

# DSC-W80/W85

## SERVICE MANUAL

LEVEL 3

Ver. 1.0 2007.03

Revision History

How to use  
Acrobat Reader

Internal memory  
ON BOARD



Photo: Silver

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

### Link

• SERVICE NOTE

• MODEL INFORMATION TABLE

• SCHEMATIC DIAGRAMS

• PRINTED WIRING BOARDS

• REPAIR PARTS LIST

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

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

DIGITAL STILL CAMERA

SONY®

## Model information table

Model	DSC-W80/Silver	DSC-W80/Black	DSC-W80/White	DSC-W80/Pink	DSC-W85/Silver
Destination	US, CND, AEP, UK, E, AUS, HK, CH, KR, AR, BR, J, JE	US, CND, AEP, UK, E, AUS, HK, CH, KR, JE	US, CND, AEP, UK, E, AUS, HK, CH, KR, J, JE	US, CND, AEP, UK, E, AUS, HK, CH, KR, J, JE	CND, AEP, UK, E, AUS, KR

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

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

## SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer.

- Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
- Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
- Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
- Look for parts which, through functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
- Check the B+ voltage to see it is at the values specified.
- 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

<u>Section</u>	<u>Title</u>	<u>Page</u>
<b>1. SERVICE NOTE</b>		
1-4. Method for Copying or Erasing the Data in Internal Memory .....	1-1	
1-5. How to Write Data to Internal Memory .....	1-2	
<b>4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS</b>		
4-2. Schematic Diagrams .....	4-3	
4-3. Printed Wiring Boards .....	4-21	
4-4. Mounted Parts Location .....	4-29	
<b>5. REPAIR PARTS LIST</b>		
5-2. Electrical Parts List .....	5-6	

## 1-4. METHOD FOR COPYING OR ERASING THE DATA IN INTERNAL MEMORY

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

**Note 1:** When replacing the SY-173 board, erase the data in internal memory of the board before replacement.

**Note 2:** When replacing the SY-173 board, execute formatting and initialize the internal memory after replacement.

### Method for Copying the Data in Internal Memory

#### Copy

Copies all images in the internal memory to a “Memory Stick Duo”.

- ① Insert a “Memory Stick Duo” having 32 MB or larger capacity.
- ② Select [Copy] with  $\Delta/\nabla/\blacktriangle/\triangledown$  on the control button, then press  $\bullet$ .  
The message “All data in internal memory will be copied” appears.
- ③ Select [OK] with  $\blacktriangle$ , then press  $\bullet$ .  
Copying starts.

#### To cancel the copying

Select [Cancel] in step ③, then press  $\bullet$ .

- Use a fully charged battery pack. If you attempt to copy image files using a battery pack with little remaining charge, the battery pack may run out, causing copying to fail or possibly corrupting the data.
- You cannot copy individual images.
- The original images in the internal memory are retained even after copying. To delete the contents of the internal memory, remove the “Memory Stick Duo” after copying, then execute the [Format] command in [Internal Memory Tool].
- When you copy the data in the internal memory to the “Memory Stick Duo”, all the data will be copied. You cannot choose a specific folder on the “Memory Stick Duo” as the destination for the data to be copied.
- Even if you copy data, a **DPOF** (Print order) mark is not copied

### Method for Formatting the Internal Memory

This item does not appear when a “Memory Stick Duo” is inserted in the camera.

#### Format

Formats the internal memory.

- Note that formatting irrevocably erases all data in the internal memory, including even protected images.
- ① Select [Format] with  $\Delta/\nabla/\blacktriangle/\triangledown$  on the control button, then press  $\bullet$ .  
The message “All data in internal memory will be erased” appears.
  - ② Select [OK] with  $\blacktriangle$ , then press  $\bullet$ .  
The format is completed.

