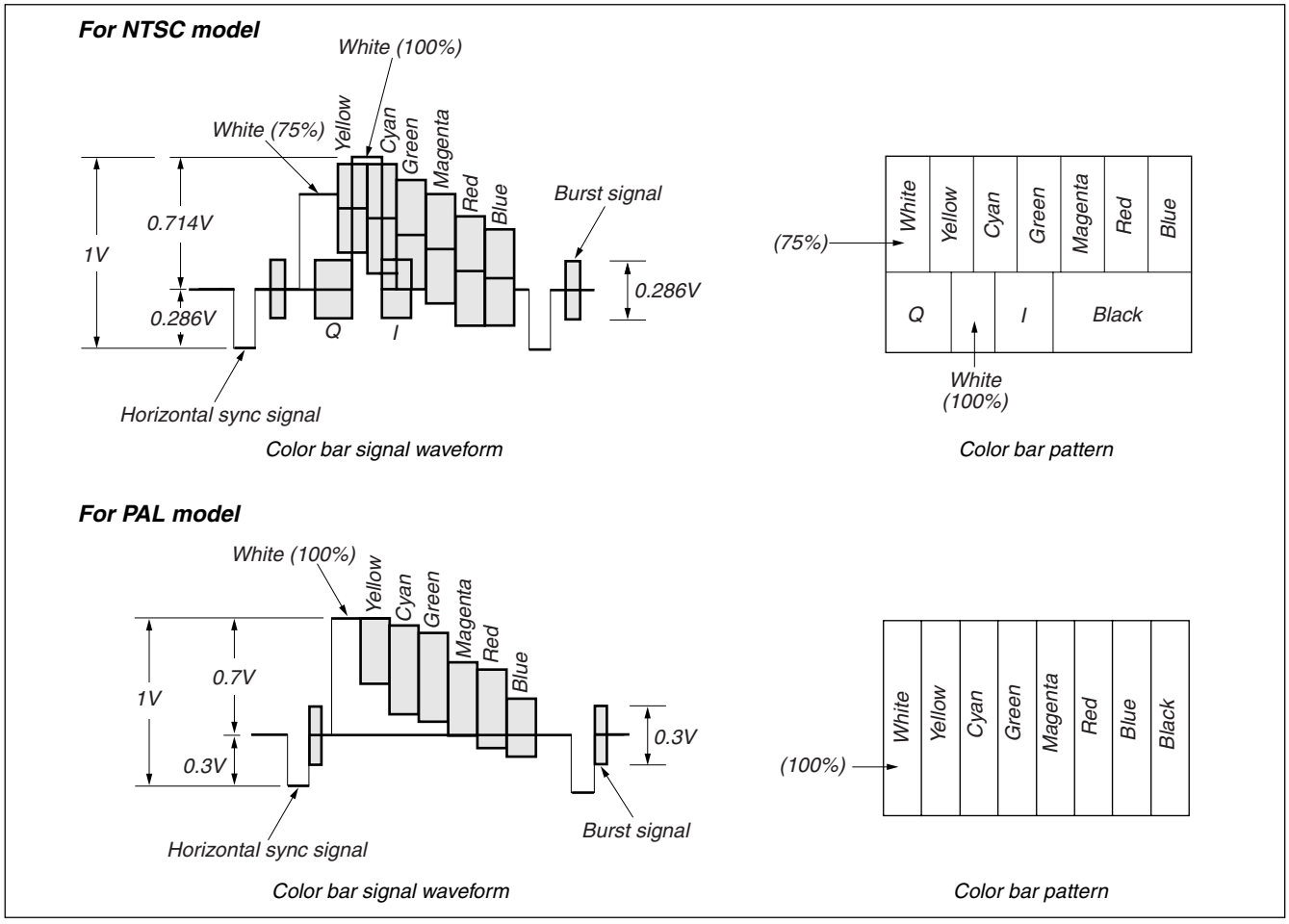


Fig. 5-3-3. Color bar signal of alignment tapes

3-1-6. Input/Output Level and Impedance

Video input/output
Special stereo mini jack
Video signal: 1 Vp-p, 75Ω unbalanced, sync negative

S video input/output
4-pin mini DIN
Luminance signal: 1 Vp-p, 75Ω unbalanced, sync negative
Chrominance signal: 0.286 Vp-p, 75Ω unbalanced (NTSC)
: 0.300 Vp-p, 75Ω unbalanced (PAL)

Audio input/output
Special stereo mini jack
Input level: 327mV
Input impedance: More than 47kΩ
Output level: 327mV (at load impedance 47kΩ)
Output impedance: Below 2.2kΩ

3-2. SYSTEM CONTROL SYSTEM ADJUSTMENT

1. Initialization of 8, A, B, C, D, E, F, 1B, 1E, 1F Page Data

If the 8, A, B, C, D, E, F, 1B, 1E, 1F page data is erased due to some reason, perform "1-2. INITIALIZATION OF PAGE DATA" of "5-1. CAMERA SECTION ADJUSTMENT"

Note: When reading or writing the 1B, 1E, 1F page data, select page: 0, address: 10, and set data: 01, then select B, E or F page. The 1B. 1E or 1F page can be chosen by this data setting.
After reading or writing, reset the data of page: 0, address: 10 to "00".

2. Touch Panel Adjustment

Adjust the calibration of the touch panel.

Mode	VTR stop
Signal	Arbitrary
Adjustment Page	A
Adjustment Address	90 to 93

Note: The data of page: 0, address: 10 must be "00".

Adjusting method:

1) Select page: 7, address: 05, and set data: 01.
2) Using a stylus etc., push the center of "X" indicated in the part A.
3) Using a stylus etc., push the center of "X" indicated in the part B.
4) Using a stylus etc., push the center of "X" indicated in the part C.
5) Select page: 7, address: 05, and set data: 00.

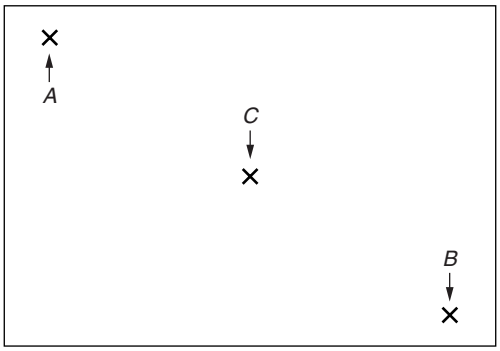


Fig. 5-3-4.

3. Serial No. Input

Note: Before performing the adjustments, check the data of page: 0, address: 10 is "00". If not, set data: 00 to this address.

3-1. Company ID Input

Write the company ID in the EEPROM (nonvolatile memory).

Page	8
Address	8C, 8D, 8E, 8F, 90

Input method:

1) Select page: 0, address: 01, and set data: 01.
2) Input the following data to page: 8, addresses: 8C to 90.
   Note: Press the PAUSE button of the adjustment remote commander each time to set the data.

Address	Data
8C	08
8D	00
8E	46
8F	01
90	02

3) Select page: 0, address: 01, and set data: 00.

3-2. Serial No. Input

Write the serial No. and model code in the EEPROM (nonvolatile memory). Convert the serial No. on the name plate from decimal to hexadecimal, and write in the EEPROM.

Page	8
Address	91, 92, 93

Input method:

1) Select page: 0, address: 01, and set data: 01.
2) Read the serial No. on the name plate, and take it as D_1.
   Example: If the serial No. is 77881.
   $D_1 = 77881$
   Note: Use six digits of the low rank when a serial No. is more than seven digits.
3) Obtain D_2 and H_1 corresponding to D_1 from Table 5-3-2.
   Example: If D_1 is "77881".
   $D_2 = D_1 - 65536 = 12345$
   $H_1 = FE$

D_1 (Decimal)	D_2 (Decimal)	H_1 (Hexadecimal) (Service model code)
000001 to 065535	D_1	FE
065536 to 131071	D_1–65536	FE
131072 to 196607	D_1–131072	FE

Table 5-3-2.

4) Input H_1 to page: 8, address: 91. (Model code input)
   Example: If H_1 is "FE".
   Select page: 8, address: 91, set data: FE, and press the PAUSE button.
5) Obtain the maximum decimal not exceeding D_2 from Table 5-3-3, and take this as D_3.
   Example: If D_2 is "12345".
   $D_3 = 12288$
6) Obtain the hexadecimal corresponding to D_3 from Table 5-3-3, and take this as H_3.
   Example: If D_3 is "12288".
   $H_3 = 3000$
7) Obtain the difference D_4 between D_2 and D_3. (Decimal calculation, $0 \leqq D_4 \leqq 255$)
   $D_4 = D_2 - D_3$
   Example: If D_2 is "12345" and D_3 is "12288".
   $D_4 = 12345 - 12288 = 57$
8) Convert D_4 to hexadecimal, and take this as H_4.
   (Refer to "Hexadecimal-decimal conversion table" in "5-4. Service Mode".)
   Example: If D_4 is "57".
   $H_4 = 39$
9) Input the upper 2 digits of H_3 to page: 8, address: 92.
   Example: If H_3 is "3000".
   Select page: 8, address: 92, set data: 30, and press the PAUSE button.
10) Input H_4 to page: 8, address: 93.
    Example: If H_4 is "39".
    Select page: 8, address: 93, set data: 39, and press the PAUSE button.
11) Select page: 0, address: 01, and set data: 00.

Decimal (D_3)	Hexa-decimal (H_3)	Decimal (D_3)	Hexa-decimal (H_3)	Decimal (D_3)	Hexa-decimal (H_3)	Decimal (D_3)	Hexa-decimal (H_3)	Decimal (D_3)	Hexa-decimal (H_3)	Decimal (D_3)	Hexa-decimal (H_3)	Decimal (D_3)	Hexa-decimal (H_3)	Decimal (D_3)	Hexa-decimal (H_3)
0	0000	8192	2000	16384	4000	24576	6000	32768	8000	40960	A000	49152	C000	57344	E000
256	0100	8448	2100	16640	4100	24832	6100	33024	8100	41216	A100	49408	C100	57600	E100
512	0200	8704	2200	16896	4200	25088	6200	33280	8200	41472	A200	49664	C200	57856	E200
768	0300	8960	2300	17152	4300	25344	6300	33536	8300	41728	A300	49920	C300	58112	E300
1024	0400	9216	2400	17408	4400	25600	6400	33792	8400	41984	A400	50176	C400	58368	E400
1280	0500	9472	2500	17664	4500	25856	6500	34048	8500	42240	A500	50432	C500	58624	E500
1536	0600	9728	2600	17920	4600	26112	6600	34304	8600	42496	A600	50688	C600	58880	E600
1792	0700	9984	2700	18176	4700	26368	6700	34560	8700	42752	A700	50944	C700	59136	E700
2048	0800	10240	2800	18432	4800	26624	6800	34816	8800	43008	A800	51200	C800	59392	E800
2304	0900	10496	2900	18688	4900	26880	6900	35072	8900	43264	A900	51456	C900	59648	E900
2560	0A00	10752	2A00	18944	4A00	27136	6A00	35328	8A00	43520	AA00	51712	CA00	59904	EA00
2816	0B00	11008	2B00	19200	4B00	27392	6B00	35584	8B00	43776	AB00	51968	CB00	60160	EB00
3072	0C00	11264	2C00	19456	4C00	27648	6C00	35840	8C00	44032	AC00	52224	CC00	60416	EC00
3328	0D00	11520	2D00	19712	4D00	27904	6D00	36096	8D00	44288	AD00	52480	CD00	60672	ED00
3584	0E00	11776	2E00	19968	4E00	28160	6E00	36352	8E00	44544	AE00	52736	CE00	60928	EE00
3840	0F00	12032	2F00	20224	4F00	28416	6F00	36608	8F00	44800	AF00	52992	CF00	61184	EF00
4096	1000	12288	3000	20480	5000	28672	7000	36864	9000	45056	B000	53248	D000	61440	F000
4352	1100	12544	3100	20736	5100	28928	7100	37120	9100	45312	B100	53504	D100	61696	F100
4608	1200	12800	3200	20992	5200	29184	7200	37376	9200	45568	B200	53760	D200	61952	F200
4864	1300	13056	3300	21248	5300	29440	7300	37632	9300	45824	B300	54016	D300	62208	F300
5120	1400	13312	3400	21504	5400	29696	7400	37888	9400	46080	B400	54272	D400	62464	F400
5376	1500	13568	3500	21760	5500	29952	7500	38144	9500	46336	B500	54528	D500	62720	F500
5632	1600	13824	3600	22016	5600	30208	7600	38400	9600	46592	B600	54784	D600	62976	F600
5888	1700	14080	3700	22272	5700	30464	7700	38656	9700	46848	B700	55040	D700	63232	F700
6144	1800	14336	3800	22528	5800	30720	7800	38912	9800	47104	B800	55296	D800	63488	F800
6400	1900	14592	3900	22784	5900	30976	7900	39168	9900	47360	B900	55552	D900	63744	F900
6656	1A00	14848	3A00	23040	5A00	31232	7A00	39424	9A00	47616	BA00	55808	DA00	64000	FA00
6912	1B00	15104	3B00	23296	5B00	31488	7B00	39680	9B00	47872	BB00	56064	DB00	64256	FB00
7168	1C00	15360	3C00	23552	5C00	31744	7C00	39936	9C00	48128	BC00	56320	DC00	64512	FC00
7424	1D00	15616	3D00	23808	5D00	32000	7D00	40192	9D00	48384	BD00	56576	DD00	64768	FD00
7680	1E00	15872	3E00	24064	5E00	32256	7E00	40448	9E00	48640	BE00	56832	DE00	65024	FE00
7936	1F00	16128	3F00	24320	5F00	32512	7F00	40704	9F00	48896	BF00	57088	DF00	65280	FF00

Table 5-3-3.

3-3. SERVO AND RF SYSTEM ADJUSTMENT

Before perform the servo and RF system adjustments, check that the specified value of "40.5MHz/54MHz Origin Oscillation Adjustment" of "CAMERA SYSTEM ADJUSTMENT" is satisfied. And check that the data of page: 0, address: 10 is "00". If not, set data: 00 to this address.

Adjusting Procedure:

1. CAP FG duty adjustment
2. PLL f_0 & LPF f_0 adjustment
3. Switching position adjustment
4. AGC center level and APC & AEQ adjustment
5. PLL f_0 & LPF f_0 fine adjustment

1. Cap FG Duty Adjustment (VC-283 Board) RadarW

Set the Cap FG signal duty cycle to 50% to establish an appropriate capstan servo. If deviated, the uneven rotation of capstan and noise can occur.

Measurement Point	Display data of page: 3, address: 02, 03
Measuring Instrument	Adjustment remote commander
Adjustment Page	C
Adjustment Address	16
Specified Value	Data of page: 3, address: 02 is "00". Data of page: 3, address: 03 is "00".

Note1: The data of page: 0, address: 10 must be "00".

Adjusting method:

Order	Page	Address	Data	Procedure
1				Close the cassette compartment without inserting a cassette.
2	0	01	01	Set the data.
3	3	01	1B	Set the data, and press PAUSE button.
4	3	02		Check that the data changes in the following order. "1B" → "2B" → "00"
5	3	03		Check that the data is "00". (Note2)
6	0	01	00	Set the data.

Note2: If the data is "01", adjustment has errors or the mechanism deck is defective.

2. PLL f_0 & LPF f_0 Adjustment (VC-283 Board) RadarW

Mode	VTR stop
Measurement Point	Display data of page: 3, address: 02, 03
Measuring Instrument	Adjustment remote commander
Adjustment Page	C
Adjustment Address	1F, 20, 22, 29
Specified Value	Data of page: 3, address: 02 is "00". Data of page: 3, address: 03 is "00".

Note1: The data of page: 0, address: 10 must be "00".

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	C	21	DC	Set the data, and press PAUSE button.
3	3	01	30	Set the data, and press PAUSE button.
4	3	02		Check that the data changes to "00" with in 5 sec. (Note2)
5	3	03		Check that the data is "00". (Note2)
6	0	01	00	Set the data.

Note2: If it isn't satisfied, select page: C, address: 21, set the following data, and press the PAUSE button, and repeat steps 3 to 5.

	Setting data
When the data of page: C, address: 21 is "DC".	E0
When the data of page: C, address: 21 is "E0".	D8
When the data of page: C, address: 21 is "D8".	E4
When the data of page: C, address: 21 is "E4"	D4

There are errors when it isn't satisfied even if the above treatment is done.
If bit2, bit3, bit4, bit5 or bit 6 of the data of page: 3, address: 03 is "1", there are errors. For the error contents, see the following table. (For the bit values, refer to "5-4. SERVICE MODE", "4-3. 3. Bit value discrimination".)

Bit value of page: 3, address: 03 data	Error contents
bit 2 = 1 or bit 3 = 1	PLL f_0 fine adjustment is defective
bit 4 = 1 or bit 5 = 1	PLL f_0 adjustment is defective
bit 6 = 1	LPF f_0 is defective

3. Switching Position Adjustment (VC-283 Board) RadarW

To obtain normal playback waveform output during the Digital8 playback mode, adjust the switching position.

Mode	VTR playback
Signal	SW/OL reference tape (XH2-3)
Measurement Point	Display data of page: 3, address: 02, 03
Measuring Instrument	Adjustment remote commander
Adjustment Page	C
Adjustment Address	10, 11, 12, 13
Specified Value	Data of page: 3, address: 02 is “00”. Data of page: 3, address: 03 is “00”.

Note1: The data of page: 0, address: 10 must be “00”.

Adjusting method:

Order	Page	Address	Data	Procedure
1				Insert the SW/OL reference tape and enter the VTR STOP mode.
2	0	01	01	Set the data.
3	C	10	EE	Set the data, and press PAUSE button.
4	3	21		Check that the data is “02”. (Note2)
5	3	01	0D	Set the data, and press PAUSE button.
6	3	02		Check that the data changes to “00”.
7	3	03		Check that the data is “00”. (Note3)
8	0	01	00	Set the data.

Note2: If the data of page: 3, address: 21 is “72”, the tape top being played. After playing the tape for 1 to 2 seconds, stop it, perform step 5 and higher.
If the data of page: 3, address: 21 is “62”, the tape end being played. After rewinding the tape, perform step 5 and higher.

Note3: If bit 0 of the data is “1”, the EVEN channel is defective. If bit 1 is “1”, the ODD channel is defective. Contents of the defect is written into page: C, addresses: 10 and 12. See the following table. (For the bit values, refer to “5-4. SERVICE MODE”, “4-3. 3. Bit value discrimination”.) If bit 3 of the data is “1”, the tape end being played, so rewind the tape and perform the adjustment again.

When the EVEN channel is defective

Data of page: C, address: 10	Contents of defect
EE	Writing into EEPROM (IC2502) is defective
E8	Adjustment data is out of range
E7	No data is returned from IC2101

When the ODD channel is defective

Data of page: C, address: 12	Contents of defect
EE	Writing into EEPROM (IC2502) is defective
E8	Adjustment data is out of range
E7	No data is returned from IC2101

4. AGC Center Level and APC & AEQ Adjustment

Note: The data of page: 0, address: 10 must be “00”.

4-1. Preparations before adjustments

Mode	Camera recording
Subject	Arbitrary

Adjusting method:

Order	Page	Address	Data	Procedure
1	7	30	80	Set the data.
2				Record the camera signal for three minutes.

4-2. AGC Center Level Adjustment (VC-283 Board) RadarW

Mode	Playback
Signal	Recorded signal at “Preparations before adjustments”
Measurement Point	Pin ② of CN1012 (RF MON) (Note1) Ext. trigger: Pin ④ of CN1012 (SWP)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	1E
Specified Value	Data of page: 3, address: 02 is “00”. Data of page: 3, address: 03 is “00”.

Note1: Connect a 75Ω resistor between Pin ② and Pin ⑥ (GND) of CN1012.
75Ω resistor (Parts code: 1-247-804-11)

Adjusting method:

Order	Page	Address	Data	Procedure
1				Playback the recorded signal at “Preparations before adjustments”
2	0	01	01	Set the data.
3	3	33	08	Set the data.
4				Confirm that the playback RF signal is stable. (Fig. 5-3-4.)
5	3	01	23	Set the data, and press PAUSE button.
6	3	02		Check that the data is “00”.
7	3	03		Check that the data is “00”. (Note2)
8				Perform “APC & AEQ Adjustment”.

Note2: If the data of page: 3, address: 03 is other than “00”, adjustment has errors. (Take an appropriate remedial measures according to the errors referring to the following table.)

Data	Contents of defect
20	Perform re-adjustment. (Note 3)
30	The machine is defective
40	Perform re-adjustment. (Note 3)
50	The machine is defective

Note3: If this data is displayed twice successively, the machine is defective.

4-3. APC & AEQ Adjustment (VC-283 Board) RadarW

Mode	Playback
Signal	Recorded signal at “Preparations before adjustments”
Measurement Point	Pin ② of CN1012 (RF MON) (Note1) Ext. trigger: Pin ④ of CN1012 (SWP)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	18, 19, 1B, 1C, 21, 2C
Specified Value	Data of page: 3, address: 02 is “00”. Data of page: 3, address: 03 is “00”.

Note1: Connect a 75Ω resistor between Pin ② and Pin ⑥ (GND) of CN1012.
75Ω resistor (Parts code: 1-247-804-11)

Note2: The “AGC Center Level Adjustment” must have already been completed before starting this adjustment.

Adjusting method:

Order	Page	Address	Data	Procedure
1				Playback the recorded signal at “Preparations before adjustments”
2	0	01	01	Set the data.
3	3	33	08	Set the data.
4				Confirm that the playback RF signal is stable. (Fig. 5-3-4.)
5	3	01	07	Set the data, and press PAUSE button.
6	3	02		Check that the data changes from “07” to “00” in about 20 seconds after pressing PAUSE button.
7	3	03		Check that the data is “00”. (Note3)
8				Perform “Processing after Completing Adjustments”.

Note3: If the data is other than “00”, adjustment has errors. Take an appropriate remedial measures according to the errors referring to the following table.

Data	Contents of defect
20	Perform re-adjustment. (Note 4)
30	The machine is defective
50	Perform re-adjustment. (Note 4)
60	The machine is defective
80	The machine is defective

Note4: If this data is displayed twice successively, the machine is defective.

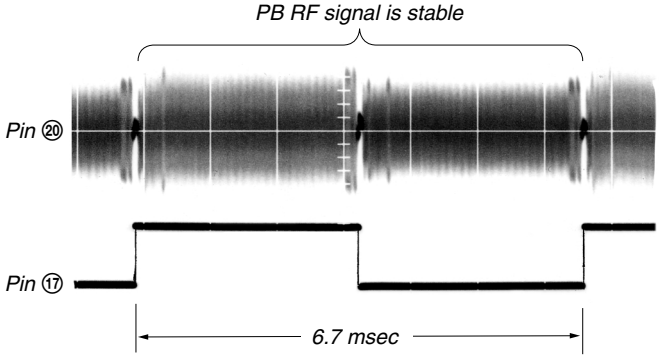


Fig. 5-3-5.

4-4. Processing after Completing Adjustments

Order	Page	Address	Data	Procedure
1	7	30	00	Set the data.
2	3	33	00	Set the data.
3	0	01	00	Set the data.

5. PLL f0 & LPF f0 Fine Adjustment (VC-283 Board) RadarW

Mode	VTR stop
Signal	Arbitrary
Measurement Point	Display data of page: 3, address: 02, 03
Measuring Instrument	Adjustment remote commander
Adjustment Page	C
Adjustment Address	1F, 20, 22, 29
Specified Value	Data of page: 3, address: 02 is “00”. Data of page: 3, address: 03 is “00”.

Note1: The data of page: 0, address: 10 must be “00”.

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	3	01	30	Set the data, and press PAUSE button.
3	3	02		Check that the data changes to “00” with in 5 sec. (Note2)
4	3	03		Check that the data is “00”. (Note3)
5	0	01	00	Set the data.

Note2: If it isn’t satisfied, there are errors.

Note3: If the data of page: 3, address: 03 is other than “00”, there are errors. For the error contents, see the following table. (For the bit values, refer to “5-4. SERVICE MODE”, “4-3. 3. Bit value discrimination”.)

Bit value of page: 3, address: 03	Error contents
bit 2 = 1 or bit 3 = 1	PLL f0 fine adjustment is defective
bit 4 = 1 or bit 5 = 1	PLL f0 adjustment is defective
bit 6 = 1	LPF f0 is defective

3-4. VIDEO SYSTEM ADJUSTMENTS

Note1: Before perform the servo and RF system adjustments, check that the specified value of "40.5MHz/50MHz Origin Oscillation Adjustment" of "CAMERA SYSTEM ADJUSTMENT" is satisfied.
And check that the data of page: 0, address: 10 is "00". If not, set data: 00 to this address.