#### To cancel the formatting

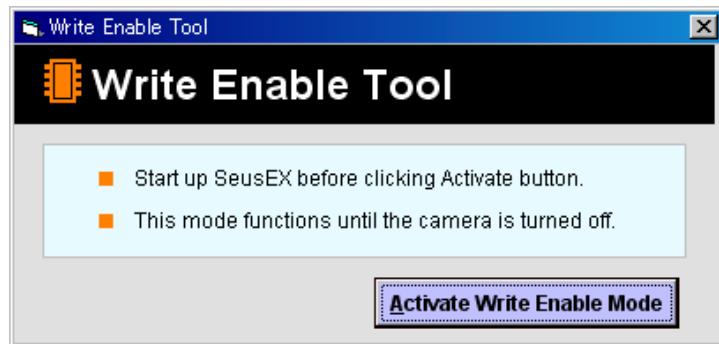
Select [Cancel] in step ②, then press  $\bullet$ .

## 1-5. HOW TO WRITE DATA TO INTERNAL MEMORY

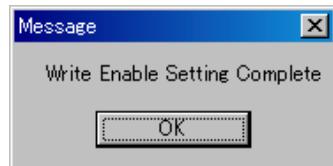
Usually, the camera has been set so as to disable the data writing from the PC to the internal memory of the camera. This setting must be changed temporarily when the data is to be written to the internal memory such as a case after the board replacement. To change the setting, use the write enable tool “WriteEnableTool.exe”.

### Data writing method

- 1) Connect the PC to the camera (USB mode: Mass Storage), and switch the driver to the “Sony Seus USB Driver”.
- 2) Start the Write Enable Tool and the SeusEX.
- 3) Click the **Activate Write Enable Mode** button of the Write Enable Tool.



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



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

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

#### 1-4. 内蔵メモリのデータコピーおよび消去方法

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

Note1：SY-173基板交換の際は、基板交換前に内蔵メモリのデータを消去して下さい。

Note2：SY-173基板交換の際は、基板交換後に内蔵メモリのフォーマットおよび初期化を実行して下さい。

#### 内蔵メモリのコピー方法

##### コピー

内蔵メモリーに記録した画像を、“メモリースティック デュオ”に一括コピーします。

- ① 32MB以上の容量のある“メモリースティック デュオ”を本体に入れる。
- ② コントロールボタンの▲/▼/◀/▶で[コピー]を選び、中央の●を押す。  
「内蔵メモリーのデータがすべてコピーされます」というメッセージが表示される。
- ③ ▲で[実行]を選び、中央の●を押す。  
コピーが実行される。

##### コピーを中止するには

手順③で、[キャンセル]を選び、中央の●を押す。

充分に充電したバッテリーをご使用ください。残量の少ないバッテリーを使用して画像ファイルをコピーすると、バッテリー切れのためデータを転送できなかったり、データを破損するおそれがあります。

画像ごとのコピーはできません。

データをコピーしても、内蔵メモリー内のデータは削除されません。内蔵メモリーの内容を消去するには、コピー後に“メモリースティック デュオ”を本体から取りはずし、[内蔵メモリーツール]の[フォーマット]を行ってください。

データをコピーすると“メモリースティック デュオ”内に新しいフォルダが作成されます。コピー先のフォルダを指定することはできません。

データのコピーを行っても、DPOF(プリント予約)マークの設定はコピーされません。

#### 内蔵メモリのフォーマット方法

“メモリースティック デュオ”が本機に入っている場合は表示されません。

##### フォーマット

内蔵メモリーの管理領域をフォーマット(初期化)します。

フォーマットすると、プロテクトしてある画像も含めて、すべてのデータが消去され、元に戻せません。

- ① コントロールボタンの▲/▼/◀/▶で[フォーマット]を選び、中央の●を押す。  
「内蔵メモリーのデータがすべて消去されます」というメッセージが表示される。
- ② ▲で[実行]を選び、中央の●を押す。  
フォーマットが実行される。

##### フォーマットを中止するには

手順②で、[キャンセル]を選び、中央の●を押す。

## 1-5. 内蔵メモリヘデータを書き戻す方法

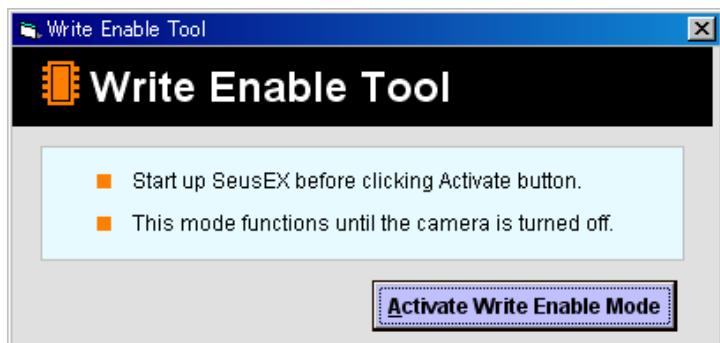
通常は、PCからカメラの内蔵メモリヘデータを書き込むことはできない設定になっています。

基板交換後などに、内蔵メモリヘデータを書き戻す場合には、この設定を一時的に変更する必要があります。

設定の変更には、書き込み許可ツール（WriteEnableTool.exe）を使用します。

### 書き戻し方法

- 1) カメラとPCをマストレージ接続し、ドライバを“Sony Seus USB Driver”に切り替える。
- 2) 書き込み許可ツールとSeusEXを起動する。
- 3) 書き込み許可ツールのActivate Write Enable Modeボタンをクリックする。



- 4) 設定の変更が終了すると、次のメッセージが表示されます。



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

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

## 4-2. SCHEMATIC DIAGRAMS

### Link

• CD-701 FLEXIBLE BOARD (CCD IMAGER)	• SY-173 BOARD (6/10) (CPU (POWER SUPPLY), BATTERY IN, CLOCK)
• SY-173 BOARD (1/10) (CCD SIGNAL PROCESS)	• SY-173 BOARD (7/10) (AUDIO, VIDEO)
• SY-173 BOARD (2/10) (LENS DRIVE)	• SY-173 BOARD (8/10) (FRONT CONTROL)
• SY-173 BOARD (3/10) (OIS DRIVE)	• SY-173 BOARD (9/10) (DC/DC CONVERTER)
• SY-173 BOARD (4/10) (CPU (SIGNAL PROCESS 1))	• SY-173 BOARD (10/10) (CONNECTOR)
• SY-173 BOARD (5/10) (CPU (SIGNAL PROCESS 2))	

- COMMON NOTE FOR SCHEMATIC DIAGRAMS

## 4-2. SCHEMATIC DIAGRAMS

### 4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

#### 4-2. SCHEMATIC DIAGRAMS

##### THIS NOTE IS COMMON FOR SCHEMATIC DIAGRAMS

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

###### (For schematic diagrams)

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

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

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

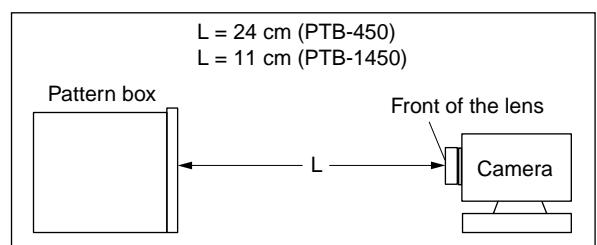
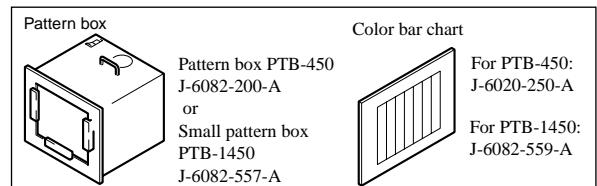
###### (Measuring conditions voltage and waveform)

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

###### Precautions for Replacement of Imager

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

###### 1. Connection



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

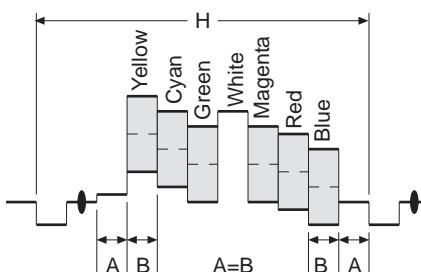


Fig. a (Video output terminal output waveform)