Note2: NTSC model: DCR-TRV40/TRV50
PAL model: DCR-TRV40E/TRV50E

1. Chroma BPF fo Adjustment (VC-283 Board)

Set the center frequency of IC4101 chroma band-pass filter.

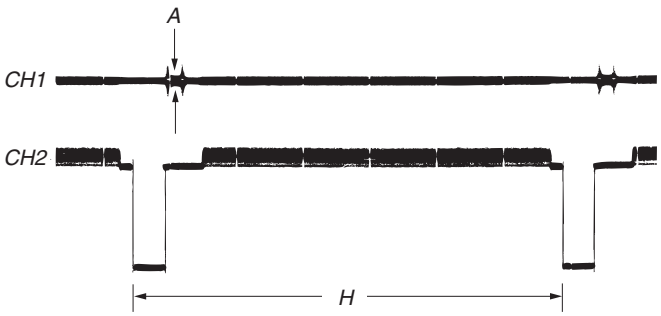
Mode	Camera
Subject	Arbitrary
Measurement Point	CH1: Chroma signal terminal of S VIDEO jack (75Ω terminated) CH2: Y signal terminal of S VIDEO jack (75Ω terminated)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	28
Specified Value	A = 100mVp-p or less B = 200mVp-p or more

Note: The data of page: 0, address: 10 must be "00".

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2				Check that the burst signal (B) is output to the chroma signal terminal of S VIDEO jack.
3	3	0C	04	Set the data, and press PAUSE button.
4	C	28		Change the data for minimum amplitude of the burst signal level (A). (The data should be "00" to "0F".)
5	C	28		Press PAUSE button.
6	3	0C	00	Set the data, and press PAUSE button.
7				Check that the burst signal level (B) satisfies the specified value.
8	0	01	00	Set the data.

When the data of page: 3, address: 0C, is 04:



When the data of page: 3, address: 0C, is 00:

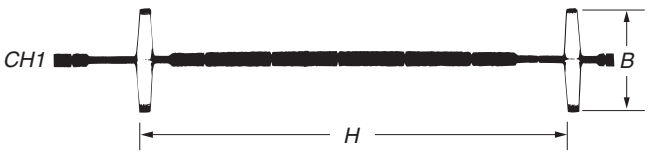


Fig. 5-3-6.

2. S VIDEO OUT Y Level Adjustment (VC-283 Board)

Mode	Camera
Subject	Arbitrary
Measurement Point	Y signal terminal of S VIDEO jack (75Ω terminated)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	25
Specified Value	A = 1000 ± 14mV

Note: The data of page: 0, address: 10 must be "00".

Switch setting:

DEMO MODE (Menu setting) ..... OFF

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	3	0C	02	Set the data, and press PAUSE button.
3	C	25		Change the data and set the Y signal level (A) to the specified value.
4	C	25		Press PAUSE button.
5	3	0C	00	Set the data, and press PAUSE button.
6	0	01	00	Set the data.

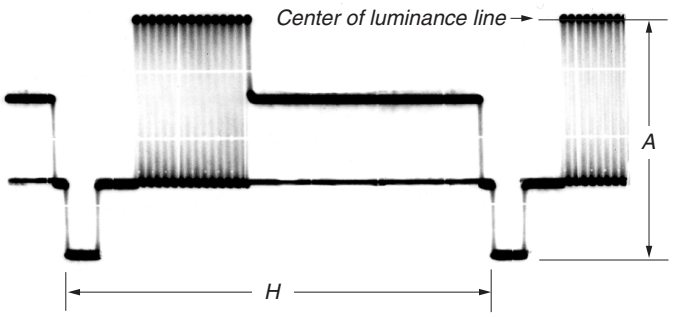


Fig. 5-3-7.

3. S VIDEO OUT Chroma Level Adjustment (VC-283 Board)

Mode	Camera
Subject	Arbitrary
Measurement Point	Chroma signal terminal of S VIDEO jack (75Ω terminated) External trigger: Y signal terminal of S VIDEO jack
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	26, 27
Specified Value	Cr level: A = 714 ± 14mV (NTSC) A = 700 ± 14mV (PAL) Cb level: B = 714 ± 14mV (NTSC) B = 700 ± 14mV (PAL) Burst level: C = 286 ± 6mV (NTSC) C = 300 ± 6mV (PAL)

Note: The data of page: 0, address: 10 must be “00”.

Switch setting:

DEMO MODE (Menu setting) ..... OFF

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	Set the data.
2	3	0C	02	Set the data, and press PAUSE button.
3	C	26		Change the data and set the Cr signal level (A) to the specified value.
4	C	26		Press PAUSE button.
5	C	27		Change the data and set the Cb signal level (B) to the specified value.
6	C	27		Press PAUSE button.
7				Check that the burst signal level (C) is satisfied the specified value.
8	3	0C	00	Set the data, and press PAUSE button.
9	0	01	00	Set the data.

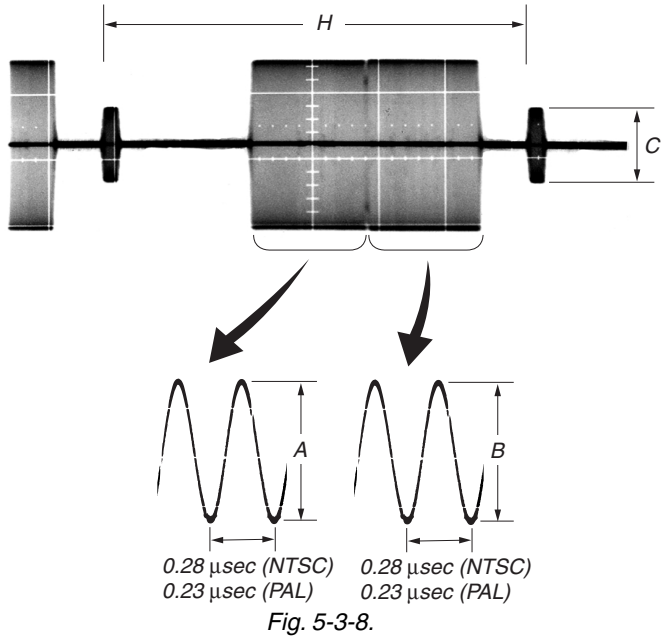


Fig. 5-3-8.

4. VIDEO OUT Y, Chroma Level Check (VC-283 Board)

Mode	Camera
Subject	Arbitrary
Measurement Point	Video terminal of AUDIO VIDEO jack (75Ω terminated)
Measuring Instrument	Oscilloscope
Specified Value	Sync level: A = 286 ± 18mV (NTSC) A = 300 ± 18mV (PAL) Burst level: B = 286 ± 18(mV (NTSC) B = 300 ± 18mV (PAL)

Note: The data of page: 0, address: 10 must be “00”.

Switch setting:

DEMO MODE (Menu setting) ..... OFF

Adjusting method:

Order	Page	Address	Data	Procedure
1	3	0C	02	Set the data, and press PAUSE button.
2				Check that the sync signal level (A) satisfies the specified value.
3				Check that the burst signal level (B) satisfies the specified value.
4	3	0C	00	Set the data, and press PAUSE button.

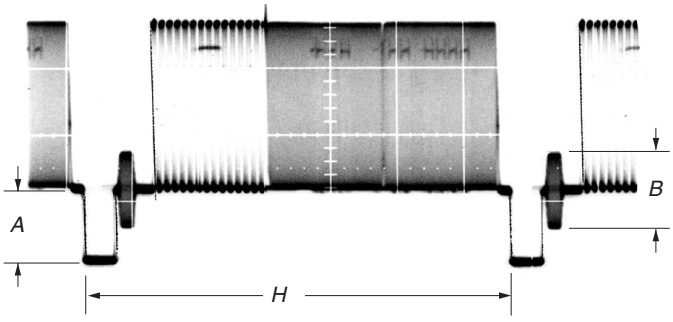


Fig. 5-3-9.

3-5. AUDIO SYSTEM ADJUSTMENTS

[Connection of Audio System Measuring Devices]

Connect the audio system measuring devices as shown in Fig. 5-3-10.

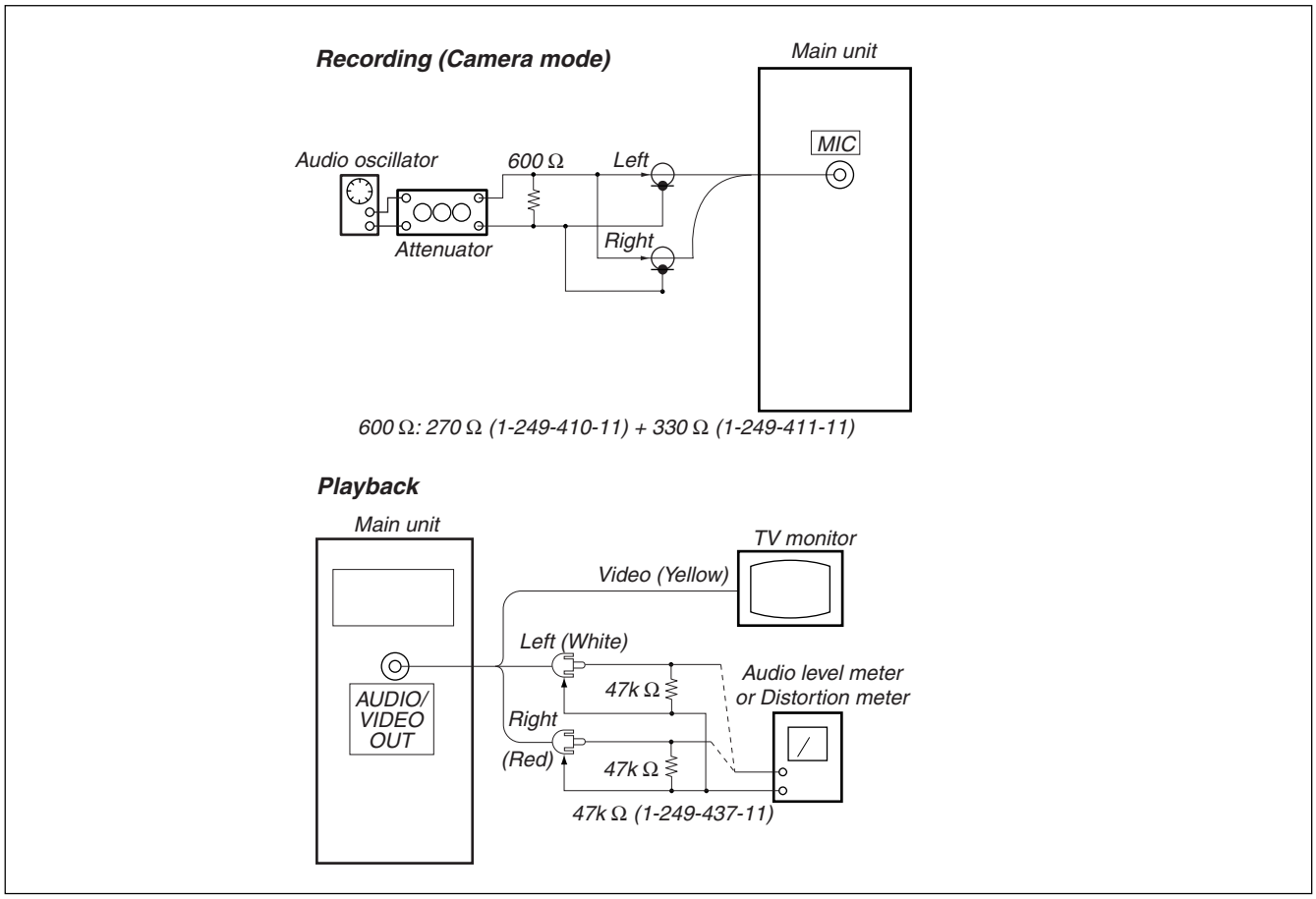


Fig. 5-3-10.

1. Playback Level Check

Mode	VTR playback
Signal	Alignment tape: For audio operation check (XH5-3 (NTSC)) (XH5-3P (PAL))
Measurement Point	Audio left or right terminal of AUDIO VIDEO jack
Measuring Instrument	Audio level meter and frequency counter
Specified Value	32 kHz mode: 1 kHz, +3.0 ± 2.0dBs 48 kHz mode: 1 kHz, +3.0 ± 2.0dBs 44.1 kHz mode: The 7.35kHz signal level during EMP OFF is +2.0 ± 2.0dBs. The 7.35kHz signal level during EMP ON is –6 ± 2 dB from the signal level during EMP OFF.

Checking Method:

1) Check that the playback signal level is the specified value.

2. Overall Level Characteristics Check

Mode	Camera recording and playback
Signal	400Hz, –66 dBs signal: MIC jack left and right
Measurement Point	Audio left or right terminal of AUDIO VIDEO jack
Measuring Instrument	Audio level meter
Specified Value	–7.5 ± 3.0dBs

Checking Method:

1) Input the 400Hz, –66dBs signal in the MIC jack.
2) Record in the camera mode.
3) Playback the recorded section.
4) Check that the 400Hz signal level is the specified value.

3. Overall Distortion Check

Mode	Camera recording and playback
Signal	400Hz, –66dBs signal: MIC jack left and right
Measurement Point	Audio left or right terminal of AUDIO VIDEO jack
Measuring Instrument	Audio distortion meter
Specified Value	Below 0.4% (200Hz to 6kHz BPF ON)

Checking Method:

1) Input the 400Hz, –66dBs signal in the MIC jack.
2) Record in the camera mode.
3) Playback the recorded section.
4) Check that the distortion is the specified value.

4. Overall Noise Level Check

Mode	Camera recording and playback
Signal	No signal: Insert a shorting plug in the MIC jack
Measurement Point	Audio left or right terminal of AUDIO VIDEO jack
Measuring Instrument	Audio level meter
Specified Value	Below –45dBs (IHF-A filter ON, 20kHz LPF ON)

Checking Method:

1) Insert a shorting plug in the MIC jack.
2) Record in the camera mode.
3) Playback the recorded section.
4) Check that the noise level is the specified value.

5. Overall Separation Check

Mode	Camera recording and playback
Signal	400Hz, –66dBs signal: MIC jack <right> [left] (Connect the MIC jack <left> [right] to GND)
Measurement Point	Audio <left> [right] terminal of AUDIO VIDEO jack
Measuring Instrument	Audio level meter
Specified Value	Below –40dBs (IHF-A filter ON)

< > : Left channel check
[ ] : Right channel check

Checking Method:

1) Input the 400Hz, –66dBs signal in the <right> [left] terminal of the MIC jack only.
2) Record in the camera mode.
3) Playback the recorded section.
4) Check that the signal level of the audio <left> [right] terminal is the specified value.

5-4. SERVICE MODE

4-1. ADJUSTMENT REMOTE COMMANDER

The adjustment remote commander is used for changing the calculation coefficient in signal processing, EVR data, etc. The adjustment remote commander performs bi-directional communication with the unit using the remote commander signal line (LANC). The resultant data of this bi-directional communication is written in the non-volatile memory.

1. Using the adjustment remote commander

1) Connect the adjustment remote commander to the LANC terminal.
2) Set the HOLD switch of the adjustment remote commander to "HOLD" (SERVICE position). If it has been properly connected, the LCD on the adjustment remote commander will display as shown in Fig. 5-4-1.

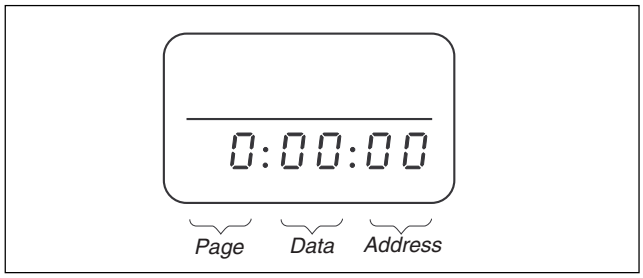


Fig. 5-4-1

3) Operate the adjustment remote commander as follows.
   - Changing the page
     The page increases when the EDIT SEARCH+ button is pressed, and decreases when the EDIT SEARCH– button is pressed. There are altogether 19 pages, from 0 to F, 1B, 1E, 1F. (Note)

Hexadecimal notation	0 1 2 3 4 5 6 7 8 9 A B C D E F
LCD Display	0 1 2 3 4 5 6 7 8 9 A b c d E F
Decimal notation conversion value	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

   - Changing the address
     The address increases when the FF (►►) button is pressed, and decreases when the REW (◄◄) button is pressed. There are altogether 256 addresses, from 00 to FF.
   - Changing the data (Data setting)
     The data increases when the PLAY (►) button is pressed, and decreases when the STOP (■) button is pressed. There are altogether 256 data, from 00 to FF.
   - Writing the adjustment data
     The PAUSE button must be pressed to write the adjustment data (8, A, B, C, D, E, F, 1B, 1E, 1F page) in the nonvolatile memory. (The new adjusting data will not be recorded in the nonvolatile memory if this step is not performed.)
4) After completing all adjustments, turn off the main power supply once.

Note: When reading or writing the 1B, 1E, 1F page data, select page: 0, address: 10, and set data: 01, then select B, E or F page. The 1B, 1E or 1F page can be chosen by this data setting.
After reading or writing, reset the data of page: 0, address: 10 to "00".

2. Precautions upon using the adjustment remote commander

Mishandling of the adjustment remote commander may erase the correct adjustment data at times. To prevent this, it is recommended that all adjustment data be noted down before beginning adjustments and new adjustment data after each adjustment.

4-2. DATA PROCESS

The calculation of the DDS display and the adjustment remote commander display data (hexadecimal notation) are required for obtaining the adjustment data of some adjustment items. In this case, after converting the hexadecimal notation to decimal notation, calculate and convert the result to hexadecimal notation, and use it as the adjustment data. Indicates the hexadecimal-decimal conversion table.

Hexadecimal-decimal Conversion Table

① \ Lower digit of hexadecimal / Upper digit of hexadecimal	0	1	2	3	4	5	6	7	8	9	A (A)	B (b)	C (c)	D (d)	E (E)	F (F)
0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
3	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
4	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
5	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
6	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
7	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
8	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
9	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159
A (A)	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
B (b)	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191
C (c)	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207
D (d)	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223
E (E)	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239
F (F)	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255

② (D (d) column)

Note : The characters shown in the parenthesis ( ) shown the display on the adjustment remote commander.

(Example) If the DDS display or the adjustment remote commander shows BD (bd);
Because the upper digit of the adjustment number is B (b), and the lower digit is D (d), the meeting point "189" of ① and ② in the above table is the corresponding decimal number.

Table. 5-4-1.

4-3. SERVICE MODE

Note: Before performing the adjustments, check the data of page: 0, address: 10 is "00". If not, set data: 00 to this address.

1. Setting the Test Mode

Page D	Address 10

Data	Function
00	Normal
01	Forced camera power ON
02	Forced VTR power ON
03	Forced camera + VTR power ON
05	Forced memory power ON

- Before setting the data , select page: 0, address: 01, and set data: 01.
- For page D, the data set is recorded in the non-volatile memory by pressing the PAUSE button of the adjustment remote commander. In this case, take note that the test mode will not be exited even when the main power is turned off.
- After completing adjustments/repairs, be sure to return the data of this address to 00, and press the PAUSE button of the adjustment remote commander.
  Select page: 0, address: 01, and set data: 00.

2. Emergence Memory Address

Page C	Address F4 to FF

Address	Contents
F4	EMG code when first error occurs
F6	Upper: MSW code when shift starts when first error occurs Lower: MSW code when first error occurs
F7	Lower: MSW code to be moved when first error occurs
F8	EMG code when second error occurs
FA	Upper: MSW code when shift starts when second error occurs Lower: MSW code when second error occurs
FB	Lower: MSW code to be moved when second error occurs
FC	EMG code when last error occurs
FE	Upper: MSW code when shift starts when last error occurs Lower: MSW code when last error occurs
FF	Lower: MSW code to be moved when last error occurs

When no error occurs in this unit, data "00" is written in the above addresses (F4 to FF). when first error occurs in the unit, the data corresponding to the error is written in the first emergency address (F4 to F7). In the same way, when the second error occurs, the data corresponding to the error is written in the second emergency address (F8 to FB). Finally, when the last error occurs, the data corresponding to the error is written in the last emergency address (FC to FF).

Note: After completing adjustments, be sure to initialize the data of addresses F4 to FF to "00".

Initializing method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 3, address: 01, set data: 37, and press the PAUSE button.
3) Select page: 0, address: 01, and set data: 00.

2-1. EMG Code (Emergency Code)

Codes corresponding to the errors which occur are written in addresses F4, F8 and FC. The type of error indicated by the code are shown in the following table.

Code	Emergency Type
00	No error
10	Loading motor emergency during loading
11	Loading motor emergency during unloading
22	T reel emergency during normal rotation
23	S reel emergency during normal rotation
24	T reel emergency (Short circuit between S reel terminal and T reel terminal)
30	FG emergency at the start up of the capstan
40	FG emergency at the start up of the drum
42	FG emergency during normal rotation of the drum

2-2. MSW Code

MSW when errors occur:

Information on MSW (mode SW) when errors occur

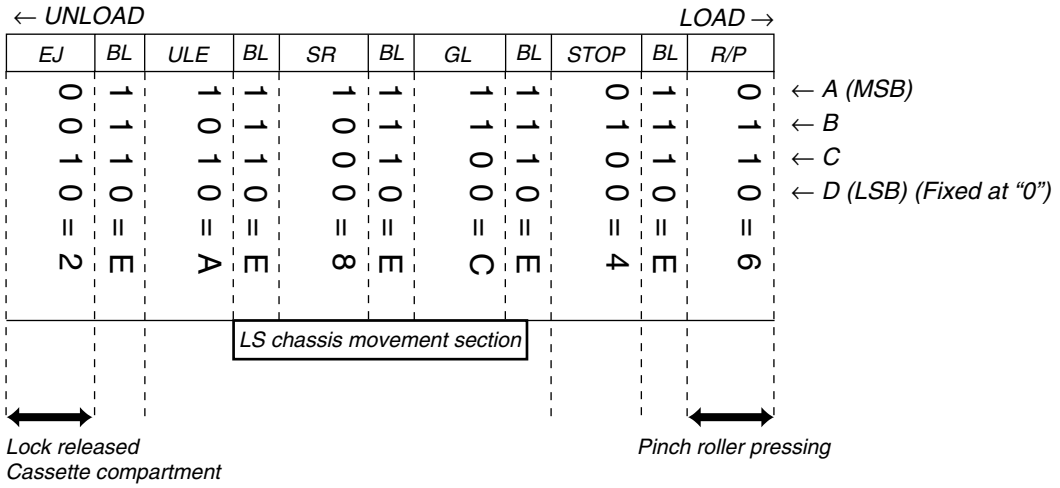
MSW when movement starts:

Information on MSW when movements starts when the mechanism position is moved (When the L motor is moved)

MSW of target of movement:

Information on target MSW of movement when the mechanism position is moved

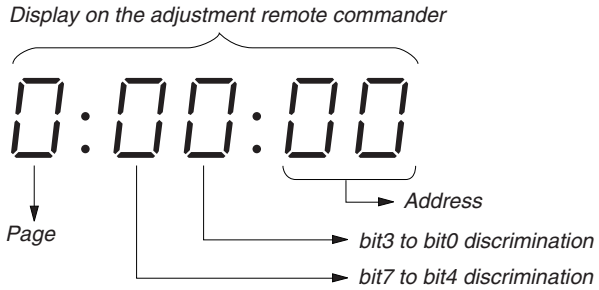
Mechanical Position



Position	Code	Contents
EJ	2	Position at which the cassette component lock is released, at the farthest unload side mechanically at which the mechanism can move no further in the UNLOAD direction.
BL	E	BLANK code, at the boundary between codes.
ULE	A	EJECT completion position. when the cassette is ejected, the mechanism will stop at this position. Cassette IN standby. The guide will start protruding out as the mechanism moves towards the LOAD position.
SR	8	Position at which it is possible to release the S ratchet.
GL	C	Guide loading are performed here.
STOP	4	Stop position in the loading state. The pinch roller separates, the tension regulator returns, and the brake is imposed on both reels.
R/P	6	PB, REC, CUE, REVIEW, PAUSE positions. When pinch roller is pressed, and the tension regulator is ON, the mechanism is operating at this position in modes in which normal images are shown.
NULL	0	Code not existing in the MD. Default value.
	F	Status before finding any mechanism position.

3. Bit value discrimination

Bit values must be discriminated using the display data of the adjustment remote commander for following items. Use the table below to discriminate if the bit value is "1" or "0".



	Display on the adjustment remote commander	Bit values			
		bit3 or bit7	bit2 or bit6	bit1 or bit5	bit0 or bit4
	0	0	0	0	0
	1	0	0	0	1
	2	0	0	1	0
	3	0	0	1	1
	4	0	1	0	0
	5	0	1	0	1
	6	0	1	1	0
	7	0	1	1	1
Ⓐ	8	1	0	0	0
	9	1	0	0	1
	A (A)	1	0	1	0
	B (b)	1	0	1	1
	C (c)	1	1	0	0
	D (d)	1	1	0	1
Ⓑ	E (E)	1	1	1	0
	F (F)	1	1	1	1

Example: If "8E" is displayed on the adjustment remote commander, the bit values for bit7 to bit4 are shown in the Ⓐ column, and the bit values for bit3 to bit0 are shown in the Ⓑ column.

4. Switch check (1)

Page 7	Address 0E

Note: The data of page: 0, address: 10 must be "00".

Bit	Function	When bit value=1	When bit value=0
0	POWER SW (VTR MODE SW) (PS-2890 block S003)	OFF	ON (VCR/PLAYER)
1	POWER SW (CAM MODE SW) (PS-2890 block S002)	OFF	ON (CAMERA)
2	START/STOP SW (PS-2890 block S001)	OFF	ON
3	EJECT SW (FP-460 flexible)	OFF	ON
4	CC DOWN SW (Mechanism chassis)	OFF (UP)	ON (DOWN)
5	PHOTO SW (PHOTO FREEZE SW) (FK-2890 block S070)	OFF	ON
6	POWER SW (PHOTO STBY SW) (PS-2890 block S004)	OFF	ON (MEMORY)
7			

Using method:

1) Select page: 7, address: 0E.
2) By discriminating the bit value of display data, the state of the switch can be discriminated.

5. Switch check (2)

Page 7	Address 0C

Note: The data of page: 0, address: 10 must be "00".

Bit	Function	When bit value=1	When bit value=0
1	MIC jack (MA-409 board J6202)	Used	Not used
2	AUDIO/VIDEO jack (JK-219 board J5303)	Used	Not used
3	S VIDEO jack (JK-219 board J5302)	Used	Not used

Using method:

1) Select page: 7, address: 0C.
2) By discriminating the bit value of display data, the state of the switch can be discriminated.

6. Switch check (3)

Page 3	Address 61

Note: The data of page: 0, address: 10 must be “00”.

Bit	Function	When bit value=1	When bit value=0
6	HEADPHONS jack	Used	Not used

Using method:

1) Select page: 3, address: 61.
2) By discriminating the bit value of display data, the state of the switch can be discriminated.

7. Switch check (4)

Page 2	Address 60 to 65

Using method:

1) Select page: 2, address: 60 to 65.
2) By discriminating the display data, the pressed key can be discriminated.

Address	Data							
	00 (00 to 0C)	19 (0D to 26)	34 (27 to 43)	53 (44 to 63)	76 (64 to 8A)	A0 (8B to B6)	CE (B7 to E6)	FF (E7 to FF)
60 (KEY AD0) (IC3101 ⑲)	COLOR SLOW S/ SUPER NS (JK-219 board) (S5301)	FLASH (JK-219 board) (S5302)						No key input
61 (KEY AD1) (IC3101 ⑳)	EDIT SEARCH – (FK-2890 block) (S068)	EDIT SEARCH + (FK-2890 block) (S067)	PHOTO (PHOTO REC) (FK-2890 block) (S069)					No key input
62 (KEY AD2) (IC3101 ㉑)						FOCUS INFINTY (KP-2890 block) (S007)	FOCUS AUTO (KP-2890 block) (S007)	FOCUS MANUAL (KP-2890 block) (S007)
63 (KEY AD3) (IC3101 ㉕)	STOP (KY-2890 block) (S001)	REW (KY-2890 block) (S002)	PLAY (KY-2890 block) (S003)	FF (KY-2890 block) (S004)	PAUSE (KY-2890 block) (S005)		PANEL CLOSE (CK-155 board) (S5201)	PANEL OPEN (CK-155 board) (S5201)
64 (KEY AD4) (IC3101 ㉖)	REC (KY-2890 block) (S006, 007)	VLUME – (KY-2890 block) (S008)	VLUME + (KY-2890 block) (S009)	DISPLAY (KY-2890 block) (S010)	MENU (KY-2890 block) (S011)		PANEL REVERSE (FP-461 flexible)	PANEL NORMAL (FP-461 flexible)
65 (KEY AD5) (IC3101 ㉗)	NET WORK (KP-2890 block) (S001) *1	EXECUTE (KP-2890 block) (S002)	PROGRAM AE (KP-2890 block) (S003)	EXPOSURE (KP-2890 block) (S004)	BACK LIGHT (KP-2890 block) (S005)	FADER (KP-2890 block) (S006)		No key input

*1: DCR-TRV50/TRV50E

8. Record of Use check (1)

Page 7	Address A7 to A9

Note1: When replacing the drum assembly or the mechanism deck, initialize the data of address: A7 to A9.
Note2: This data will be kept even if the lithium battery (CK-115 board BT5201 of the cabinet (R) assembly) is removed.
Note3: The data of page: 0, address: 10 must be “00”.

Address	Function		Remarks
A7	Drum rotation counted time (BCD code)	Hour (H)	100000th place digit and 10000th place digit of counted time
A8		Hour (M)	1000th place digit and 100th place digit of counted time
A9		Hour (L)	10th place digit and 1st place digit of counted time

Using method:
1) The record of use data is displayed at addresses: A7 to A9.

Initializing method:
1) Select page: 7, address: 00, and set data: 71.
2) Select page: 7, address: 01, set data: 71 and press the PAUSE button.
3) Check that the data of page: 7, address: 02 is “00”.

9. Record of Use check (2)

Page 7	Address C8 to CD

Note1: This data will be kept even if the lithium battery (CK-115 board BT5201 of the cabinet (R) assembly) is removed.
Note2: The data of page: 0, address: 10 must be “00”.

Address	Function		Remarks
C8	User initial power on date (BCD code)	Year	After setting the clock, set the date of power on next.
C9		Month	
CA		Day	
CB	Final condensation occurrence date (BCD code)	Year	
CC		Month	
CD		Day	

Using method:
1) The record of use data is displayed at addresses: C8 to CD.

10. Record of Self-diagnosis check

Page 7	Address B0 to C6

Note1: This data will be kept even if the lithium battery (CK-115 board BT5201 of the cabinet (R) assembly) is removed.
Note2: The data of page: 0, address: 10 must be “00”.

Address	Self-diagnosis code
B0	“Repaired by” code (Occurred 1st time) *1
B1	“Block function” code (Occurred 1st time)
B2	“Detailed” code (Occurred 1st time)
B4	“Repaired by” code (Occurred 2nd time) *1
B5	“Block function” code (Occurred 2nd time)
B6	“Detailed” code (Occurred 2nd time)
B8	“Repaired by” code (Occurred 3rd time) *1
B9	“Block function” code (Occurred 3rd time)
BA	“Detailed” code (Occurred 3rd time)
BC	“Repaired by” code (Occurred 4th time) *1
BD	“Block function” code (Occurred 4th time)
BE	“Detailed” code (Occurred 4th time)
C0	“Repaired by” code (Occurred 5th time) *1
C1	“Block function” code (Occurred 5th time)
C2	“Detailed” code (Occurred 5th time)
C4	“Repaired by” code (Occurred the last time) *1
C5	“Block function” code (Occurred the last time)
C6	“Detailed” code (Occurred the last time)

*1 : “01” → “C”, “03” → “E”

Using method:
1) The past self-diagnosis codes are displayed at addresses: BC to C6. Refer to “SELF-DIAGNOSIS FUNCTION” for detail of the self-diagnosis code.

COVER

SECTION 6
REPAIR PARTS LIST

6-1. EXPLODED VIEWS

NOTE:

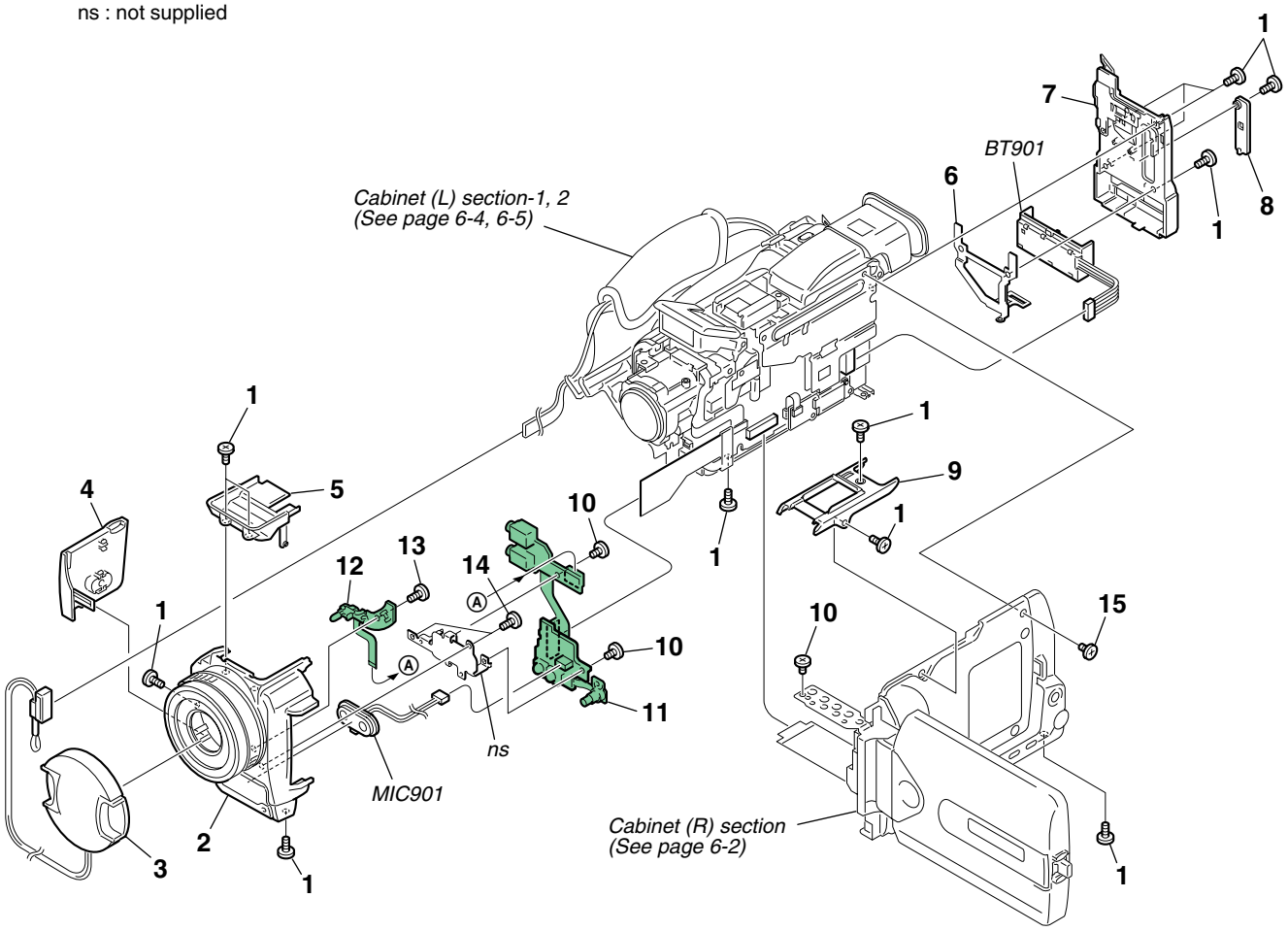
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Abbreviation
  CND : Canadian model
  AUS : Australian model
  CH : Chinese model
  JE : Tourist model
  EE : East Europian model
  HK : Hong Kong model

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

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

6-1-1. OVERALL SECTION

ns : not supplied

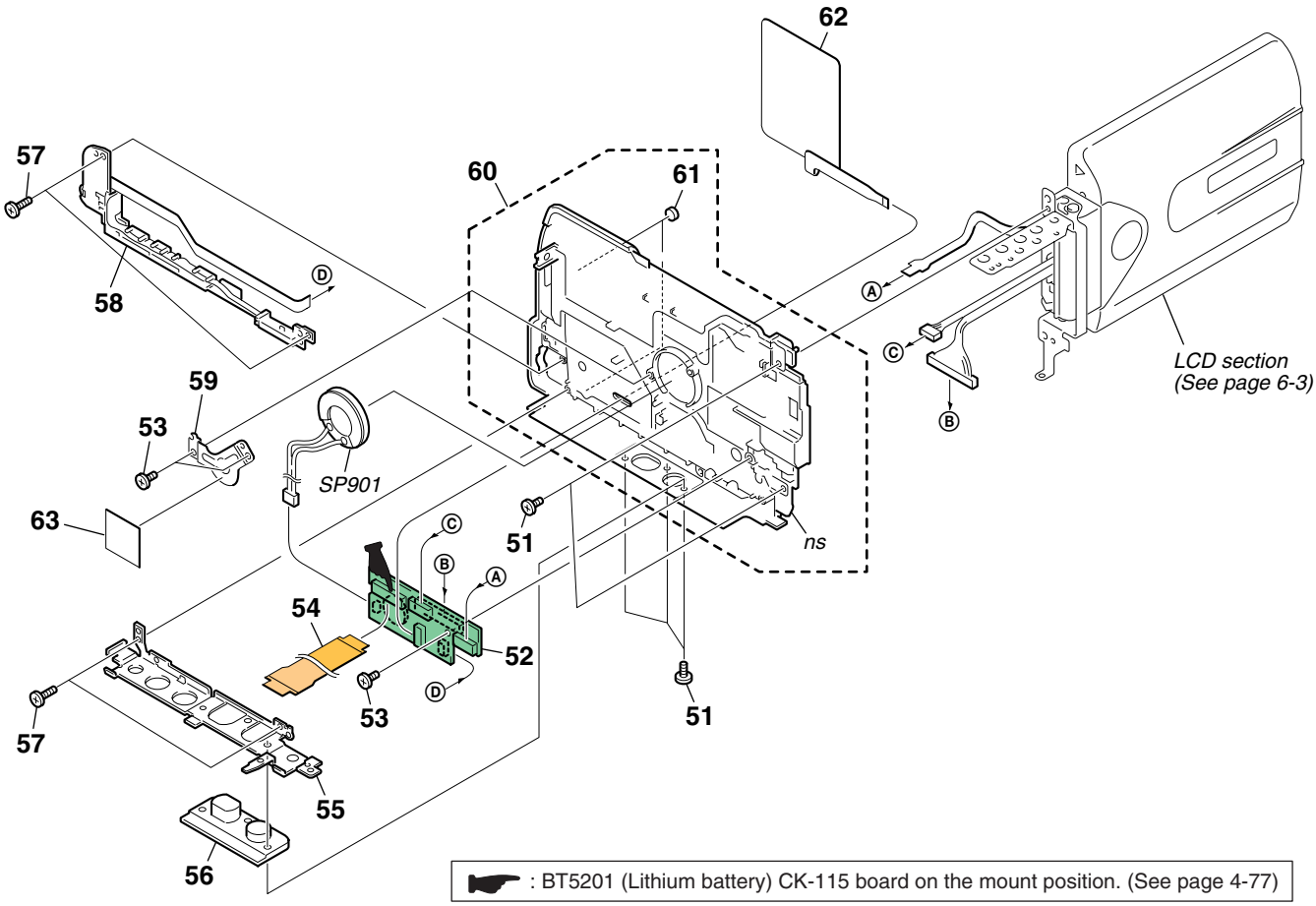


Ref. No.	Part No.	Description
1	3-989-735-81	SCREW (M1.7), LOCK ACE, P2
2	X-3952-430-1	F PANEL ASSY (TRV50/TRV50E)
2	X-3952-435-1	F PANEL ASSY (TRV40/TRV40E)
3	X-3949-944-1	CAP (A) ASSY, LENS
4	X-3952-294-1	COVER ASSY, JACK
5	3-074-489-01	ST COVER
6	3-067-024-01	BRACKET (LOWER), STRAP
7	X-3952-229-1	BT PANEL ASSY
8	3-067-025-01	CPC LID

Ref. No.	Part No.	Description
9	3-073-929-01	TOP CABINET
10	4-974-725-01	SCREW (M1.7), LOCK ACE, P2
11	A-7078-135-A	MA-408 BOARD, COMPLETE
12	A-7078-136-A	SE-124 BOARD, COMPLETE
13	3-713-791-11	SCREW (M1.7X5), TAPPING, P2
14	3-713-791-51	SCREW (M1.7X3.5), TAPPING, P2
BT901	1-694-772-11	TERMINAL BOARD, BATTERY
MIC901	1-418-351-11	MICROPHONE UNIT

6-1-2. CABINET (R) SECTION

ns : not supplied



: BT5201 (Lithium battery) CK-115 board on the mount position. (See page 4-77)

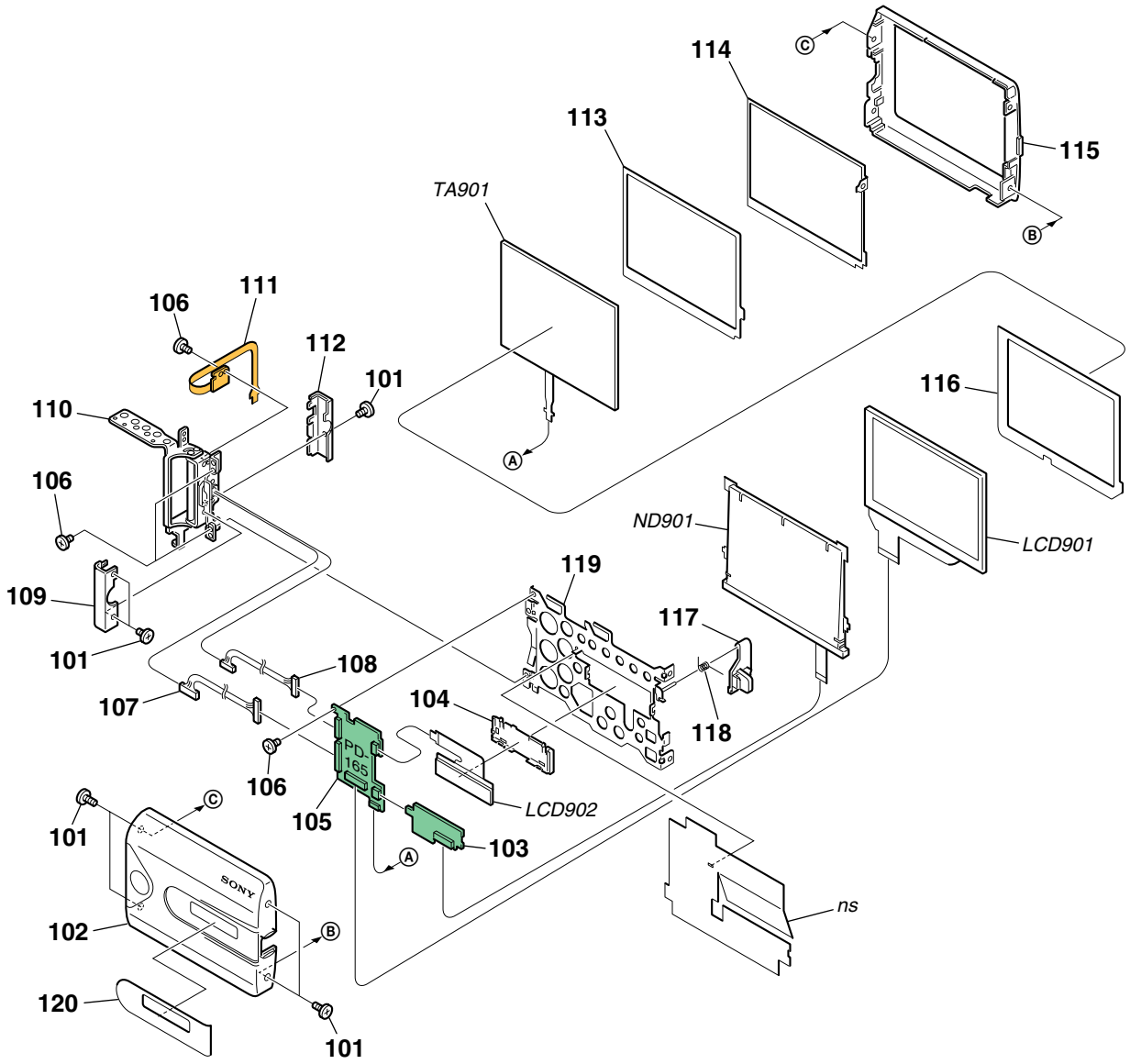
CAUTION :
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

Ref. No.	Part No.	Description
51	3-055-573-01	SCREW (M1.7), LOCK ACE, P2
52	A-7078-133-A	CK-115 BOARD, COMPLETE
53	3-713-791-51	SCREW (M1.7X3.5), TAPPING, P2
54	1-684-315-11	FP-456 FLEXIBLE BOARD
55	3-074-072-01	FRAME BOTTOM
56	3-055-257-01	TRIPOD (LARGE)
57	3-713-791-11	SCREW (M1.7X5), TAPPING, P2
58	1-477-179-11	SWITCH BLOCK, CONTROL (KP-2890)

Ref. No.	Part No.	Description
59	X-3952-463-1	RETAINER ASSY, SPEAKER
60	X-3952-429-1	CABINET (R) ASSY (TRV50/TRV50E)
60	X-3952-433-1	CABINET (R) ASSY (TRV40/TRV40E)
61	3-959-978-02	CUSHION, PANEL
62	1-477-182-21	SWITCH BLOCK, CONTROL (KY-2890)
63	3-075-198-01	SP INSULATING SHEET
SP901	1-529-590-11	SPEAKER (2.0CM)

6-1-3. LCD SECTION

ns : not supplied



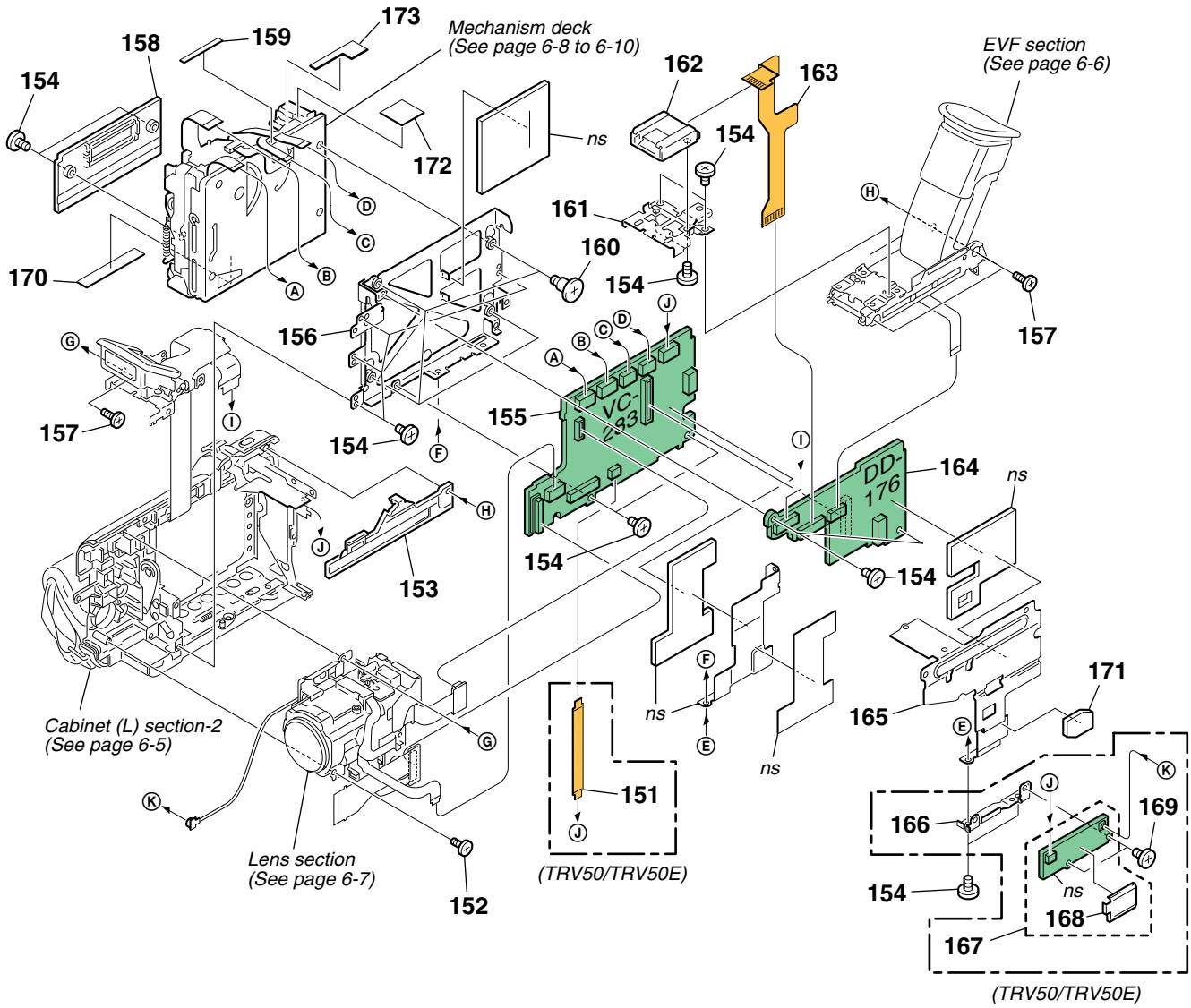
Ref. No.	Part No.	Description
101	3-989-735-81	SCREW (M1.7), LOCK ACE, P2
102	X-3952-325-1	P CABINET (C) ASSY (TRV50/TRV50E)
102	X-3952-436-1	P CABINET (C) ASSY (TRV40/TRV40E)
⚠103	1-477-187-11	TRANSFORMER UNIT, INVERTER
104	3-055-289-01	HOLDER, LCD
105	A-7078-134-A	PD-165 BOARD, COMPLETE
106	4-974-725-01	SCREW (M1.7), LOCK ACE, P2
107	1-961-642-11	HARNESS (PC-121)
108	1-961-643-11	HARNESS (PC-122)
109	3-074-073-01	COVER (FRONT), HINGE
110	X-3952-326-1	HINGE ASSY
111	1-684-320-21	FP-461 FLEXIBLE BOARD
112	3-074-074-01	COVER (REAR), HINGE
113	3-074-077-01	CUSHION (C)

Ref. No.	Part No.	Description
114	3-074-081-01	PLATE (P), GROUND
115	3-074-075-01	P CABINET (M)
116	3-074-078-01	CUSHION (L)
117	3-074-076-01	BUTTON, PANEL OPEN
118	3-074-080-01	SPRING (P), TORSION COIL
119	X-3952-327-1	P FRAME ASSY
120	3-073-940-11	P ORNAMENTAL PLATE (TRV50E)
120	3-073-940-21	P ORNAMENTAL PLATE (TRV50)
120	3-073-940-31	P ORNAMENTAL PLATE (TRV40E)
120	3-073-940-41	P ORNAMENTAL PLATE (TRV40)
LCD901	1-804-599-21	INDICATOR MODULE LIQUID CRYST
LCD902	A-7096-726-A	INDICATION LCD BLOCK ASSY
⚠ND901	1-518-797-11	TUBE, FLUORESCENT,COLD CATHODE
TA901	1-477-189-11	PANEL, TOUCH

Note :	Note :
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-1-4. CABINET (L) SECTION-1

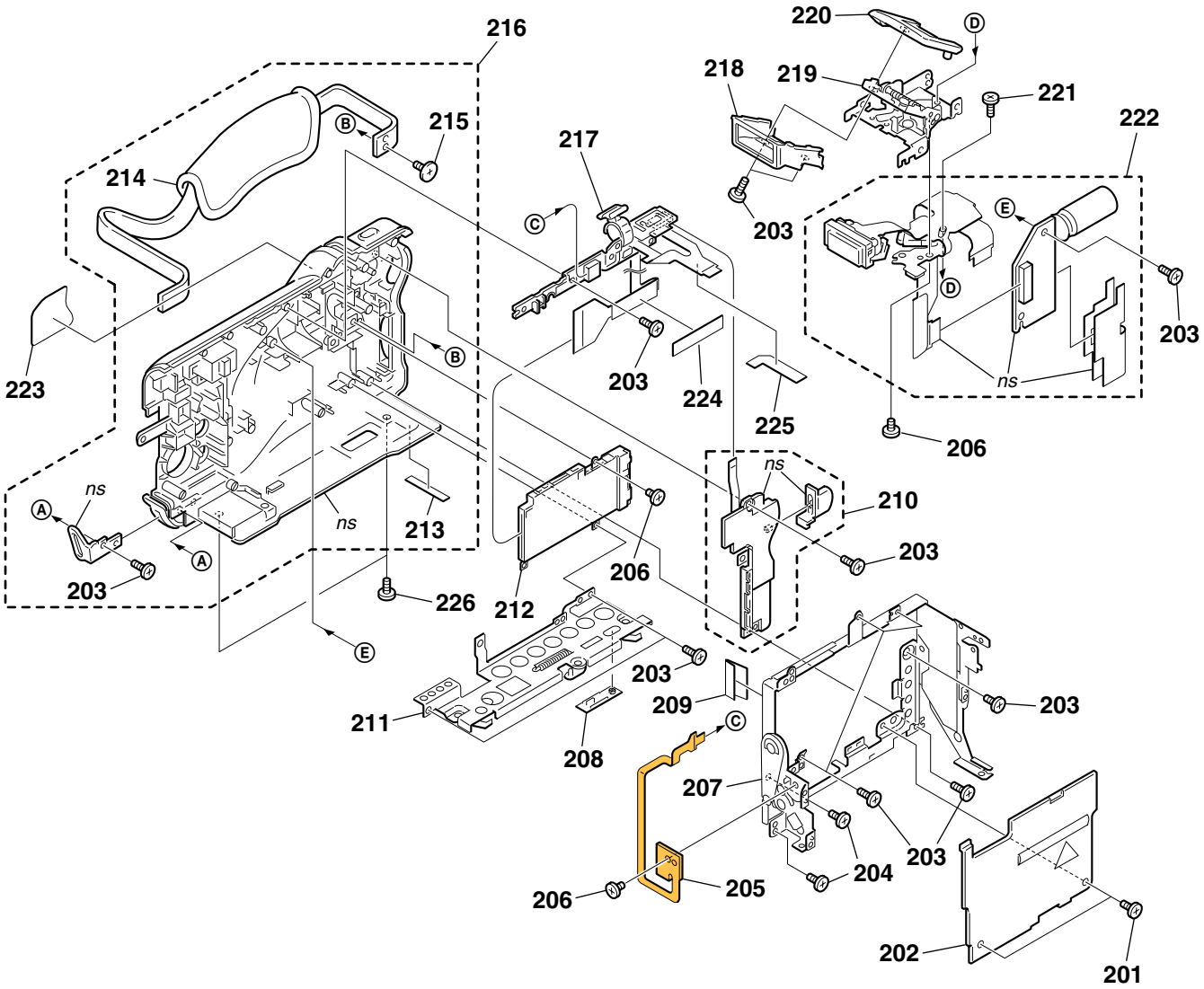
ns : not supplied



Ref. No.	Part No.	Description
151	1-684-316-11	FP-457 FLEXIBLE BOARD (TRV50/TRV50E)
152	3-713-791-51	SCREW (M1.7X3.5), TAPPING, P2
153	3-073-939-01	ZOOM COVER
154	4-974-725-01	SCREW (M1.7), LOCK ACE, P2
155	A-7095-053-A	VC-283 (N) BOARD, COMPLETE (SERVICE) (TRV50)
155	A-7095-107-A	VC-283 (P) BOARD, COMPLETE (SERVICE) (TRV50E)
155	A-7095-108-A	VC-283 (N8) BOARD, COMPLETE (SERVICE) (TRV40)
155	A-7095-109-A	VC-283 (P8) BOARD, COMPLETE (SERVICE) (TRV40E)
156	X-3952-322-1	MD FRAME ASSY
157	3-713-791-11	SCREW (M1.7X5), TAPPING, P2
158	3-059-722-01	COVER, CASSETTE COMPARTMENT
159	3-075-390-01	MY SHEET
160	3-059-718-01	SCREW (M1.4X1.5)
161	3-073-927-01	BASE, SHOE
162	1-815-124-11	CONNECTOR, EXTERNAL (HOT SHOE)
163	1-684-318-11	FP-459 FLEXIBLE BOARD
164	A-7078-114-A	DD-176 BOARD, COMPLETE
165	3-073-932-01	DD HEAT SINK
166	3-073-930-01	NT FRAME (TRV50/TRV50E)
167	A-7067-302-A	BT-003 BOARD (TRV50/TRV50E)
168	X-3951-819-1	CASE ASSY, BT SHIELD (TRV50/TRV50E)
169	3-389-523-22	SCREW (LOCK ACE) (TRV50/TRV50E)
170	3-059-725-01	LABEL, LS
171	3-074-455-01	DD INSULATING SHEET

6-1-5. CABINET (L) SECTION-2

ns : not supplied



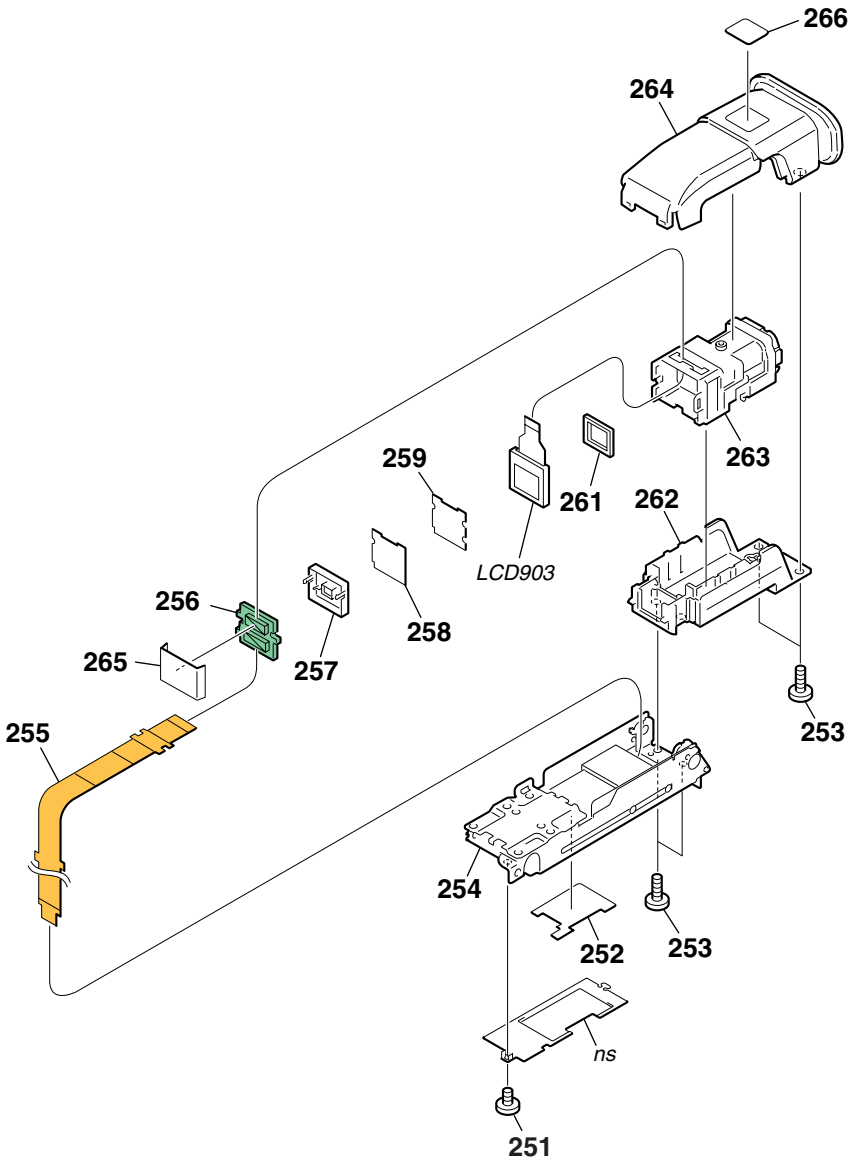
Ref. No.	Part No.	Description
201	3-989-735-81	SCREW (M1.7), LOCK ACE, P2
202	3-073-457-01	COVER, GRIP
203	3-713-791-11	SCREW (M1.7X5), TAPPING, P2
204	3-713-791-51	SCREW (M1.7X3.5), TAPPING, P2
205	1-684-319-21	FP-460 FLEXIBLE BOARD
206	4-974-725-01	SCREW (M1.7), LOCK ACE, P2
207	X-3952-238-1	CS FRAME ASSY
208	3-073-456-01	EJECT KNOB
209	3-073-928-01	L SHEET
210	1-477-181-11	SWITCH BLOCK, CONTROL (PS-2890)
211	X-3952-237-1	LOCK ASSY, GRIP
212	1-816-271-11	CONNECTOR, MEMORY STICK 10P
* 213	3-055-189-01	FOOT (A)
214	3-061-550-01	BELT, GRIP (TRV40/TRV40E)
214	3-074-145-01	BELT, GRIP (TRV50/TRV50E)
215	3-073-686-01	SCREW (M2X2.5)

Ref. No.	Part No.	Description
216	X-3952-431-1	CABINET L ASSY (TRV50E)
216	X-3952-432-1	CABINET L ASSY (TRV50)
216	X-3952-434-1	CABINET L ASSY (TRV40)
216	X-3952-437-1	CABINET (L) ASSY (TRV40E)
217	1-477-180-11	SWITCH BLOCK, CONTROL (FK-2890)
218	3-074-488-01	ST CABINET (LOWER)
219	X-3952-296-1	HINGE ASSY, ST
220	3-074-487-01	ST CABINET (UPPER)
221	3-052-245-01	BOLT (M1.4)
⚠222	1-477-188-11	FLASH UNIT
223	3-073-502-21	SHEET, POWER (TRV50/TRV50E)
223	3-073-502-31	SHEET, POWER (TRV40/TRV40E)
224	3-075-388-01	DM SHEET
225	3-075-389-01	DP SHEET
226	3-989-735-91	SCREW (M1.7), LOCK ACE, P2

Note :	Note :
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-1-6. EVF SECTION

ns : not supplied

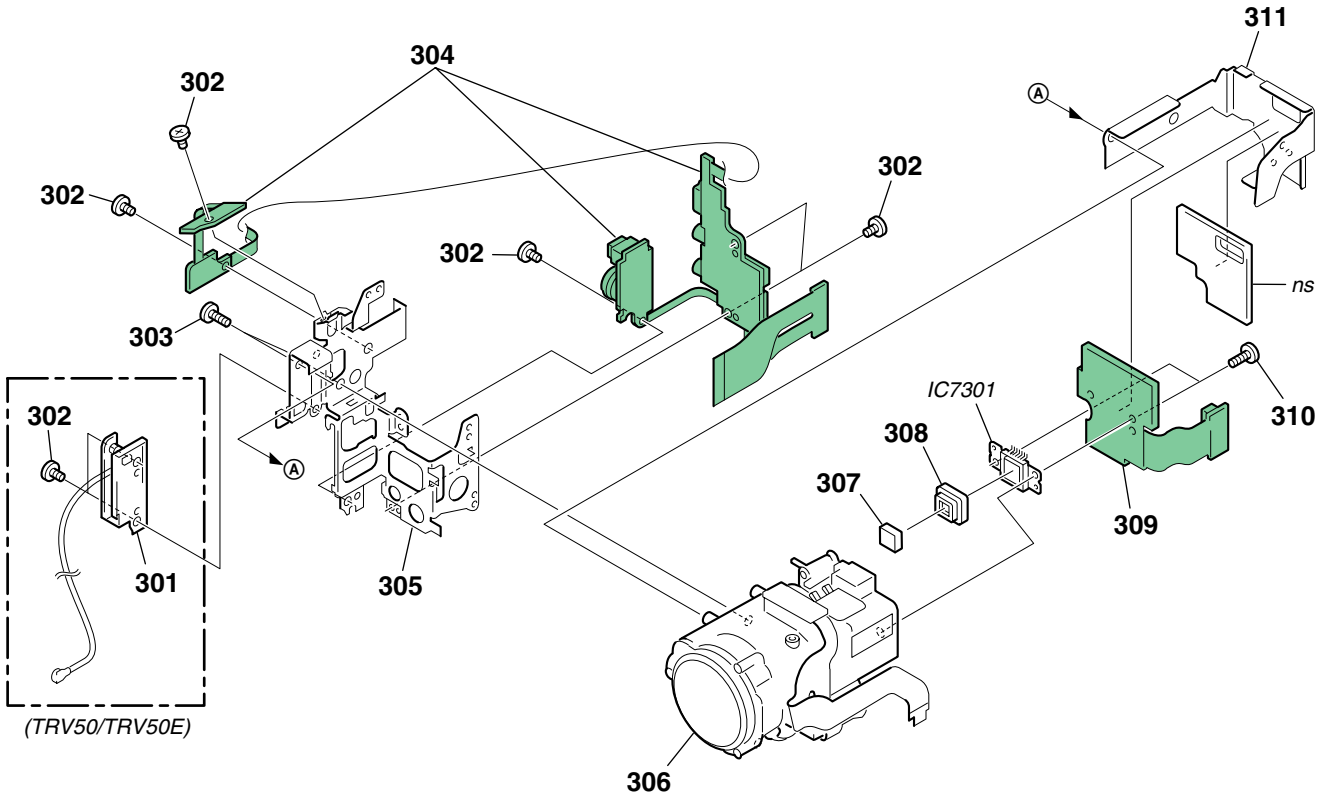


Ref. No.	Part No.	Description
251	4-974-725-01	SCREW (M1.7), LOCK ACE, P2
252	3-073-454-01	SHEET, VF FLEXIBLE RETAINER
253	3-713-791-31	SCREW (M1.7X6), TAPPING, P2
254	X-3952-234-1	VF BASE ASSY
255	1-684-317-11	FP-458 FLEXIBLE BOARD
256	A-7078-132-A	LB-078 BOARD, COMPLETE
257	3-072-214-01	GUIDE (20), LAMP
258	3-072-211-01	ILLUMINATOR

Ref. No.	Part No.	Description
259	3-072-210-01	SHEET, PRISM
261	3-059-734-01	CUSHION (1), LCD
262	X-3952-236-1	VF CABINET (LOWER) ASSY
263	X-3951-453-1	LENS ASSY, VF
264	X-3952-235-1	VF CABINET (UPPER) ASSY
265	3-069-000-01	SHEET, VF ELECTROSTATIC
266	3-074-434-01	COLOR VF LABEL (PR)
LCD903	8-753-028-54	LCX033AN-1

6-1-7. LENS SECTION

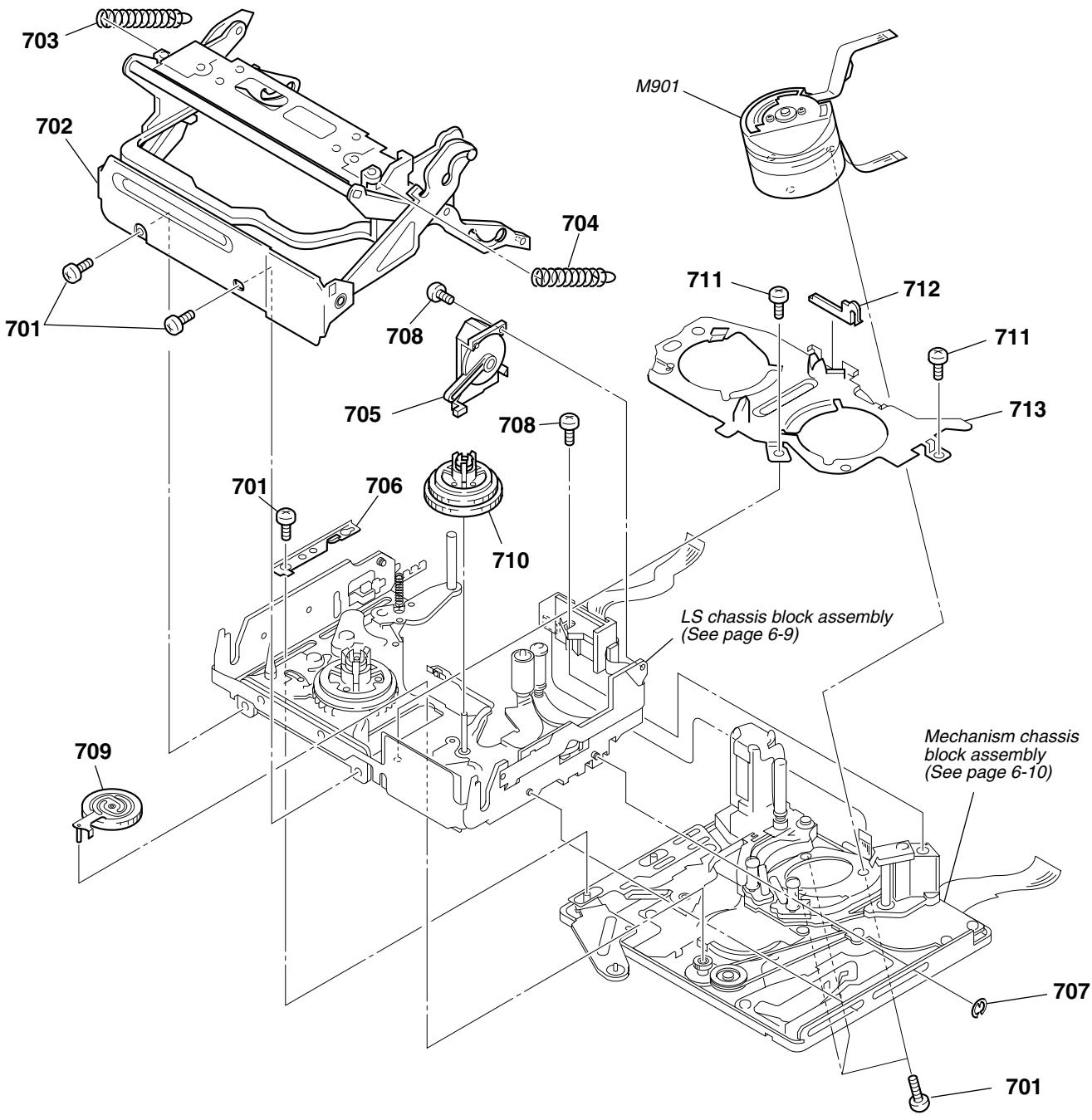
ns : not supplied



Be sure to read “Precautions upon replacing CCD imager” on page 4-11 when changing the CCD imager.

Ref. No.	Part No.	Description
301	1-754-236-11	ANTENNA (2.4GHZ) (TRV50/TRV50E)
302	4-974-725-01	SCREW (M1.7), LOCK ACE, P2
303	3-713-791-51	SCREW (M1.7X3.5), TAPPING, P2
304	A-7078-131-A	JK-219 BOARD, COMPLETE (TRV50/TRV50E)
304	A-7078-191-A	JK-219 (N8) BOARD, COMPLETE (TRV40/TRV40E)
305	3-074-063-01	FRAME, LENS
306	8-848-760-01	DEVICE, LENS LSV-690C
307	1-758-569-11	FILTER BLOCK, OPTICAL
308	3-053-973-01	RUBBER (W), SEAL
309	A-7078-130-A	CD-381 (N) BOARD, COMPLETE (TRV40/TRV50)
309	A-7078-189-A	CD-381 (P) BOARD, COMPLETE (TRV40E/TRV50E)
310	3-713-791-11	SCREW (M1.7X5), TAPPING, P2
311	X-3952-323-1	CD HEAT SINK ASSY
IC7301	A-7095-087-A	CCD BLOCK ASSY (CCD IMAGER)

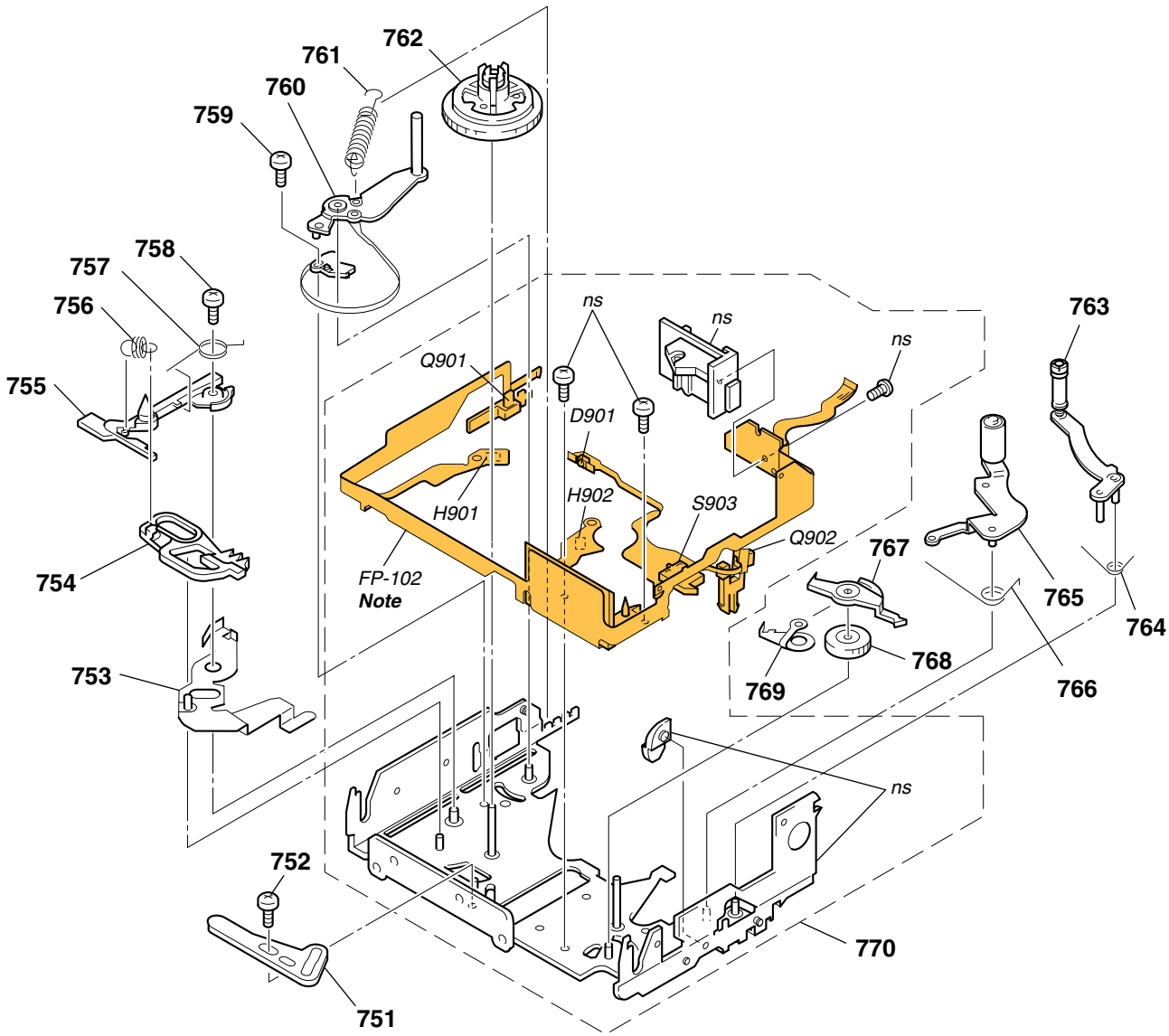
6-1-8. CASSETTE COMPARTMENT ASSY, DRUM ASSY



Ref. No.	Part No.	Description
701	3-703-816-14	SCREW (M1.4)
702	X-3952-017-3	CASSETTE COMPARTMENT ASSY
703	3-059-082-01	SPRING, TENSION (CASSETTE COMPARTMENT S)
704	3-059-208-01	SPRING (CASSETTE COMPARTMENT T)
705	X-3950-370-3	DAMPER ASSY
706	3-059-101-03	RETAINER, LS GUIDE
707	7-624-102-04	STOP RING 1.5, TYPE -E
709	X-3950-364-1	GEAR ASSY, GOOSENECK
710	X-3950-366-1	TABLE ASSY, T REEL
711	3-075-097-01	SCREW (M1.4X1.4), SPECIAL HEAD
712	3-059-093-01	RETAINER, LED
713	X-3950-361-1	PLATE ASSY, RETAINER
M901	A-7048-940-A	DRUM (DEH-18A-R)

6-1-9. LS CHASSIS BLOCK ASSEMBLY

ns : not supplied



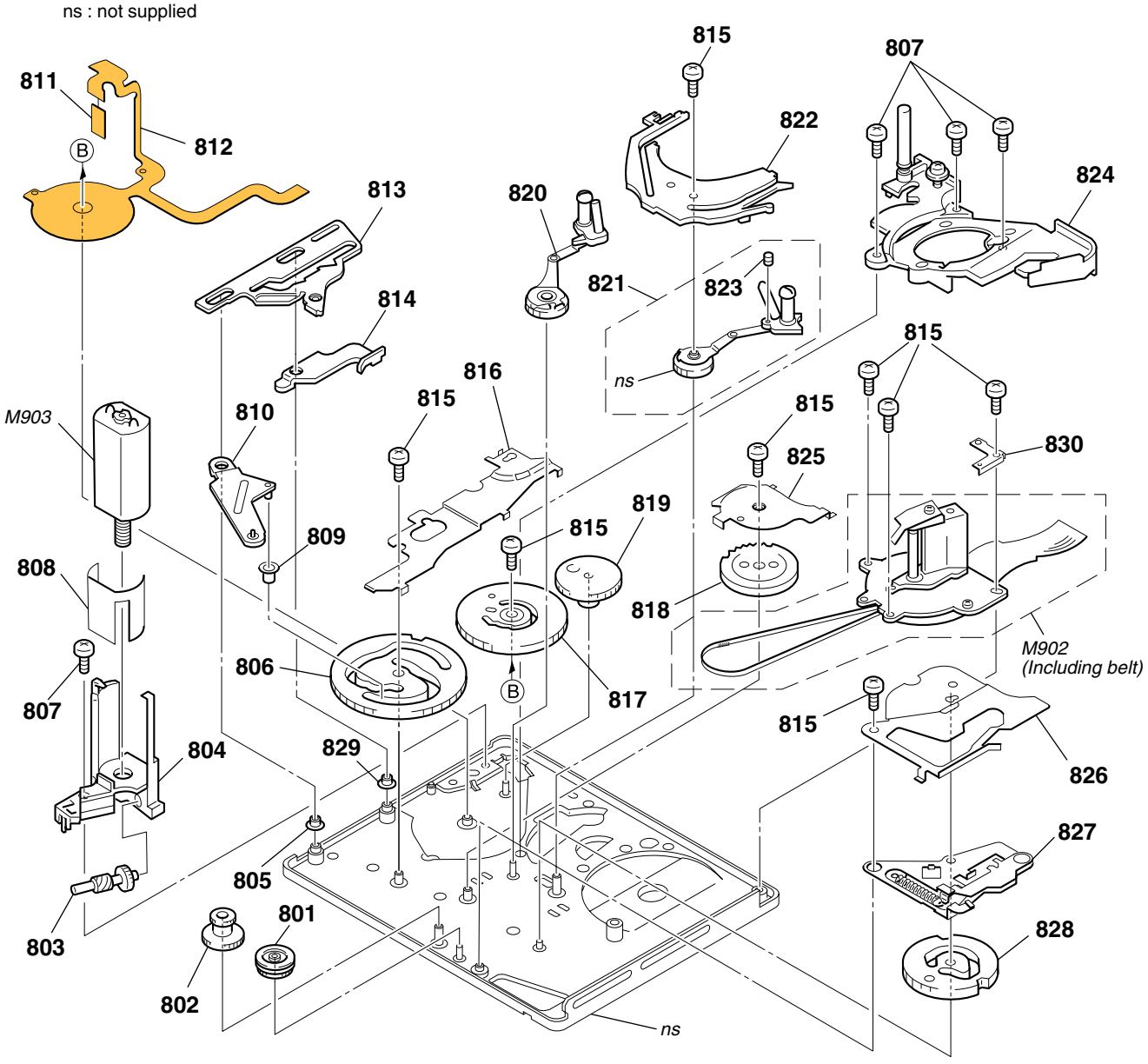
Note: *FP-102 is included in the LS sub assy and is attached to chassis by hot-press.*
Because installation of FP-102 requires a very high accuracy, FP-102 is not supplied as an independent service parts.

Ref. No.	Part No.	Description
751	3-059-173-01	PLATE, LS CAM
752	3-075-097-01	SCREW (M1.4X1.4), SPECIAL HEAD
753	X-3950-371-1	ARM ASSY, BRAKE (S) DRIVING
754	3-059-166-01	BRAKE (S)
755	3-059-146-01	POSITIONING (S), CASSETTE
756	3-059-167-01	SPRING (BRAKE S), TENSION COIL
757	3-059-169-01	SPRING (BRAKE S ARM), TORSION
758	3-703-816-14	SCREW (M1.4)
759	3-059-090-01	SCREW (M1.4X2.5), SPECIAL HEAD
* 760	X-3950-358-4	TG1 ASSY
761	3-059-156-01	SPRING (TENSION REGULATOR)
762	X-3950-365-2	TABLE ASSY, S REEL
763	A-7094-819-A	TG7 BLOCK ASSY

Ref. No.	Part No.	Description
764	3-059-165-01	SPRING (TG7 RETURN), TORSION
765	X-3950-359-1	ARM ASSY, PINCH
766	3-059-161-01	SPRING (PINCH RETURN), TORSION
767	3-059-170-01	BRAKE (T)
768	3-059-171-01	GEAR (T), BRAKE
769	3-059-172-01	SPRING (T), BRAKE
770	A-7094-816-B	LS BLOCK ASSY
D901	8-719-078-71	DIODE LA57A, SO (TAPE LED)
H901	8-719-067-74	ELEMENT, HOLE HW-105A-CDE-T (S REEL)
H902	8-719-067-74	ELEMENT, HOLE HW-105A-CDE-T (T REEL)
Q901	8-729-028-71	TRANSISTOR PN166, SO (TAPE END)
Q902	8-729-028-71	TRANSISTOR PN166, SO (TAPE TOP)
S903	1-572-288-11	SWITCH, PUSH (C.C.DOWN)

6-1-10. MECHANICAL CHASSIS BLOCK ASSEMBLY

ns : not supplied



Ref. No.	Part No.	Description
801	3-059-211-01	GEAR, CONVERSION
802	3-059-220-01	GEAR, RELAY
803	3-059-187-01	SHAFT, WORM
804	3-059-186-03	HOLDER, MOTOR
805	3-060-002-01	ROLLER, LS GUIDE
806	3-059-189-01	GEAR (A), CAM
807	3-704-197-21	SCREW (M1.4X2.5), SPECIAL HEAD
808	3-059-225-01	SHIELD, MOTOR
808	3-704-197-21	SCREW (M1.4X2.5), SPECIAL HEAD
809	3-059-191-01	ROLLER, LS
810	3-059-190-01	ARM, LS
811	1-677-049-11	FP-228 FLEXIBLE BOARD (DEW SENSOR)
812	1-677-084-11	FP-100 FLEXIBLE BOARD (YAW SENSOR)
813	3-059-149-01	SLIDER, TG1 CAM
814	3-059-148-01	ARM, TG1 DRIVING
815	3-703-816-14	SCREW (M1.4)
816	3-059-117-01	COVER (A), GEAR

Ref. No.	Part No.	Description
817	X-3950-367-1	GEAR ASSY, MODE
818	3-059-139-01	GEAR, GL DRIVING
819	3-059-188-01	GEAR, DECELERATION
820	A-7094-818-A	COASTER (S) BLOCK ASSY
821	A-7094-817-A	COASTER (T) BLOCK ASSY
822	3-059-126-01	RAIL, GUIDE
823	3-962-914-01	SCREW (M1.4X2)
824	A-7094-822-A	DRUM BASE BLOCK ASSY
825	3-059-118-01	COVER (B), GEAR
826	3-059-083-01	COVER (C), GEAR
827	X-3950-368-1	ARM ASSY, PINCH DRIVING
828	3-059-192-01	GEAR (B), CAM
829	3-063-355-01	ROLLER (S1), LS GUIDE
830	3-065-202-01	SUPPORT, TG7
M902	8-835-685-01	MOTOR, DC SCD18A/C-NP (INCLUDING BELT) (CAPSTAN)
M903	A-7094-823-A	MOTOR BLOCK ASSY, L

6-2. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS: uF: µF
- COILS uH: µH
- 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...: µA... , uPA... , µPA... , uPB... , µPB... , uPC... , µPC... , uPD..., µPD...
- Abbreviation
  CND : Canadian model
  AUS : Australian model
  CH : Chinese model
  JE : Tourist model
  EE : East Europian model
  HK : Hong Kong model

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

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

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

Ref. No.	Part No.	Description			
	A-7067-302-A	BT-003 BOARD, COMPLETE (TRV50,TRV50E)			
		**********			
	(The parts on the BT-003 board are not supplied and not replaced. The completed mounted board of the BT-003 board is supplied.)				
	A-7078-130-A	CD-381 (N) BOARD, COMPLETE (TRV40/TRV50)			
		**********			
	A-7078-189-A	CD-381 (P) BOARD, COMPLETE (TRV40E/TRV50E)			
		**********			
		(IC7301 is not included in this complte board.)			
		< CAPACITOR >			
C7302	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C7304	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C7305	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C7306	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C7307	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C7308	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C7309	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C7311	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C7312	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C7313	1-113-987-11	TANTAL. CHIP	4.7uF	20%	25V
C7314	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C7315	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C7316	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C7317	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C7318	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C7319	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C7320	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C7321	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C7326	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
		< CONNECTOR >			
CN7301	1-815-438-11	CONNECTOR, BOARD TO BOARD 40P			
		< FERRITE BEAD >			
FB7301	1-414-445-11	FERRITE	0uH		
FB7302	1-414-445-11	FERRITE	0uH		
		< IC >			
IC7301	A-7095-087-A	CCD BLOCK ASSY (CCD IMAGER)			
IC7302	6-702-059-01	IC VSP2220PWR			

Ref. No.	Part No.	Description			
		< COIL >			
L7301	1-469-528-91	INDUCTOR	100uH		
L7302	1-414-771-91	INDUCTOR	10uH		
L7303	1-414-771-91	INDUCTOR	10uH		
		< TRANSISTOR >			
Q7301	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q7302	8-725-055-21	TRANSISTOR	2SC5096-O/R(TE85L)		
Q7303	8-725-055-21	TRANSISTOR	2SC5096-O/R(TE85L)		
		< RESISTOR >			
R7302	1-218-990-11	SHORT	0		
R7304	1-218-965-11	RES-CHIP	10K	5%	1/16W
R7305	1-218-966-11	RES-CHIP	12K	5%	1/16W
R7307	1-218-953-11	RES-CHIP	1K	5%	1/16W
R7309	1-218-965-11	RES-CHIP	10K	5%	1/16W
R7310	1-218-966-11	RES-CHIP	12K	5%	1/16W
R7311	1-218-953-11	RES-CHIP	1K	5%	1/16W
R7312	1-218-954-11	RES-CHIP	1.2K	5%	1/16W
R7313	1-218-954-11	RES-CHIP	1.2K	5%	1/16W
R7314	1-218-975-11	RES-CHIP	68K	5%	1/16W
R7315	1-218-990-11	SHORT	0		
R7316	1-218-990-11	SHORT	0		
R7319	1-218-990-11	SHORT	0		
R7320	1-216-295-91	SHORT	0		
	A-7078-133-A	CK-115 BOARD, COMPLETE			
		**********			
		< BATTERY >			
BT5201	1-756-128-11	BATTERY, LITHIUM (SECONDARY)			
		< CAPACITOR >			
C5204	1-135-957-91	TANTAL. CHIP	10uF	20%	16V
		< CONNECTOR >			
CN5201	1-794-505-21	CONNECTOR, FPC (ZIF) 51P			
CN5202	1-691-344-11	CONNECTOR, FFC/FPC (ZIF) 6P			
CN5203	1-691-348-11	CONNECTOR, FFC/FPC (ZIF) 10P			
CN5204	1-691-346-11	CONNECTOR, FFC/FPC (ZIF) 8P			
CN5205	1-778-506-21	PIN, CONNECTOR (PC BOARD) 2P			
CN5206	1-816-463-11	PIN, CONNECTOR (PC BOARD) 10P			
CN5207	1-794-997-11	PIN, CONNECTOR 20P			

Be sure to read "Precautions upon replacing CCD imager" on page 4-11 when changing the CCD imager.

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

CK-115 **DD-176**

Ref. No.	Part No.	Description			
		< DIODE >			
D5201	8-719-062-16	DIODE 01ZA8.2(TPL3)			
D5202	8-719-062-16	DIODE 01ZA8.2(TPL3)			
D5203	8-719-062-16	DIODE 01ZA8.2(TPL3)			
D5204	8-719-073-03	DIODE MA8082-(K8).S0			
D5205	8-719-062-16	DIODE 01ZA8.2(TPL3)			
		< RESISTOR >			
R5201	1-216-295-91	SHORT	0		
R5202	1-216-295-91	SHORT	0		
R5203	1-218-953-11	RES-CHIP	1K	5%	1/16W
R5204	1-218-949-11	RES-CHIP	470	5%	1/16W
R5205	1-218-990-11	SHORT	0		
		< SWITCH >			
S5201	1-762-805-21	SWITCH, PUSH (1 KEY) (PANEL OPEN/CLOSE)			
S5202	1-771-138-82	SWITCH, KEY BOARD (RESET)			
	A-7078-114-A	DD-176 BOARD, COMPLETE **********			
		< CAPACITOR >			
C4501	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C4504	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4506	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C4507	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C4508	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C4509	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C4510	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C4511	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C4512	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4514	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C4515	1-119-923-81	CERAMIC CHIP	0.047uF	10%	10V
C4517	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C4518	1-119-923-81	CERAMIC CHIP	0.047uF	10%	10V
C4519	1-119-923-81	CERAMIC CHIP	0.047uF	10%	10V
C4520	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C4521	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4522	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C4523	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C4524	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C4525	1-119-751-11	TANTAL. CHIP	22uF	20%	16V
C4526	1-119-923-81	CERAMIC CHIP	0.047uF	10%	10V
C4527	1-119-751-11	TANTAL. CHIP	22uF	20%	16V
C4528	1-119-923-81	CERAMIC CHIP	0.047uF	10%	10V
C4529	1-165-646-91	CERAMIC	3.3uF	10%	10V
C4530	1-165-646-91	CERAMIC	3.3uF	10%	10V
C4531	1-165-646-91	CERAMIC	3.3uF	10%	10V
C4532	1-165-646-91	CERAMIC	3.3uF	10%	10V
C4535	1-165-646-91	CERAMIC	3.3uF	10%	10V
C4536	1-165-646-91	CERAMIC	3.3uF	10%	10V
C4537	1-165-646-91	CERAMIC	3.3uF	10%	10V
C4538	1-165-646-91	CERAMIC	3.3uF	10%	10V
C4539	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C4540	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C4541	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4542	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V

Ref. No.	Part No.	Description			
C4545	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4546	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4547	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4548	1-127-861-11	CERAMIC CHIP	2.2uF	10%	16V
C4549	1-127-861-11	CERAMIC CHIP	2.2uF	10%	16V
C4550	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4551	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C4553	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C4554	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C4555	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C4556	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C4557	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C4558	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C4559	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C4560	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C4561	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C4562	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C4563	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C4564	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C4565	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C4566	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C4567	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C4568	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C4602	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4603	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
		< CONNECTOR >			
* CN4501	1-580-789-21	PIN, CONNECTOR (SMD) 6P			
CN4601	1-816-464-11	CONNECTOR BOAR TO BOARD 100P			
CN4602	1-793-299-21	CONNECTOR, FPC (ZIF) 33P			
CN4603	1-784-420-11	CONNECTOR, FFC/FPC (ZIF) 21P			
CN4604	1-691-384-11	CONNECTOR, FFC/FPC 20P			
		< DIODE >			
D4501	8-719-027-76	DIODE 1SS357-TPH3			
D4502	8-719-062-16	DIODE 01ZA8.2(TPL3)			
D4503	8-719-027-76	DIODE 1SS357-TPH3			
D4504	8-719-058-24	DIODE RB501V-40TE-17			
D4505	8-719-058-24	DIODE RB501V-40TE-17			
D4601	8-719-062-16	DIODE 01ZA8.2(TPL3)			
D4602	8-719-062-16	DIODE 01ZA8.2(TPL3)			
D4603	8-719-062-16	DIODE 01ZA8.2(TPL3)			
D4604	8-719-062-16	DIODE 01ZA8.2(TPL3)			
D4605	8-719-056-85	DIODE UDZSTE-178.2B			
		< FUSE >			
⚠F4501	1-576-406-21	FUSE, MICRO (1.4A/32V) (1608)			
⚠F4502	1-576-406-21	FUSE, MICRO (1.4A/32V) (1608)			
⚠F4503	1-576-406-21	FUSE, MICRO (1.4A/32V) (1608)			
⚠F4504	1-576-406-21	FUSE, MICRO (1.4A/32V) (1608)			
⚠F4505	1-576-406-21	FUSE, MICRO (1.4A/32V) (1608)			
⚠F4506	1-576-406-21	FUSE, MICRO (1.4A/32V) (1608)			
⚠F4507	1-576-406-21	FUSE, MICRO (1.4A/32V) (1608)			
⚠F4508	1-576-406-21	FUSE, MICRO (1.4A/32V) (1608)			
		< IC >			
IC4501	6-702-202-01	IC MB4499PFV-G-BND-ER-E1			

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

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

Ref. No.	Part No.	Description	
		< COIL >	
L4501	1-419-354-21	INDUCTOR	22uH
L4502	1-419-354-21	INDUCTOR	22uH
L4503	1-419-354-21	INDUCTOR	22uH
L4504	1-416-670-11	INDUCTOR	33uH
L4507	1-416-668-41	INDUCTOR	10uH
L4508	1-419-354-21	INDUCTOR	22uH
L4509	1-419-354-21	INDUCTOR	22uH
L4510	1-419-354-21	INDUCTOR	22uH
L4511	1-469-549-21	INDUCTOR	1uH
L4513	1-469-549-21	INDUCTOR	1uH
L4514	1-469-549-21	INDUCTOR	1uH
L4515	1-469-549-21	INDUCTOR	1uH
L4516	1-469-549-21	INDUCTOR	1uH
L4517	1-469-549-21	INDUCTOR	1uH
L4518	1-469-549-21	INDUCTOR	1uH
L4519	1-469-549-21	INDUCTOR	1uH
L4520	1-414-770-91	INDUCTOR	4.7uH
L4521	1-414-770-91	INDUCTOR	4.7uH
L4522	1-469-549-21	INDUCTOR	1uH
L4523	1-469-549-21	INDUCTOR	1uH
L4524	1-469-549-21	INDUCTOR	1uH
L4525	1-469-549-21	INDUCTOR	1uH
L4526	1-469-549-21	INDUCTOR	1uH
L4528	1-414-770-91	INDUCTOR	4.7uH
		< LINE FILTER >	
LF4501	1-411-957-11	FILTER, COMMON MODE	
		< TRANSISTOR >	
Q4501	8-729-047-68	TRANSISTOR	SSM3K03FE(TPL3)
Q4502	8-729-056-54	TRANSISTOR	TPCS8302(TE12L)
Q4503	8-729-043-60	TRANSISTOR	CPH6102-TL-E
Q4504	8-729-042-29	TRANSISTOR	RN1104F(TPL3)
Q4505	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO
Q4506	8-729-042-29	TRANSISTOR	RN1104F(TPL3)
Q4507	8-729-037-61	TRANSISTOR	RN2104F(TPL3)
Q4508	8-729-037-61	TRANSISTOR	RN2104F(TPL3)
Q4509	8-729-055-99	TRANSISTOR	MCH3309-TL
Q4510	8-729-055-99	TRANSISTOR	MCH3309-TL
Q4513	8-729-055-99	TRANSISTOR	MCH3309-TL
Q4514	8-729-055-99	TRANSISTOR	MCH3309-TL
Q4515	8-729-055-99	TRANSISTOR	MCH3309-TL
Q4516	8-729-056-00	TRANSISTOR	MCH3310-TL-E
Q4517	8-729-055-99	TRANSISTOR	MCH3309-TL
Q4518	8-729-023-89	TRANSISTOR	2SJ305(TE85L)
Q4519	8-729-023-89	TRANSISTOR	2SJ305(TE85L)
Q4520	8-729-056-01	TRANSISTOR	MCH3405-TL-E
Q4521	8-729-056-02	TRANSISTOR	MCH5804-TL-E
Q4522	8-729-056-02	TRANSISTOR	MCH5804-TL-E
Q4525	8-729-056-02	TRANSISTOR	MCH5804-TL-E
Q4526	8-729-056-02	TRANSISTOR	MCH5804-TL-E
Q4527	8-729-056-02	TRANSISTOR	MCH5804-TL-E
Q4528	8-729-056-02	TRANSISTOR	MCH5804-TL-E
Q4529	8-729-056-54	TRANSISTOR	TPCS8302(TE12L)
Q4530	8-729-037-53	TRANSISTOR	2SA1832F-Y/GR(TPL3)
Q4531	8-729-053-52	TRANSISTOR	N1C01FE-Y/GR(TPLR3)

Ref. No.	Part No.	Description			
		< RESISTOR >			
R4501	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4502	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4505	1-218-989-11	RES-CHIP	1M	5%	1/16W
R4506	1-208-691-11	METAL CHIP	2.2K	0.5%	1/16W
R4508	1-208-699-11	METAL CHIP	4.7K	0.5%	1/16W
R4509	1-218-878-11	METAL CHIP	20K	0.5%	1/16W
R4511	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R4513	1-218-965-11	RES-CHIP	10K	5%	1/16W
R4514	1-218-965-11	RES-CHIP	10K	5%	1/16W
R4515	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4516	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R4517	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4518	1-218-969-11	RES-CHIP	22K	5%	1/16W
R4519	1-216-009-91	RES-CHIP	22	5%	1/10W
R4521	1-216-009-91	RES-CHIP	22	5%	1/10W
R4522	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4523	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R4528	1-218-973-11	RES-CHIP	47K	5%	1/16W
R4529	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R4530	1-208-715-11	METAL CHIP	22K	0.5%	1/16W
R4531	1-218-864-11	METAL CHIP	5.1K	0.5%	1/16W
R4532	1-208-691-11	METAL CHIP	2.2K	0.5%	1/16W
R4533	1-218-968-11	RES-CHIP	18K	5%	1/16W
R4535	1-218-969-11	RES-CHIP	22K	5%	1/16W
R4536	1-218-979-11	RES-CHIP	150K	5%	1/16W
R4554	1-218-973-11	RES-CHIP	47K	5%	1/16W
R4555	1-218-973-11	RES-CHIP	47K	5%	1/16W
R4556	1-218-941-81	RES-CHIP	100	5%	1/16W
R4557	1-218-941-81	RES-CHIP	100	5%	1/16W
R4558	1-218-989-11	RES-CHIP	1M	5%	1/16W
R4559	1-218-989-11	RES-CHIP	1M	5%	1/16W
R4561	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4562	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4567	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4568	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4569	1-208-699-11	METAL CHIP	4.7K	0.5%	1/16W
R4570	1-208-711-11	METAL CHIP	15K	0.5%	1/16W
R4571	1-208-909-11	METAL CHIP	8.2K	0.5%	1/16W
R4601	1-218-990-11	SHORT	0		
R4602	1-218-990-11	SHORT	0		
R4603	1-218-990-11	SHORT	0		
R4604	1-218-990-11	SHORT	0		
R4605	1-218-990-11	SHORT	0		

	A-7078-131-A	JK-219 BOARD, COMPLETE (TRV50/TRV50E)
		**********
	A-7078-191-A	JK-219 (N8) BOARD, COMPLETE (TRV40/TRV40E)
		**********
		< CAPACITOR >
C5353	1-104-847-11	TANTAL. CHIP 22uF 20% 4V
C5354	1-104-847-11	TANTAL. CHIP 22uF 20% 4V
C5355	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C5356	1-125-777-11	CERAMIC CHIP 0.1uF 10% 10V
C5357	1-119-923-81	CERAMIC CHIP 0.047uF 10% 10V

JK-219 **LB-078**

Ref. No.	Part No.	Description			
C5358	1-119-923-81	CERAMIC CHIP	0.047uF	10%	10V
C5359	1-119-923-81	CERAMIC CHIP	0.047uF	10%	10V
C5360	1-119-923-81	CERAMIC CHIP	0.047uF	10%	10V
C5361	1-137-710-11	CERAMIC CHIP	10uF	20%	6.3V
C5362	1-137-710-11	CERAMIC CHIP	10uF	20%	6.3V
C5363	1-137-710-11	CERAMIC CHIP	10uF	20%	6.3V
C5364	1-137-710-11	CERAMIC CHIP	10uF	20%	6.3V
C5366	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C5367	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
		< CONNECTOR >			
CN5301	1-785-828-11	CONNECTOR, SQUARE TYPE 4P (DV IN/OUT)			
CN5302	1-794-962-11	CONNECTOR, SQUARE TYPE(USB 5P) (USB)			
CN5303	1-779-520-11	CONNECTOR, BOARD TO BOARD 80P			
		< DIODE >			
D5301	8-719-062-16	DIODE 01ZA8.2(TPL3)			
D5303	8-719-070-93	DIODE TLAU1008(T05,SOY)			
D5304	6-500-003-01	DIODE CL-270HB-X-TS (TRV50/TRV50E)			
		< FERRITE BEAD >			
FB5301	1-500-444-11	FERRITE	0uH		
FB5302	1-500-444-11	FERRITE	0uH		
FB5303	1-500-444-11	FERRITE	0uH		
FB5304	1-500-444-11	FERRITE	0uH		
FB5351	1-469-179-21	FERRITE	0uH		
FB5352	1-469-179-21	FERRITE	0uH		
FB5353	1-469-179-21	FERRITE	0uH		
FB5354	1-469-179-21	FERRITE	0uH		
		< IC >			
IC5351	8-759-489-19	IC uPC6756GR-8JG-E2			
		< JACK >			
J5301	1-569-950-41	JACK (SMALL TYPE) (HEADPHONES)			
J5302	1-778-518-11	CONNECTOR, EXTERNAL (S VIDEO)			
J5303	1-778-040-11	JACK, SMALL TYPE (AUDIO/VIDEO)			
		< COIL >			
L5351	1-414-771-91	INDUCTOR	10uH		
		< LINE FILTER >			
LF5303	1-419-983-21	INDUCTOR	0uH		
		< TRANSISTOR >			
Q5301	8-729-037-72	TRANSISTOR	UN9211J-(K8).SO		
Q5302	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO (TRV50/TRV50E)		
		< RESISTOR >			
R5301	1-216-864-11	METAL CHIP	0	5%	1/16W
R5302	1-216-864-11	METAL CHIP	0	5%	1/16W
R5303	1-216-864-11	METAL CHIP	0	5%	1/16W
R5304	1-218-965-11	RES-CHIP	10K	5%	1/16W
R5305	1-216-864-11	METAL CHIP	0	5%	1/16W

Ref. No.	Part No.	Description			
R5306	1-218-965-11	RES-CHIP	10K	5%	1/16W
R5307	1-218-950-11	RES-CHIP	560	5%	1/16W
R5308	1-218-954-11	RES-CHIP	1.2K	5%	1/16W
R5309	1-218-945-11	RES-CHIP	220	5%	1/16W (TRV50/TRV50E)
R5311	1-216-864-11	METAL CHIP	0	5%	1/16W
R5312	1-216-864-11	METAL CHIP	0	5%	1/16W
R5313	1-216-864-11	METAL CHIP	0	5%	1/16W
R5314	1-216-864-11	METAL CHIP	0	5%	1/16W
R5315	1-216-864-11	METAL CHIP	0	5%	1/16W
R5355	1-216-295-91	SHORT	0		
R5356	1-218-969-11	RES-CHIP	22K	5%	1/16W
R5357	1-218-969-11	RES-CHIP	22K	5%	1/16W
R5358	1-218-969-11	RES-CHIP	22K	5%	1/16W
R5359	1-218-969-11	RES-CHIP	22K	5%	1/16W
R5360	1-218-965-11	RES-CHIP	10K	5%	1/16W
R5361	1-218-965-11	RES-CHIP	10K	5%	1/16W
R5362	1-218-989-11	RES-CHIP	1M	5%	1/16W
R5364	1-218-989-11	RES-CHIP	1M	5%	1/16W
R5365	1-218-953-11	RES-CHIP	1K	5%	1/16W
		< SWITCH >			
S5301	1-771-138-82	SWITCH, KEY BOARD (FLASH)			
S5302	1-771-138-82	SWITCH, KEY BOARD (SUPER NIGHTSHOT)			
		< SENSOR >			
SE5351	1-418-682-41	SENSOR, ANGULAR VELOCITY (PITCH)			
SE5352	1-418-682-21	SENSOR, ANGULAR VELOCITY (YAW)			
		< VARISTOR >			
VDR531	1-801-862-11	VARISTOR, CHIP			
VDR532	1-801-862-11	VARISTOR, CHIP			
VDR533	1-801-862-11	VARISTOR, CHIP			
VDR534	1-803-742-21	VARISTOR, CHIP			
VDR535	1-803-742-21	VARISTOR, CHIP			
VDR536	1-801-862-11	VARISTOR, CHIP			
VDR537	1-801-862-11	VARISTOR, CHIP			
VDR538	1-801-862-11	VARISTOR, CHIP			
VDR539	1-803-742-21	VARISTOR, CHIP			
	A-7078-132-A	LB-078 BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C6101	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C6102	1-164-505-11	CERAMIC CHIP	2.2uF		16V
		< CONNECTOR >			
CN6101	1-691-358-21	CONNECTOR, FFC/FPC (ZIF) 20P			
CN6102	1-691-354-21	CONNECTOR, FFC/FPC (ZIF) 16P			
		< DIODE >			
D6102	8-719-082-33	DIODE NSCW100-T39			
		< IC >			
IC6101	8-759-581-11	IC NJM2125F(TE2)			

Ref. No.	Part No.	Description			
		< TRANSISTOR >			
Q6101	8-729-054-48	TRANSISTOR	RN4983FE(TPLR3)		
Q6102	8-729-054-48	TRANSISTOR	N1B04FE-Y/GR(TPLR3)		
		< RESISTOR >			
R6102	1-208-941-11	METAL CHIP	180K	0.5%	1/16W
R6103	1-208-719-11	METAL CHIP	33K	0.5%	1/16W
R6104	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R6106	1-211-977-11	METAL CHIP	22	0.5%	1/10W
		< THERMISTOR >			
TH6101	1-810-811-11	THERMISTOR, NTC (1608)			
	A-7078-135-A	MA-408 BOARD, COMPLETE			
		**********			
	1-804-531-11	LASER UNIT			
		< CAPACITOR >			
C5902	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C5903	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C5904	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C5905	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C5906	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C5907	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C5908	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C5909	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C5910	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C5911	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C5912	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C5914	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C5915	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C5917	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5918	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5919	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5920	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C5921	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5922	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C5923	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C5924	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C5925	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C5926	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C5927	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C5928	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C5929	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C5930	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5931	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C5932	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C5933	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C5934	1-125-841-91	TANTAL. CHIP	22uF	20%	4V
C5935	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5936	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5937	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5938	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5939	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C6201	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V

Ref. No.	Part No.	Description			
		< CONNECTOR >			
CN5901	1-816-232-11	PIN, CONNECTOR (PC BOARD) 4P			
CN5903	1-815-235-11	CONNECTOR, FFC/FPC (ZIF) 37P			
CN6201	1-691-346-11	CONNECTOR, FFC/FPC (ZIF) 8P			
		< DIODE >			
D5902	8-719-067-44	DIODE CL-310IRS-X-TU			
D5903	8-719-067-44	DIODE CL-310IRS-X-TU			
D5904	8-719-016-74	DIODE 1SS352-TPH3			
D5905	8-719-061-82	DIODE TLSU1002(TPX1,SONY)			
D6204	8-719-062-16	DIODE 01ZA8.2(TPL3)			
		< FERRITE BEAD >			
FB6201	1-500-444-11	FERRITE	0uH		
FB6203	1-500-444-11	FERRITE	0uH		
FB6204	1-500-444-11	FERRITE	0uH		
FB6205	1-500-444-11	FERRITE	0uH		
FB6206	1-500-444-11	FERRITE	0uH		
		< IC >			
IC5901	8-759-638-50	IC AN2901FHQ-EB			
IC5902	8-759-581-11	IC NJM2125F(TE2)			
IC5903	8-742-221-00	HYB IC SBX3055-01			
		< JACK >			
J6201	1-793-995-11	JACK, SUPER SMALL TYPE (LANC)			
J6202	1-691-737-41	JACK (SMALL TYPE) (MIC (PLUG IN POWER))			
		< COIL >			
L5901	1-469-528-91	INDUCTOR	100uH		
		< TRANSISTOR >			
Q5903	8-729-042-26	TRANSISTOR	2SB1462J-QR(K8).SO		
Q5906	8-729-048-77	TRANSISTOR	XP4313-(TX).SO		
Q5909	8-729-049-92	TRANSISTOR	2SC5585H-T2L		
Q5910	8-729-037-76	TRANSISTOR	UN9215J-(K8).SO		
		< RESISTOR >			
R5901	1-218-990-11	SHORT	0		
R5902	1-218-968-11	RES-CHIP	18K	5%	1/16W
R5903	1-218-971-11	RES-CHIP	33K	5%	1/16W
R5904	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R5905	1-218-965-11	RES-CHIP	10K	5%	1/16W
R5906	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R5907	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R5908	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R5910	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R5912	1-218-953-11	RES-CHIP	1K	5%	1/16W
R5913	1-218-953-11	RES-CHIP	1K	5%	1/16W
R5915	1-216-803-11	METAL CHIP	33	5%	1/16W
R5916	1-216-803-11	METAL CHIP	33	5%	1/16W
R5918	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R5919	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R5921	1-208-910-11	RES-CHIP	9.1K	5%	1/16W
R5922	1-208-910-11	RES-CHIP	9.1K	5%	1/16W
R5923	1-208-910-11	RES-CHIP	9.1K	5%	1/16W
R5924	1-208-910-11	RES-CHIP	9.1K	5%	1/16W
R5925	1-218-964-11	RES-CHIP	8.2K	5%	1/16W

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Ref. No.	Part No.	Description			
R5926	1-218-990-11	SHORT	0		
R5927	1-218-990-11	SHORT	0		
R5928	1-218-964-11	RES-CHIP	8.2K	5%	1/16W
R5929	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R5931	1-218-967-11	RES-CHIP	15K	5%	1/16W
R5932	1-218-967-11	RES-CHIP	15K	5%	1/16W
R5933	1-216-817-11	METAL CHIP	470	5%	1/16W
R5934	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R5937	1-218-971-11	RES-CHIP	33K	5%	1/16W
R5940	1-218-954-11	RES-CHIP	1.2K	5%	1/16W
R5941	1-218-968-11	RES-CHIP	18K	5%	1/16W
R5942	1-218-971-11	RES-CHIP	33K	5%	1/16W
R5943	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R5944	1-216-837-11	METAL CHIP	22K	5%	1/16W
R5945	1-208-912-11	METAL CHIP	11K	0.5%	1/16W
R5946	1-216-820-11	METAL CHIP	820	5%	1/16W
R5947	1-216-833-11	METAL CHIP	10K	5%	1/16W
R5948	1-208-701-11	METAL CHIP	5.6K	0.5%	1/16W
R5950	1-208-912-11	METAL CHIP	11K	0.5%	1/16W
R5951	1-218-937-11	RES-CHIP	47	5%	1/16W
R5952	1-218-953-11	RES-CHIP	1K	5%	1/16W
R5953	1-216-017-91	RES-CHIP	47	5%	1/10W
R5954	1-216-017-91	RES-CHIP	47	5%	1/10W
R5956	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R5957	1-218-939-11	RES-CHIP	68	5%	1/16W
R5958	1-218-990-11	SHORT	0		
R6207	1-216-813-11	METAL CHIP	220	5%	1/16W
R6208	1-216-864-11	METAL CHIP	0	5%	1/16W
		< VARISTOR >			
VDR621	1-803-742-21	VARISTOR, CHIP			
VDR622	1-801-862-11	VARISTOR, CHIP			
VDR623	1-801-862-11	VARISTOR, CHIP			

	A-7078-134-A	PD-165 BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C5701	1-113-988-11	TANTAL. CHIP	68uF	20%	4V
C5702	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5703	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C5704	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C5705	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C5706	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C5707	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C5708	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5709	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5710	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C5711	1-107-687-11	TANTAL. CHIP	3.3uF	20%	20V
C5712	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C5713	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C5714	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5715	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5716	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C5717	1-164-357-11	CERAMIC CHIP	0.001uF	5%	50V
C5718	1-164-866-11	CERAMIC CHIP	47PF	5%	50V
C5719	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C5720	1-109-982-11	CERAMIC CHIP	1uF	10%	10V

Ref. No.	Part No.	Description			
C5721	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C5722	1-113-994-11	TANTAL. CHIP	6.8uF	20%	16V
C5723	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5724	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5726	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C5727	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C5801	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5802	1-127-985-91	TANTAL. CHIP	47uF	20%	16V
C5803	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C5805	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C5806	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5807	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C5808	1-119-750-11	TANTAL. CHIP	22uF	20%	6.3V
		< CONNECTOR >			
CN5701	1-750-344-11	CONNECTOR, FFC/EPC (ZIF) 24P			
CN5802	1-794-997-11	PIN, CONNECTOR 20P			
* CN5803	1-778-155-11	CONNECTOR, FFC/FPC (ZIF) 7P			
CN5804	1-784-420-11	CONNECTOR, FFC/FPC (ZIF) 21P			
CN5805	1-785-554-21	CONNECTOR (5P), CARD EDGE			
CN5806	1-816-463-11	PIN, CONNECTOR (PC BOARD) 10P			
		< DIODE >			
D5701	8-719-404-50	DIODE MA111-TX			
D5702	8-719-084-46	DIODE 1SV288(TPH3)			
		< IC >			
IC5701	8-752-102-40	IC CXA3592R-T4			
IC5702	8-759-833-18	IC CM7021L3-E2			
IC5801	8-759-573-02	IC BU9735K-E2			
		< COIL >			
L5701	1-469-525-91	INDUCTOR	10uH		
L5702	1-414-771-91	INDUCTOR	10uH		
L5703	1-414-771-91	INDUCTOR	10uH		
L5704	1-414-771-91	INDUCTOR	10uH		
L5705	1-412-943-11	INDUCTOR	2.2uH		
L5801	1-412-056-11	INDUCTOR	4.7uH		
L5802	1-414-757-11	INDUCTOR	100uH		
		< TRANSISTOR >			
Q5701	8-729-037-52	TRANSISTOR	2SD2216J-QR(K8).SO		
Q5702	8-729-037-74	TRANSISTOR	UN9213J-(K8).SO		
Q5801	8-729-042-72	TRANSISTOR	UN9214J-(K8).SO		
Q5802	8-729-042-26	TRANSISTOR	2SB1462J-QR(K8).SO		
		< RESISTOR >			
R5701	1-218-985-11	RES-CHIP	470K	5%	1/16W
R5702	1-208-719-11	METAL CHIP	33K	0.5%	1/16W
R5703	1-218-970-11	METAL CHIP	27K	0.5%	1/16W
R5705	1-218-985-11	RES-CHIP	470K	5%	1/16W
R5706	1-218-977-11	RES-CHIP	100K	5%	1/16W
R5707	1-216-835-11	METAL CHIP	15K	5%	1/16W
R5708	1-218-958-11	RES-CHIP	2.7K	5%	1/16W
R5709	1-218-973-11	RES-CHIP	47K	5%	1/16W
R5710	1-218-975-11	RES-CHIP	68K	5%	1/16W
R5711	1-218-969-11	RES-CHIP	22K	5%	1/16W

Ref. No.	Part No.	Description			
R5712	1-218-975-11	RES-CHIP	68K	5%	1/16W
R5713	1-218-989-11	RES-CHIP	1M	5%	1/16W
R5714	1-218-977-11	RES-CHIP	100K	5%	1/16W
R5717	1-216-864-11	METAL CHIP	0	5%	1/16W
R5719	1-218-942-11	RES-CHIP	120	5%	1/16W
R5721	1-218-965-11	RES-CHIP	10K	5%	1/16W
R5722	1-218-965-11	RES-CHIP	10K	5%	1/16W
R5727	1-218-974-11	RES-CHIP	56K	5%	1/16W
R5732	1-218-941-81	RES-CHIP	100	5%	1/16W
R5736	1-218-941-81	RES-CHIP	100	5%	1/16W
R5737	1-218-941-81	RES-CHIP	100	5%	1/16W
R5801	1-218-941-81	RES-CHIP	100	5%	1/16W
R5802	1-216-855-11	METAL CHIP	680K	5%	1/16W
R5803	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R5804	1-218-953-11	RES-CHIP	1K	5%	1/16W
R5805	1-216-864-11	METAL CHIP	0	5%	1/16W

	A-7078-136-A	SE-124 BOARD, COMPLETE	
		**********	
		< PHOTO INTERRUPTER >	
PH6301	8-749-016-83	IC GP1S092HCPI	
PH6302	8-749-016-83	IC GP1S092HCPI	

	A-7095-053-A	VC-283 (N) BOARD, COMPLETE(SERVICE)	(TRV50)
		**********	
	A-7095-107-A	VC-283 (P) BOARD, COMPLETE (SERVICE)	(TRV50E)
		**********	
	A-7095-108-A	VC-283 (N8) BOARD, COMPLETE (SERVICE)	(TRV40)
		**********	
	A-7095-109-A	VC-283 (P8) BOARD, COMPLETE (SERVICE)	(TRV40E)
		**********	
		< CAPACITOR >	

Ref. No.	Part No.	Description			
C1001	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C1002	1-113-987-11	TANTAL. CHIP	4.7uF	20%	25V
C1004	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C1005	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C1006	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C1201	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C1202	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C1203	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C1301	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C1302	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C1303	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C1304	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1305	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1306	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C1307	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C1308	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C1309	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1310	1-104-752-11	TANTAL. CHIP	33uF	20%	6.3V
C1311	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1312	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1316	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C1317	1-164-874-11	CERAMIC CHIP	100PF	5%	50V
C1318	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C1319	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C1325	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1326	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1327	1-119-749-11	TANTAL. CHIP	33uF	20%	4V
C1328	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C1501	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C1502	1-113-986-11	TANTAL. CHIP	2.2uF	20%	25V
C1503	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C1504	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C1505	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1506	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1507	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1508	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1509	1-113-988-11	TANTAL. CHIP	68uF	20%	4V
C1510	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C1511	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1512	1-164-845-11	CERAMIC CHIP	5PF	0.25PF	50V
C1513	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1514	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C1515	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C1516	1-107-687-11	TANTAL. CHIP	3.3uF	20%	20V
C1518	1-109-847-11	TANTAL. CHIP	0.47uF	20%	16V
C1519	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1521	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1522	1-109-847-11	TANTAL. CHIP	0.47uF	20%	16V
C1524	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C1525	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1527	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C1528	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C1529	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1530	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C1531	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1532	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1533	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1534	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1535	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1536	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1537	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1538	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C1539	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1540	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C1541	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C1542	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C1601	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1603	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1605	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1607	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1609	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1611	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1613	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1614	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1618	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1619	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1621	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1625	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1627	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1629	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V

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Ref. No.	Part No.	Description			
C1631	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1633	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C1634	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1636	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C1637	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C1701	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1703	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1705	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1706	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1707	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1708	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1709	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1710	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C1711	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1712	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1713	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C1715	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C1716	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C1717	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C1801	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C1802	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1901	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1902	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1903	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1904	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C1905	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1906	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C1907	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1908	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C1909	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1910	1-164-935-11	CERAMIC CHIP	470PF	10%	50V
C1911	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1912	1-164-866-11	CERAMIC CHIP	47PF	5%	50V
C1913	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1914	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1915	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C1916	1-164-935-11	CERAMIC CHIP	470PF	10%	50V
C1917	1-164-866-11	CERAMIC CHIP	47PF	5%	50V
C1918	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1919	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1920	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1921	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1922	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1923	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1924	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1926	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1927	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2001	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2002	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C2003	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C2004	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C2005	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2006	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2007	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2008	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2009	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2010	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2011	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2012	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2013	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V

Ref. No.	Part No.	Description			
C2014	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2015	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2016	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2017	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2018	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2019	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C2020	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2022	1-164-862-11	CERAMIC CHIP	33PF	5%	50V
C2023	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2024	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2025	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2102	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2103	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2104	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2106	1-164-850-11	CERAMIC CHIP	10PF	0.50PF	50V
C2107	1-164-850-11	CERAMIC CHIP	10PF	0.50PF	50V
C2109	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2110	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2111	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2112	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2113	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2114	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C2115	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C2116	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2117	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C2118	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C2121	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2122	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2123	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2124	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C2125	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2126	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C2127	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C2128	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2129	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2130	1-119-923-81	CERAMIC CHIP	0.047uF	10%	10V
C2131	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C2132	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C2133	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C2134	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2135	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2136	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C2137	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2138	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2139	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2140	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2141	1-164-882-11	CERAMIC CHIP	220PF	5%	16V
C2302	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2303	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2304	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2305	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2306	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2307	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C2308	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2309	1-164-935-11	CERAMIC CHIP	470PF	10%	50V
C2310	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2311	1-164-935-11	CERAMIC CHIP	470PF	10%	50V
C2312	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C2313	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2317	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V

Ref. No.	Part No.	Description			
C2401	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C2402	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C2403	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2404	1-119-923-81	CERAMIC CHIP	0.047uF	10%	10V
C2405	1-119-923-81	CERAMIC CHIP	0.047uF	10%	10V
C2406	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2407	1-164-942-11	CERAMIC CHIP	0.0068uF	10%	16V
C2408	1-164-942-11	CERAMIC CHIP	0.0068uF	10%	16V
C2409	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2410	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2411	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2412	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2414	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2415	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C2416	1-115-156-11	CERAMIC CHIP	1uF		10V
C2417	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2418	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2422	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2423	1-164-935-11	CERAMIC CHIP	470PF	10%	50V
C2424	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C2425	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2426	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2427	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2428	1-164-935-11	CERAMIC CHIP	470PF	10%	50V
C2429	1-119-923-81	CERAMIC CHIP	0.047uF	10%	10V
C2430	1-164-935-11	CERAMIC CHIP	470PF	10%	50V
C2431	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2432	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2433	1-164-935-11	CERAMIC CHIP	470PF	10%	50V
C2434	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2435	1-164-947-11	CERAMIC CHIP	0.01uF		50V
C2436	1-164-947-11	CERAMIC CHIP	0.01uF		50V
C2437	1-164-947-11	CERAMIC CHIP	0.01uF		50V
C2501	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2502	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2503	1-164-850-11	CERAMIC CHIP	10PF	0.50PF	50V
C2504	1-164-850-11	CERAMIC CHIP	10PF	0.50PF	50V
C2506	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2507	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2508	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2509	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2510	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2511	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2512	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2513	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2515	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2516	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2517	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2518	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2519	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2520	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2521	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2523	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2524	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2701	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2702	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2703	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2715	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2716	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2717	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V

Ref. No.	Part No.	Description			
C2718	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2719	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C2720	1-119-923-81	CERAMIC CHIP	0.047uF	10%	10V
C2721	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C2725	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2901	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2903	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2907	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2908	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2909	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2910	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2912	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C2913	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2914	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2915	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2916	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2918	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2919	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2920	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2921	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2922	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C2923	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C2924	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C2925	1-164-876-11	CERAMIC CHIP	120PF	5%	50V
C2926	1-164-850-11	CERAMIC CHIP	10PF	0.50PF	50V
C2927	1-164-935-11	CERAMIC CHIP	470PF	10%	50V
C3001	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3002	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3003	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C3004	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3007	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V (TRV50/TRV50E)
C3101	1-164-848-11	CERAMIC CHIP	8PF	0.50PF	50V
C3102	1-164-849-11	CERAMIC CHIP	9PF	0.50PF	50V
C3103	1-119-749-11	TANTAL. CHIP	33uF	20%	4V
C3104	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3105	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3106	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3107	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3113	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3115	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3118	1-164-942-11	CERAMIC CHIP	0.0068uF	10%	16V
C4101	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4102	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4104	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C4105	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C4106	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C4107	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4108	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C4109	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C4110	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C4111	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C4112	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4113	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C4115	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C4116	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4117	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4118	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C4119	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C4120	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4121	1-137-859-11	TANTAL. CHIP	220uF	20%	4V

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Ref. No.	Part No.	Description			
C4122	1-137-859-11	TANTAL. CHIP	220uF	20%	4V
C4123	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4124	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4126	1-164-858-11	CERAMIC CHIP	22PF	5%	50V
C4201	1-128-964-91	TANTAL. CHIP	100uF	20%	6.3V
C4202	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4204	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4205	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4206	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4208	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4209	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C4210	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4211	1-107-687-11	TANTAL. CHIP	3.3uF	20%	20V
C4212	1-164-357-11	CERAMIC CHIP	0.001uF	5%	50V
C4213	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C4214	1-164-862-11	CERAMIC CHIP	33PF	5%	50V
C4215	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C4216	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C4217	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C4218	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C4219	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C4302	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C4303	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C4304	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C4305	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C4306	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C4307	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C4308	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C4309	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4310	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4311	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C4312	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4314	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4315	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C4316	1-135-158-21	TANTALUM CHIP	15uF	20%	4V
C4317	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C4318	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C4319	1-125-926-91	TANTAL. CHIP	4.7uF	20%	6.3V
C4320	1-137-710-11	CERAMIC CHIP	10uF	20%	6.3V
C4321	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C4322	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C4323	1-110-569-21	TANTAL. CHIP	47uF	20%	4V
C4324	1-110-569-21	TANTAL. CHIP	47uF	20%	4V
C4325	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C4326	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C4327	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C4328	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C4329	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4330	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C4331	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C4333	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C4334	1-164-942-11	CERAMIC CHIP	0.0068uF	10%	16V
C4335	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C4336	1-164-942-11	CERAMIC CHIP	0.0068uF	10%	16V

Ref. No.	Part No.	Description
		< CONNECTOR >
CN1003	1-784-680-11	CONNECTOR, BOARD TO BOARD 100P
CN1004	1-784-419-11	CONNECTOR, FFC/FPC (ZIF) 15P (TRV50/TRV50E)
CN1005	1-794-505-21	CONNECTOR, FPC (ZIF) 51P
CN1006	1-779-521-11	CONNECTOR, BOARD TO BOARD 80P
CN1007	1-784-421-11	CONNECTOR, FFC/FPC (ZIF) 27P
CN1009	1-784-421-11	CONNECTOR, FFC/FPC (ZIF) 27P
CN1010	1-784-421-11	CONNECTOR, FFC/FPC (ZIF) 27P
CN1011	1-691-374-11	CONNECTOR, FFC/FPC 10P
CN1012	1-766-346-21	CONNECTOR, FFC/FPC 16P
CN1301	1-784-421-11	CONNECTOR, FFC/FPC (ZIF) 27P
CN1501	1-815-440-11	CONNECTOR, BOARD TO BOARD 40P
CN1901	1-691-374-11	CONNECTOR, FFC/FPC 10P
		< DIODE >
D1001	8-719-077-57	DIODE DF3A8.2C(TPL3)
D1003	8-719-077-57	DIODE DF3A8.2C(TPL3)
D1005	8-719-077-57	DIODE DF3A8.2C(TPL3)
D1006	8-719-077-57	DIODE DF3A8.2C(TPL3)
D1010	8-719-077-48	DIODE MA4L72800AS0
D1201	8-719-077-54	DIODE MA4L11100AS0
D1501	8-719-082-63	DIODE 1SV329(TPL3)
D2101	8-719-992-02	DIODE RB705D-T146
D2102	8-719-081-96	DIODE KV1870STL
D2103	8-719-992-02	DIODE RB705D-T146
D2104	8-719-081-96	DIODE KV1870STL
D2701	8-719-421-67	DIODE MA132WK-(K8).SO
D2702	8-719-077-48	DIODE MA4L72800AS0
D2703	8-719-077-54	DIODE MA4L11100AS0
D2704	8-719-077-48	DIODE MA4L72800AS0
D2705	8-719-077-48	DIODE MA4L72800AS0
D2901	8-719-077-54	DIODE MA4L11100AS0
D2902	8-719-077-54	DIODE MA4L11100AS0
D2903	8-719-077-48	DIODE MA4L72800AS0
D2904	8-719-077-48	DIODE MA4L72800AS0 (TRV50/TRV50E)
D3101	8-719-077-54	DIODE MA4L11100AS0
D4201	8-719-084-46	DIODE 1SV288(TPH3)
		< FERRITE BEAD >
FB1001	1-500-444-11	FERRITE 0uH
FB1002	1-500-444-11	FERRITE 0uH
FB1003	1-500-444-11	FERRITE 0uH
FB1004	1-500-444-11	FERRITE 0uH
FB1301	1-469-676-22	FERRITE 0uH
FB1501	1-469-676-22	FERRITE 0uH
FB1502	1-469-676-22	FERRITE 0uH
FB1503	1-469-676-22	FERRITE 0uH
FB1504	1-469-676-22	FERRITE 0uH
FB1505	1-500-284-21	FERRITE 0uH
FB1506	1-414-656-11	FERRITE 0uH
FB1601	1-500-284-21	FERRITE 0uH
FB1602	1-469-676-22	FERRITE 0uH
FB1603	1-469-676-22	FERRITE 0uH
FB1604	1-469-350-21	FERRITE 0uH

Ref. No.	Part No.	Description	
FB1701	1-469-676-22	FERRITE	0uH
FB1702	1-469-676-22	FERRITE	0uH
FB1901	1-469-676-22	FERRITE	0uH
FB2001	1-469-676-22	FERRITE	0uH
FB2101	1-469-676-22	FERRITE	0uH
FB2102	1-469-676-22	FERRITE	0uH
FB2103	1-469-676-22	FERRITE	0uH
FB2104	1-469-676-22	FERRITE	0uH
FB2301	1-469-676-22	FERRITE	0uH
FB2302	1-469-676-22	FERRITE	0uH
FB2303	1-469-676-22	FERRITE	0uH
FB2502	1-469-676-22	FERRITE	0uH
FB2503	1-469-676-22	FERRITE	0uH
FB2504	1-469-676-22	FERRITE	0uH
FB2902	1-469-676-22	FERRITE	0uH
FB2903	1-469-676-22	FERRITE	0uH
FB2904	1-469-676-22	FERRITE	0uH
FB2905	1-500-445-21	FERRITE	0uH
FB2906	1-500-282-11	FERRITE	0uH
FB3001	1-469-676-22	FERRITE	0uH
FB3003	1-469-676-22	FERRITE	0uH (TRV50/TRV50E)
FB3102	1-469-676-22	FERRITE	0uH
FB4101	1-469-676-22	FERRITE	0uH
FB4201	1-469-676-22	FERRITE	0uH
FB4301	1-469-676-22	FERRITE	0uH

< IC >

IC1002	6-700-709-01	IC	NJU7241F31(TE2)
IC1201	8-759-586-19	IC	TC7WH123FU(TE12R)
IC1302	8-759-637-96	IC	uPD16877MA-6A5-E2
IC1304	6-701-987-01	IC	CXD9681TQ-FE2
IC1501	8-752-417-38	IC	CXD3600AR-T4
IC1502	6-702-060-01	IC	VSP2221GPLR
IC1503	8-759-075-66	IC	TA75S01F(TE85R)
IC1504	6-700-271-01	IC	NJU7241F36(TE2)
IC1601	8-752-417-39	IC	M65515WG-DF0Z
IC1601	8-752-417-39	IC	CXD3156GA-T6
IC1701	8-759-829-96	IC	HY5V66GF-P-E1-TR
IC1704	6-701-648-01	IC	MB87M1420LGA-G-ER
IC1801	6-701-985-01	IC	BH2220FVM-TR
IC1901	8-752-086-52	IC	CXA2071R-T4
IC1902	8-752-086-53	IC	CXA2072R-T4
IC2001	6-701-740-01	IC	MB87L4261LGA-G-ER
IC2101	8-759-650-63	IC	CAIN-CSP
IC2102	6-700-553-38	IC	SN104266BGGM-TEB
IC2301	8-752-415-97	IC	CXD3155GA-T6
IC2302	6-701-691-01	IC	AK5355VT-E2
IC2401	6-701-927-01	IC	TB6550XBG(EB)
? IC2501	6-801-882-01	IC	MB91194LGA-G-116-ER
IC2502	8-759-680-85	IC	AK6417AL-L
IC2702	6-702-096-01	IC	BD4201FV-E2
IC2703	8-759-642-45	IC	TL1596CPWR
IC2901	6-700-600-01	IC	M95640-WDL6T
IC2903	8-759-082-58	IC	TC7W08FU(TE12R)
IC2904	8-759-271-88	IC	TC7SHU04FU-TE85R
IC2905	6-701-935-01	IC	HD6417190BPZ110BV
IC3001	8-759-829-96	IC	HY5V66GF-P-E1-TR (TRV50/TRV50E)
IC3001	8-759-668-17	IC	MB81F161622C-15PB-ER (TRV40/TRV40E)
IC3002	6-801-786-01	IC	uPD29F064115F9-004-E2-A (TRV50/TRV50E)
IC3002	6-801-830-01	IC	MB85331BE90PBT-02-ER (TRV40/TRV40E)
IC3101	6-801-776-01	IC	MB89097LGA-G-118-ER
IC4101	6-701-656-01	IC	AN2225NBBTBA
IC4201	8-752-100-95	IC	CXA3289AR-T4
IC4202	8-752-405-57	IC	CXD3501AR-T4
IC4301	8-759-826-24	IC	LA74208GL-TBM
IC4302	8-759-826-26	IC	AK4550VL-L

< COIL >

L1001	1-414-770-91	INDUCTOR	4.7uH
L1004	1-414-770-91	INDUCTOR	4.7uH
L1005	1-414-770-91	INDUCTOR	4.7uH
L1006	1-414-770-91	INDUCTOR	4.7uH
L1201	1-414-771-91	INDUCTOR	10uH
L1301	1-414-771-91	INDUCTOR	10uH
L1302	1-469-525-91	INDUCTOR	10uH
L1303	1-469-525-91	INDUCTOR	10uH
L1501	1-414-771-91	INDUCTOR	10uH
L1502	1-414-771-91	INDUCTOR	10uH
L1601	1-469-525-91	INDUCTOR	10uH
L1701	1-469-525-91	INDUCTOR	10uH
L1801	1-469-525-91	INDUCTOR	10uH
L1901	1-469-525-91	INDUCTOR	10uH
L1902	1-469-525-91	INDUCTOR	10uH
L1903	1-469-525-91	INDUCTOR	10uH
L2001	1-469-525-91	INDUCTOR	10uH
L2002	1-469-525-91	INDUCTOR	10uH
L2101	1-412-936-11	INDUCTOR	0.56uH
L2102	1-414-246-11	INDUCTOR	1.8uH
L2103	1-469-525-91	INDUCTOR	10uH
L2104	1-469-525-91	INDUCTOR	10uH
L2105	1-469-525-91	INDUCTOR	10uH
L2401	1-414-771-91	INDUCTOR	10uH
L2901	1-469-525-91	INDUCTOR	10uH
L4101	1-469-525-91	INDUCTOR	10uH
L4102	1-469-525-91	INDUCTOR	10uH
L4201	1-414-771-91	INDUCTOR	10uH
L4202	1-412-947-11	INDUCTOR	4.7uH
L4203	1-414-771-91	INDUCTOR	10uH
L4301	1-414-771-91	INDUCTOR	10uH
L4302	1-469-058-11	INDUCTOR	22uH

< TRANSISTOR >

Q1001	8-729-053-54	TRANSISTOR	HN1A01FE-Y/GR(TPLR3)
Q1002	8-729-050-76	TRANSISTOR	EC3201C-PM-TL
Q1003	8-729-054-44	TRANSISTOR	RN2902FE(TPLR3)
Q1004	8-729-053-57	TRANSISTOR	RN1902FE(TPLR3)
Q1005	8-729-050-79	TRANSISTOR	UNRL11100AS0
Q1006	8-729-050-74	TRANSISTOR	EC3101C-PM-TL
Q1007	8-729-053-52	TRANSISTOR	HN1C01FE-Y/GR(TPLR3)
Q1014	8-729-050-89	TRANSISTOR	UNRL21100AS0
Q1201	8-729-050-91	TRANSISTOR	UNRL21300AS0
Q1201	8-729-050-89	TRANSISTOR	RN1104C(TPL3)

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Ref. No.	Part No.	Description			
Q1202	8-729-050-74	TRANSISTOR	EC3101C-PM-TL		
Q1203	8-729-050-91	TRANSISTOR	UNRL21300AS0		
Q1501	8-729-050-91	TRANSISTOR	UNRL21300AS0		
Q1502	8-729-041-23	TRANSISTOR	NDS356AP		
Q1901	8-729-050-74	TRANSISTOR	EC3101C-PM-TL		
Q2001	8-759-054-48	TRANSISTOR	UP04601008S0		
Q2002	8-729-050-91	TRANSISTOR	UNRL21300AS0		
Q2003	8-729-049-91	TRANSISTOR	2SA2018H-T2L		
Q2004	8-729-050-74	TRANSISTOR	EC3101C-PM-TL		
Q2101	8-729-054-49	TRANSISTOR	UP04401008S0		
Q2102	8-729-050-74	TRANSISTOR	EC3101C-PM-TL		
Q2103	8-729-050-74	TRANSISTOR	EC3101C-PM-TL		
Q2104	8-729-054-49	TRANSISTOR	UP04401008S0		
Q2401	8-729-049-91	TRANSISTOR	2SA2018H-T2L		
Q2402	8-729-050-76	TRANSISTOR	EC3201C-PM-TL		
Q2501	8-729-050-89	TRANSISTOR	UNRL21100AS0		
Q2701	8-729-050-79	TRANSISTOR	UNRL11100AS0		
Q2703	8-729-050-91	TRANSISTOR	UNRL21300AS0		
Q2704	8-729-050-76	TRANSISTOR	EC3201C-PM-TL		
Q2705	8-729-056-75	TRANSISTOR	MCH3211-TL-E		
Q2707	8-729-055-89	TRANSISTOR	MCH3306-TL-E		
Q2708	8-729-053-52	TRANSISTOR	HN1C01FE-Y/GR(TPLR3)		
Q2903	8-729-050-91	TRANSISTOR	UNRL21300AS0		
Q2904	8-729-050-81	TRANSISTOR	UNRL11300AS0		
Q2905	8-729-050-74	TRANSISTOR	EC3101C-PM-TL		
Q2906	8-729-050-89	TRANSISTOR	UNRL21100AS0		
Q2907	8-729-013-31	TRANSISTOR	2SA1588-OY-TE85L		
Q2908	8-729-050-92	TRANSISTOR	UNRL21400AS0		
Q2910	8-729-050-81	TRANSISTOR	UNRL11300AS0		
Q2911	8-729-054-49	TRANSISTOR	UP04401008S0		
Q2912	8-729-049-91	TRANSISTOR	2SA2018H-T2L		
Q3101	8-729-041-43	TRANSISTOR	HN1L02FU(TE85R)		
Q4101	8-729-050-76	TRANSISTOR	EC3201C-PM-TL		
Q4102	8-729-050-81	TRANSISTOR	UNRL11300AS0		
Q4104	8-729-050-73	TRANSISTOR	2SC5376C-B(TPL3)		
Q4105	8-729-050-73	TRANSISTOR	2SC5376C-B(TPL3)		
Q4301	8-729-921-51	TRANSISTOR	2SD1834-T100		
Q4302	8-729-054-52	TRANSISTOR	RN1910FE(TPLR3)		
Q4303	8-729-054-51	TRANSISTOR	RN2910FE(TPLR3)		
Q4304	8-729-050-91	TRANSISTOR	UNRL21300AS0		
Q4305	8-729-054-52	TRANSISTOR	RN1910FE(TPLR3)		
Q4306	8-729-050-83	TRANSISTOR	UNRL11500AS0		
Q4307	8-729-054-52	TRANSISTOR	RN1910FE(TPLR3)		
		< RESISTOR >			
R1002	1-208-935-11	METAL CHIP	100K	0.5%	1/16W
R1003	1-208-707-11	METAL CHIP	10K	0.5%	1/16W
R1004	1-208-943-11	METAL CHIP	220K	0.5%	1/16W
R1005	1-218-969-11	RES-CHIP	22K	5%	1/16W
R1006	1-218-977-11	RES-CHIP	100K	5%	1/16W
R1007	1-218-977-11	RES-CHIP	100K	5%	1/16W
R1008	1-218-969-11	RES-CHIP	22K	5%	1/16W
R1009	1-208-935-11	METAL CHIP	100K	0.5%	1/16W
R1010	1-208-715-11	METAL CHIP	22K	0.5%	1/16W
R1011	1-208-699-11	METAL CHIP	4.7K	0.5%	1/16W
R1021	1-218-935-11	RES-CHIP	33	5%	1/16W
R1022	1-218-935-11	RES-CHIP	33	5%	1/16W
R1028	1-218-944-11	RES-CHIP	180	5%	1/16W
R1030	1-218-990-11	SHORT	0		
R1201	1-218-973-11	RES-CHIP	47K	5%	1/16W

Ref. No.	Part No.	Description			
R1202	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R1203	1-218-966-11	RES-CHIP	12K	5%	1/16W
R1204	1-218-967-11	RES-CHIP	15K	5%	1/16W
R1205	1-218-981-11	RES-CHIP	220K	5%	1/16W
R1206	1-218-969-11	RES-CHIP	22K	5%	1/16W
R1301	1-208-683-11	METAL CHIP	1K	0.5%	1/16W
R1302	1-208-683-11	METAL CHIP	1K	0.5%	1/16W
R1303	1-208-683-11	METAL CHIP	1K	0.5%	1/16W
R1304	1-208-683-11	METAL CHIP	1K	0.5%	1/16W
R1305	1-218-970-11	METAL CHIP	27K	0.5%	1/16W
R1306	1-208-909-11	METAL CHIP	8.2K	0.5%	1/16W
R1307	1-208-909-11	METAL CHIP	8.2K	0.5%	1/16W
R1308	1-218-970-11	METAL CHIP	27K	0.5%	1/16W
R1309	1-218-970-11	METAL CHIP	27K	0.5%	1/16W
R1310	1-208-909-11	METAL CHIP	8.2K	0.5%	1/16W
R1311	1-208-909-11	METAL CHIP	8.2K	0.5%	1/16W
R1312	1-218-970-11	METAL CHIP	27K	0.5%	1/16W
R1313	1-208-909-11	METAL CHIP	8.2K	0.5%	1/16W
R1314	1-208-707-11	METAL CHIP	10K	0.5%	1/16W
R1315	1-208-695-11	METAL CHIP	3.3K	0.5%	1/16W
R1316	1-208-943-11	METAL CHIP	220K	0.5%	1/16W
R1317	1-208-941-11	METAL CHIP	180K	0.5%	1/16W
R1318	1-208-941-11	METAL CHIP	180K	0.5%	1/16W
R1319	1-208-703-11	METAL CHIP	6.8K	0.5%	1/16W
R1320	1-218-990-11	SHORT	0		
R1321	1-208-707-11	METAL CHIP	10K	0.5%	1/16W
R1322	1-208-909-11	METAL CHIP	8.2K	0.5%	1/16W
R1323	1-208-943-11	METAL CHIP	220K	0.5%	1/16W
R1324	1-208-699-11	METAL CHIP	4.7K	0.5%	1/16W
R1325	1-218-990-11	SHORT	0		
R1361	1-216-864-11	METAL CHIP	0	5%	1/16W
R1362	1-216-864-11	METAL CHIP	0	5%	1/16W
R1363	1-216-864-11	METAL CHIP	0	5%	1/16W
R1364	1-216-864-11	METAL CHIP	0	5%	1/16W
R1365	1-216-864-11	METAL CHIP	0	5%	1/16W
R1366	1-216-864-11	METAL CHIP	0	5%	1/16W
R1367	1-218-953-11	RES-CHIP	1K	5%	1/16W
R1368	1-218-990-11	SHORT	0		
R1369	1-218-990-11	SHORT	0		
R1370	1-218-989-11	RES-CHIP	1M	5%	1/16W
R1501	1-218-989-11	RES-CHIP	1M	5%	1/16W
R1502	1-218-981-11	RES-CHIP	220K	5%	1/16W
R1504	1-218-962-11	RES-CHIP	5.6K	5%	1/16W
R1505	1-218-967-11	RES-CHIP	15K	5%	1/16W
R1506	1-218-985-11	RES-CHIP	470K	5%	1/16W
R1507	1-218-990-11	SHORT	0		
R1508	1-218-990-11	SHORT	0		
R1509	1-218-965-11	RES-CHIP	10K	5%	1/16W
R1510	1-218-990-11	SHORT	0		
R1512	1-218-943-11	RES-CHIP	150	5%	1/16W
R1513	1-218-990-11	SHORT	0		
R1514	1-218-990-11	SHORT	0		
R1517	1-218-977-11	RES-CHIP	100K	5%	1/16W
R1518	1-218-990-11	SHORT	0		
R1519	1-218-990-11	SHORT	0		
R1520	1-218-990-11	SHORT	0		
R1521	1-218-990-11	SHORT	0		
R1522	1-218-990-11	SHORT	0		
R1525	1-218-990-11	SHORT	0		
R1529	1-218-990-11	SHORT	0		

Ref. No.	Part No.	Description			
R1530	1-216-864-11	METAL CHIP	0	5%	1/16W
R1531	1-216-864-11	METAL CHIP	0	5%	1/16W
R1532	1-216-864-11	METAL CHIP	0	5%	1/16W
R1533	1-218-990-11	SHORT	0		
R1601	1-218-953-11	RES-CHIP	1K	5%	1/16W
R1602	1-218-990-11	SHORT	0 (TRV40/TRV50)		
R1603	1-218-990-11	SHORT	0 (TRV40E/TRV50E)		
R1604	1-218-990-11	SHORT	0 (TRV40E/TRV50E)		
R1605	1-218-990-11	SHORT	0 (TRV40/TRV50)		
R1606	1-218-941-81	RES-CHIP	100	5%	1/16W
R1608	1-218-990-11	SHORT	0		
R1609	1-218-990-11	SHORT	0		
R1707	1-218-990-11	SHORT	0		
R1709	1-216-864-11	METAL CHIP	0	5%	1/16W
R1710	1-218-990-11	SHORT	0		
R1712	1-216-864-11	METAL CHIP	0	5%	1/16W
R1713	1-218-990-11	SHORT	0		
R1714	1-218-965-11	RES-CHIP	10K	5%	1/16W
R1715	1-218-953-11	RES-CHIP	1K	5%	1/16W
R1716	1-218-989-11	RES-CHIP	1M	5%	1/16W
R1718	1-218-990-11	SHORT	0		
R1901	1-218-965-11	RES-CHIP	10K	5%	1/16W
R1902	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R1903	1-218-989-11	RES-CHIP	1M	5%	1/16W
R1904	1-218-979-11	RES-CHIP	150K	5%	1/16W
R1905	1-218-939-11	RES-CHIP	68	5%	1/16W
R1906	1-208-920-81	METAL CHIP	24K	0.5%	1/16W
R1907	1-218-965-11	RES-CHIP	10K	5%	1/16W
R1908	1-218-949-11	RES-CHIP	470	5%	1/16W
R1910	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R1911	1-218-965-11	RES-CHIP	10K	5%	1/16W
R1912	1-218-969-11	RES-CHIP	22K	5%	1/16W
R1913	1-218-965-11	RES-CHIP	10K	5%	1/16W
R1914	1-218-965-11	RES-CHIP	10K	5%	1/16W
R1915	1-218-969-11	RES-CHIP	22K	5%	1/16W
R1916	1-218-945-11	METAL CHIP	220	0.5%	1/16W
R1917	1-218-945-11	METAL CHIP	220	0.5%	1/16W
R1918	1-218-945-11	METAL CHIP	220	0.5%	1/16W
R1919	1-218-945-11	METAL CHIP	220	0.5%	1/16W
R1922	1-218-990-11	SHORT	0		
R2001	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2002	1-218-951-11	RES-CHIP	680	5%	1/16W
R2003	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2004	1-218-949-11	RES-CHIP	470	5%	1/16W
R2005	1-218-990-11	SHORT	0		
R2006	1-218-973-11	RES-CHIP	47K	5%	1/16W
R2007	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2008	1-218-960-11	RES-CHIP	3.9K	5%	1/16W
R2009	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2010	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R2101	1-218-990-11	SHORT	0		
R2103	1-218-990-11	SHORT	0		
R2104	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2105	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2106	1-218-946-11	RES-CHIP	270	5%	1/16W
R2107	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R2108	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R2109	1-218-990-11	SHORT	0		
R2110	1-218-990-11	SHORT	0		
R2111	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2112	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2113	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R2114	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R2115	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R2116	1-218-941-81	RES-CHIP	100	5%	1/16W
R2117	1-218-947-11	RES-CHIP	330	5%	1/16W
R2118	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R2119	1-218-937-11	RES-CHIP	47	5%	1/16W
R2120	1-208-683-11	METAL CHIP	1K	0.5%	1/16W
R2121	1-208-683-11	METAL CHIP	1K	0.5%	1/16W
R2122	1-218-849-11	METAL CHIP	1.2K	0.5%	1/16W
R2123	1-208-683-11	METAL CHIP	1K	0.5%	1/16W
R2124	1-218-849-11	METAL CHIP	1.2K	0.5%	1/16W
R2125	1-218-849-11	METAL CHIP	1.2K	0.5%	1/16W
R2126	1-218-990-11	SHORT	0		
R2129	1-218-946-11	RES-CHIP	270	5%	1/16W
R2130	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R2131	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R2132	1-218-943-11	RES-CHIP	150	5%	1/16W
R2134	1-208-709-11	METAL CHIP	12K	0.5%	1/16W
R2135	1-208-709-11	METAL CHIP	12K	0.5%	1/16W
R2136	1-218-938-11	METAL CHIP	56	0.5%	1/16W
R2137	1-218-938-11	METAL CHIP	56	0.5%	1/16W
R2138	1-218-864-11	METAL CHIP	5.1K	0.5%	1/16W
R2139	1-218-938-11	METAL CHIP	56	0.5%	1/16W
R2141	1-218-938-11	METAL CHIP	56	0.5%	1/16W
R2144	1-218-990-11	SHORT	0		
R2145	1-218-990-11	SHORT	0		
R2301	1-218-990-11	SHORT	0		
R2304	1-218-934-11	RES-CHIP	27	5%	1/16W
R2305	1-218-934-11	RES-CHIP	27	5%	1/16W
R2306	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R2307	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R2308	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R2309	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R2310	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2311	1-218-990-11	SHORT	0		
R2314	1-216-295-91	SHORT	0		
R2315	1-218-990-11	SHORT	0		
R2403	1-218-990-11	SHORT	0		
R2404	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2405	1-218-990-11	SHORT	0		
R2407	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2411	1-218-990-11	SHORT	0		
R2412	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2413	1-218-990-11	SHORT	0		
R2415	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2416	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R2417	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R2418	1-218-967-11	RES-CHIP	15K	5%	1/16W
R2419	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R2420	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R2423	1-218-990-11	SHORT	0		
R2424	1-218-968-11	RES-CHIP	18K	5%	1/16W
R2429	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2431	1-218-946-11	RES-CHIP	270	5%	1/16W
R2434	1-218-990-11	SHORT	0		
R2436	1-218-969-11	RES-CHIP	22K	5%	1/16W
R2437	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R2438	1-218-977-11	RES-CHIP	100K	5%	1/16W

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Ref. No.	Part No.	Description			
R2501	1-218-941-81	RES-CHIP	100	5%	1/16W
R2502	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2503	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2504	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2505	1-218-973-11	RES-CHIP	47K	5%	1/16W
R2506	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2507	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2508	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2509	1-218-968-11	RES-CHIP	18K	5%	1/16W
R2510	1-218-968-11	RES-CHIP	18K	5%	1/16W
R2512	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2513	1-218-985-11	RES-CHIP	470K	5%	1/16W
R2514	1-218-990-11	SHORT	0		
R2515	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2516	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2517	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2518	1-218-985-11	RES-CHIP	470K	5%	1/16W
R2519	1-218-989-11	RES-CHIP	1M	5%	1/16W
R2520	1-218-989-11	RES-CHIP	1M	5%	1/16W
R2521	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2522	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2523	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2524	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R2525	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R2526	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2527	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R2528	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2529	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2533	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2534	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2535	1-218-977-11	RES-CHIP	100K	5%	1/16W (TRV40/TRV40E)
R2536	1-218-990-11	SHORT	0 (TRV50/TRV50E)		
R2537	1-218-973-11	RES-CHIP	47K	5%	1/16W
R2538	1-218-990-11	SHORT	0 (TRV40E/TRV50E)		
R2539	1-218-990-11	SHORT	0 (TRV40/TRV50)		
R2540	1-218-990-11	SHORT	0		
R2541	1-218-975-11	RES-CHIP	68K	5%	1/16W
R2542	1-218-981-11	RES-CHIP	220K	5%	1/16W
R2543	1-218-989-11	RES-CHIP	1M	5%	1/16W
R2545	1-218-990-11	SHORT	0		
R2701	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R2702	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R2703	1-218-989-11	RES-CHIP	1M	5%	1/16W
R2704	1-218-973-11	RES-CHIP	47K	5%	1/16W
R2717	1-218-935-11	RES-CHIP	33	5%	1/16W
R2718	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R2719	1-218-990-11	SHORT	0		
R2720	1-218-949-11	RES-CHIP	470	5%	1/16W
R2721	1-218-958-11	RES-CHIP	2.7K	5%	1/16W
R2722	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2723	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2724	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2727	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2735	1-218-973-11	RES-CHIP	47K	5%	1/16W
R2902	1-218-990-11	SHORT	0		
R2904	1-218-990-11	SHORT	0		
R2905	1-218-985-11	RES-CHIP	470K	5%	1/16W
R2906	1-218-985-11	RES-CHIP	470K	5%	1/16W
R2907	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2910	1-218-990-11	SHORT	0		

Ref. No.	Part No.	Description			
R2912	1-218-990-11	SHORT	0		
R2913	1-218-989-11	RES-CHIP	1M	5%	1/16W
R2914	1-208-645-11	METAL CHIP	27	0.5%	1/16W
R2915	1-208-645-11	METAL CHIP	27	0.5%	1/16W
R2916	1-218-985-11	RES-CHIP	470K	5%	1/16W
R2920	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2921	1-218-989-11	RES-CHIP	1M	5%	1/16W
R2923	1-218-990-11	SHORT	0		
R2924	1-218-990-11	SHORT	0		
R2925	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2926	1-218-990-11	SHORT	0		
R2927	1-218-989-11	RES-CHIP	1M	5%	1/16W
R2928	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2930	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2931	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2932	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2933	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2935	1-218-955-11	RES-CHIP	1.5K	5%	1/16W
R2936	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R2937	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2938	1-218-949-11	RES-CHIP	470	5%	1/16W
R2939	1-218-940-11	RES-CHIP	82	5%	1/16W
R2942	1-218-947-11	RES-CHIP	330	5%	1/16W
R2943	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2944	1-218-990-11	SHORT	0		
R2945	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R2946	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R2948	1-218-962-11	RES-CHIP	5.6K	5%	1/16W
R2949	1-218-955-11	RES-CHIP	1.5K	5%	1/16W
R2950	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R2951	1-216-791-11	METAL CHIP	3.3	5%	1/16W
R2952	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R2953	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R2954	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2955	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2956	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2958	1-218-990-11	SHORT	0		
R2961	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2962	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2963	1-218-990-11	SHORT	0		
R2964	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R2965	1-218-961-11	RES-CHIP	4.7K	5%	1/16W (TRV50/TRV50E)
R3001	1-218-990-11	SHORT	0 (TRV40/TRV40E)		
R3002	1-218-990-11	SHORT	0 (TRV50/TRV50E)		
R3004	1-218-990-11	SHORT	0		
R3007	1-218-977-11	RES-CHIP	100K	5%	1/16W
R3008	1-218-990-11	SHORT	0 (TRV40/TRV40E)		
R3101	1-218-989-11	RES-CHIP	1M	5%	1/16W
R3102	1-218-977-11	RES-CHIP	100K	5%	1/16W
R3103	1-218-977-11	RES-CHIP	100K	5%	1/16W
R3104	1-218-973-11	RES-CHIP	47K	5%	1/16W
R3105	1-218-990-11	SHORT	0		
R3106	1-219-570-11	RES-CHIP	10M	5%	1/10W
R3107	1-218-953-11	RES-CHIP	1K	5%	1/16W
R3108	1-218-953-11	RES-CHIP	1K	5%	1/16W
R3109	1-218-973-11	RES-CHIP	47K	5%	1/16W
R3110	1-218-977-11	RES-CHIP	100K	5%	1/16W
R3111	1-218-989-11	RES-CHIP	1M	5%	1/16W
R3112	1-218-953-11	RES-CHIP	1K	5%	1/16W
R3113	1-208-957-81	METAL CHIP	820K	0.5%	1/16W

Ref. No.	Part No.	Description			
R3114	1-218-977-11	RES-CHIP	100K	5%	1/16W
R3115	1-218-977-11	RES-CHIP	100K	5%	1/16W
R3116	1-208-947-11	METAL CHIP	330K	0.5%	1/16W
R3117	1-218-977-11	RES-CHIP	100K	5%	1/16W
R3118	1-218-985-11	RES-CHIP	470K	5%	1/16W
R3119	1-218-985-11	RES-CHIP	470K	5%	1/16W
R3120	1-208-957-81	METAL CHIP	820K	0.5%	1/16W
R3121	1-208-947-11	METAL CHIP	330K	0.5%	1/16W
R3123	1-218-989-11	RES-CHIP	1M	5%	1/16W
R3124	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4101	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R4102	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R4103	1-218-941-81	RES-CHIP	100	5%	1/16W
R4104	1-218-981-11	RES-CHIP	220K	5%	1/16W
R4106	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4107	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4108	1-218-935-11	RES-CHIP	33	5%	1/16W
R4109	1-218-935-11	RES-CHIP	33	5%	1/16W
R4110	1-218-935-11	RES-CHIP	33	5%	1/16W
R4111	1-218-935-11	RES-CHIP	33	5%	1/16W
R4112	1-218-935-11	RES-CHIP	33	5%	1/16W
R4113	1-218-935-11	RES-CHIP	33	5%	1/16W
R4114	1-218-879-11	METAL CHIP	22K	0.5%	1/10W
R4115	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4116	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4117	1-218-965-11	RES-CHIP	10K	5%	1/16W
R4118	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4119	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4120	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4121	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4122	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4201	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4202	1-208-719-11	METAL CHIP	33K	0.5%	1/16W
R4205	1-218-958-11	RES-CHIP	2.7K	5%	1/16W
R4206	1-218-973-11	RES-CHIP	47K	5%	1/16W
R4207	1-218-975-11	RES-CHIP	68K	5%	1/16W
R4208	1-218-969-11	RES-CHIP	22K	5%	1/16W
R4209	1-218-975-11	RES-CHIP	68K	5%	1/16W
R4210	1-218-989-11	RES-CHIP	1M	5%	1/16W
R4211	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4212	1-218-941-81	RES-CHIP	100	5%	1/16W
R4213	1-218-941-81	RES-CHIP	100	5%	1/16W
R4214	1-218-941-81	RES-CHIP	100	5%	1/16W
R4216	1-208-927-11	METAL CHIP	47K	0.5%	1/16W
R4217	1-218-989-11	METAL CHIP	1M	0.5%	1/16W
R4218	1-218-990-11	SHORT	0		
R4221	1-216-864-11	METAL CHIP	0	5%	1/16W
R4222	1-216-864-11	METAL CHIP	0	5%	1/16W
R4223	1-218-941-81	RES-CHIP	100	5%	1/16W
R4224	1-218-941-81	RES-CHIP	100	5%	1/16W
R4225	1-218-990-11	SHORT	0		
R4301	1-218-971-11	RES-CHIP	33K	5%	1/16W
R4302	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4303	1-218-960-11	RES-CHIP	3.9K	5%	1/16W
R4304	1-218-965-11	RES-CHIP	10K	5%	1/16W
R4305	1-218-965-11	RES-CHIP	10K	5%	1/16W
R4306	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R4307	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R4308	1-218-973-11	RES-CHIP	47K	5%	1/16W
R4309	1-218-973-11	RES-CHIP	47K	5%	1/16W

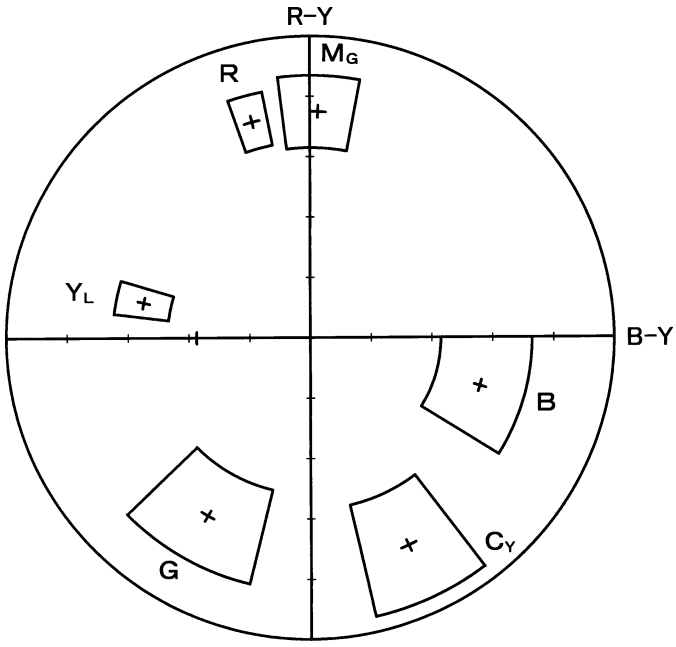
Ref. No.	Part No.	Description			
R4310	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4311	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4314	1-218-937-11	RES-CHIP	47	5%	1/16W
R4315	1-218-937-11	RES-CHIP	47	5%	1/16W
R4316	1-218-937-11	RES-CHIP	47	5%	1/16W
R4317	1-218-937-11	RES-CHIP	47	5%	1/16W
R4322	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4323	1-218-949-11	RES-CHIP	470	5%	1/16W
R4324	1-218-969-11	RES-CHIP	22K	5%	1/16W
R4325	1-218-949-11	RES-CHIP	470	5%	1/16W
R4326	1-218-949-11	RES-CHIP	470	5%	1/16W
		< COMPOSITION CIRCUIT BLOCK >			
RB2101	1-234-376-21	RES, NETWORK 2.2KX4	(1005)		
RB2501	1-234-381-21	RES, NETWORK 100KX4	(1005)		
RB2502	1-234-381-21	RES, NETWORK 100KX4	(1005)		
RB2503	1-234-381-21	RES, NETWORK 100KX4	(1005)		
RB2901	1-234-381-21	RES, NETWORK 100KX4	(1005)		
RB3101	1-234-384-11	RES, NETWORK 1MX4	(1005)		
RB3102	1-234-378-21	RES, NETWORK 10KX4	(1005)		
RB3103	1-234-375-21	RES, NETWORK 1KX4	(1005)		
RB3104	1-234-375-21	RES, NETWORK 1KX4	(1005)		
RB3106	1-234-375-21	RES, NETWORK 1KX4	(1005)		
RB3107	1-234-375-21	RES, NETWORK 1KX4	(1005)		
RB3110	1-234-375-21	RES, NETWORK 1KX4	(1005)		
RB3111	1-234-375-21	RES, NETWORK 1KX4	(1005)		
		< VARISTOR >			
VD2901	1-801-862-11	VARISTOR, CHIP			
VD2902	1-801-862-11	VARISTOR, CHIP			
		< VIBRATOR >			
X1501	1-795-135-11	VIBRATOR, CRYSTAL (40.5MHz) (TRV40E/TRV50E)			
X1501	1-781-633-21	VIBRATOR, CRYSTAL (54MHz) (TRV40/TRV50)			
X2101	1-781-045-21	VIBRATOR, CRYSTAL (24.576MHz)			
X2501	1-781-044-21	VIBRATOR, CRYSTAL (20MHz)			
X2901	1-781-620-21	VIBRATOR, CERAMIC (48MHz)			
X3101	1-795-244-11	VIBRATOR, CERAMIC (10MHz)			
X3102	1-767-994-42	VIBRATOR, CRYSTAL (32.768KHz)			

Ref. No.	Part No.	Description
		ACCESSORIES
		**********
⚠	1-475-599-11	ADAPTOR, AC (AC-L10) (TRV40:E,HK,JE/TRV40E:AEP,EE,E,JE/TRV50/TRV50E)
⚠	1-475-599-71	ADAPTOR, AC (AC-L10) (TRV40:KR)
⚠	1-475-599-81	ADAPTOR, AC (AC-L10) (TRV40E:CH)
	1-475-950-21	REMOTE COMMANDER (RMT-811)
⚠	1-569-007-11	ADAPTOR, CONVERSION 2P (TRV40:JE/TRV40E:JE)
⚠	1-569-008-21	ADAPTOR, CONVERSION 2P (TRV40:E,HK/TRV40E:E/TRV50E:E,HK)
⚠	1-573-291-11	CONNECTOR, CONVERSION 21P (TRV40E:AEP,EE/TRV50E:AEP,UK,EE)
⚠	1-696-819-11	CORD, POWER (TRV50E:AUS)
	1-757-293-11	CORD, CONNECTION (USB 5P) (TRV40/TRV40E:E,CH,JE/TRV50/TRV50E:E,HK,AUS)
	1-757-759-11	CORD, CONNECTION (USB) 5P (TRV40E:AEP,EE/TRV50E:AEP,UK,EE)
	1-765-080-11	CORD, CONNECTION (AV CABLE) (1.5m)
⚠	1-769-608-11	CORD, POWER (TRV40:E/TRV40E:AEP,EE,E/TRV50:E/TRV50E:AEP,EE,E)
⚠	1-776-985-11	CORD, POWER (TRV40:KR)
⚠	1-782-476-11	CORD, POWER (TRV40E:CH)
⚠	1-783-374-11	CORD, POWER (TRV40:HK/TRV50E:UK,HK)
⚠	1-790-107-22	CORD, POWER (TRV50:US,CND)
⚠	1-790-732-11	CORD, POWER (TRV40:JE/TRV40E:JE)
	3-053-056-01	LID, BATTERY CASE (FOR RMT-811)
	3-063-515-01	HOOD, LENS
	3-072-414-01	SPVD-008 (CD-ROM USB DRIVER) (TRV40/TRV40E/TRV50E)
	3-072-654-01	SPVD-008 (I) (CD-ROM USB DRIVER) (TRV50)
	3-073-861-01	CLOTH (TL), CLEANING
	3-073-941-01	STYLUS (TRV50/TRV50E)
	3-074-375-11	MANUAL, INSTRUCTION (ENGLISH) (TRV40:E,HK,JE/TRV50)
	3-074-375-21	MANUAL, INSTRUCTION (FRENCH) (TRV50:CND)
	3-074-375-31	MANUAL, INSTRUCTION (SPANISH/PORTUGUESE) (TRV40:E,JE)
	3-074-375-41	MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (TRV40:E,HK)
	3-074-375-51	MANUAL, INSTRUCTION (KOREAN) (TRV40:JE,KR)
	3-074-375-61	MANUAL, INSTRUCTION (ARABIC) (TRV40:E)
	3-074-603-11	MANUAL, NETWORK INSTRUCTION (ENGLISH) (TRV50:US)
	3-075-225-11	MANUAL, INSTRUCTION (ENGLISH/RUSSIAN) (TRV40E:E,CH,JE/TRV50E:UK,E,HK,AUS)
	3-075-225-21	MANUAL, INSTRUCTION (FRENCH/GERMAN) (TRV40E:E,JE/TRV50E:AEP,E)
	3-075-225-31	MANUAL, INSTRUCTION (ENGLISH/DUTCH) (TRV50E:AEP)
	3-075-225-41	MANUAL, INSTRUCTION (SPANISH/PORTUGUESE) (TRV40E:AEP/TRV50E:AEP)
	3-075-225-51	MANUAL, INSTRUCTION (ITALIAN/GREEK) (TRV40E:AEP/TRV50E:AEP)
	3-075-225-61	MANUAL, INSTRUCTION (ARABIC/PERSIAN) (TRV40E:E/TRV50E:E)
	3-075-225-71	MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (TRV50E:HK)
	3-075-225-81	MANUAL, INSTRUCTION (SIMPLIFIED CHINESE) (TRV40E:E,CH,JE/TRV50E:E)
	3-075-396-11	MANUAL, NETWORK INSTRUCTION (ENGLISH/FRENCH) (TRV50:CND/TRV50E:E,HK,AUS)
	3-075-396-21	MANUAL, NETWORK INSTRUCTION (ENGLISH) (TRV50E:UK)
	3-075-396-31	MANUAL, NETWORK INSTRUCTION (ENGLISH/DUTCH) (TRV50E:AEP)
	3-075-396-41	MANUAL, NETWORK INSTRUCTION (FRENCH/GERMAN) (TRV50E:AEP)
	3-075-396-51	MANUAL, NETWORK INSTRUCTION (ITALIAN/GREEK) (TRV50E:AEP)
	3-075-396-61	MANUAL, NETWORK INSTRUCTION (SPANISH/PORTUGUESE) (TRV50E:AEP)
	3-075-396-71	MANUAL, NETWORK INSTRUCTION (TRADITIONAL CHINESE) (TRV50E:HK)
	3-075-396-81	MANUAL, NETWORK INSTRUCTION (SIMPLIFIED CHINESE) (TRV50E:E)
	A-7024-735-A	MEMORY BLOCK ASSY (8),PACKING
	X-3949-944-1	CAP (A) ASSY, LENS

Note :	**Note :**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

〈FOR CAMERA COLOR REPRODUCTION ADJUSTMENT〉

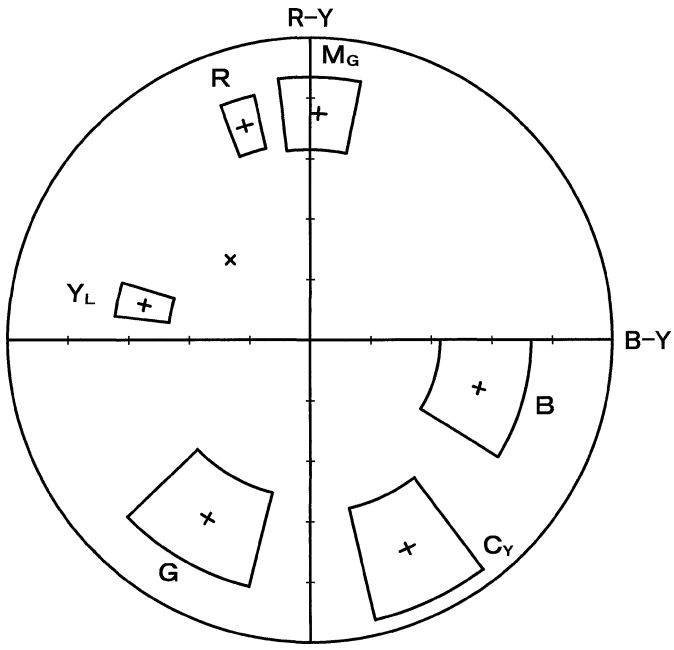
For NTSC model



DCR-TRV40/TRV50

Take a copy of CAMERA COLOR REPRODUCTION FRAME with a clear sheet for use.

For PAL model



DCR-TRV40E/TRV50E

9-929-951-11

Sony EMCS Co.

2002C1600-1

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Revision History

Ver.	Date	History	Contents	S.M. Rev. issued
1.0	2002.03	Official Release	—	—