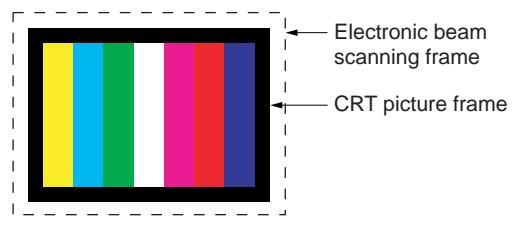
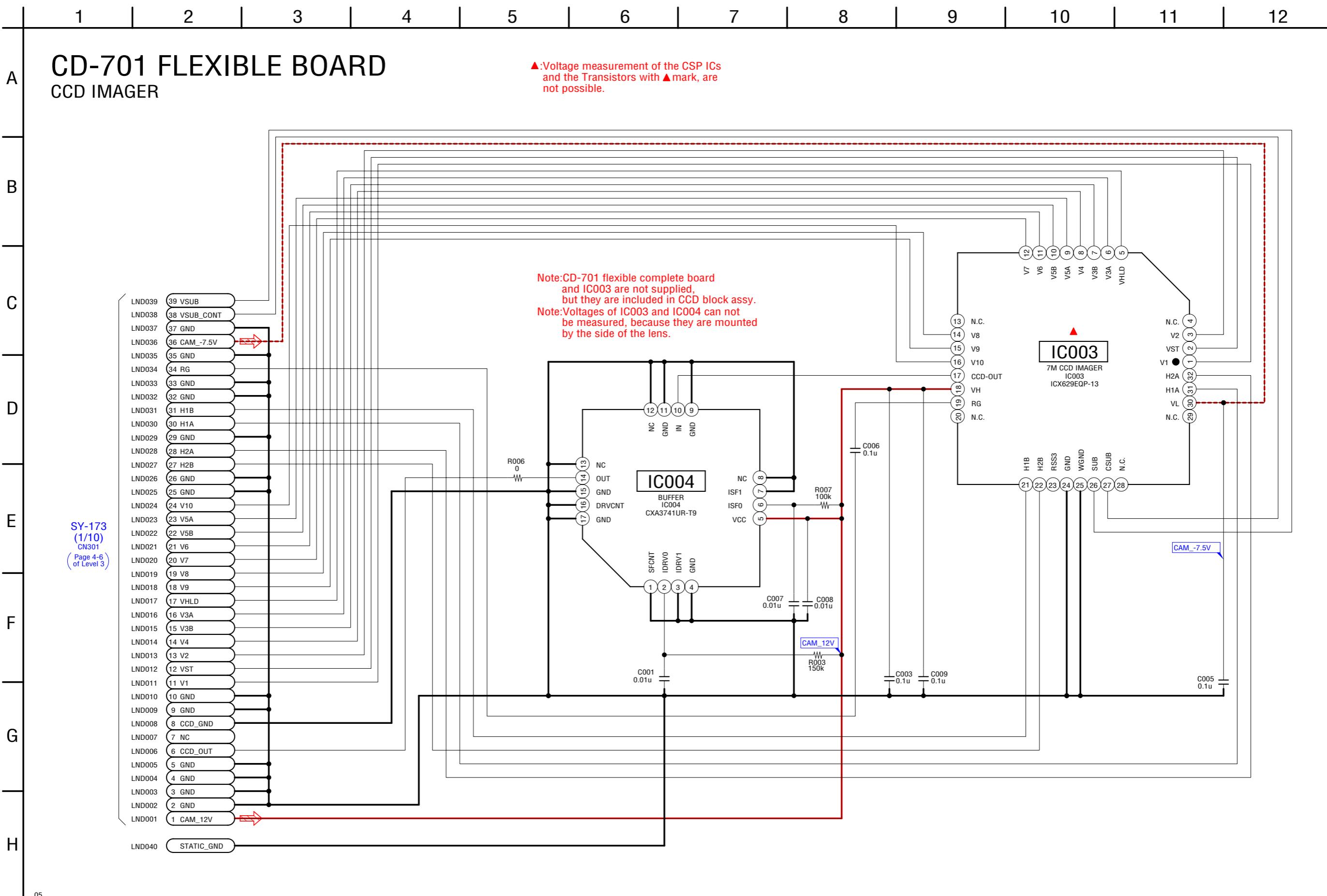


Fig.b (Picture on monitor TV)

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

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

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



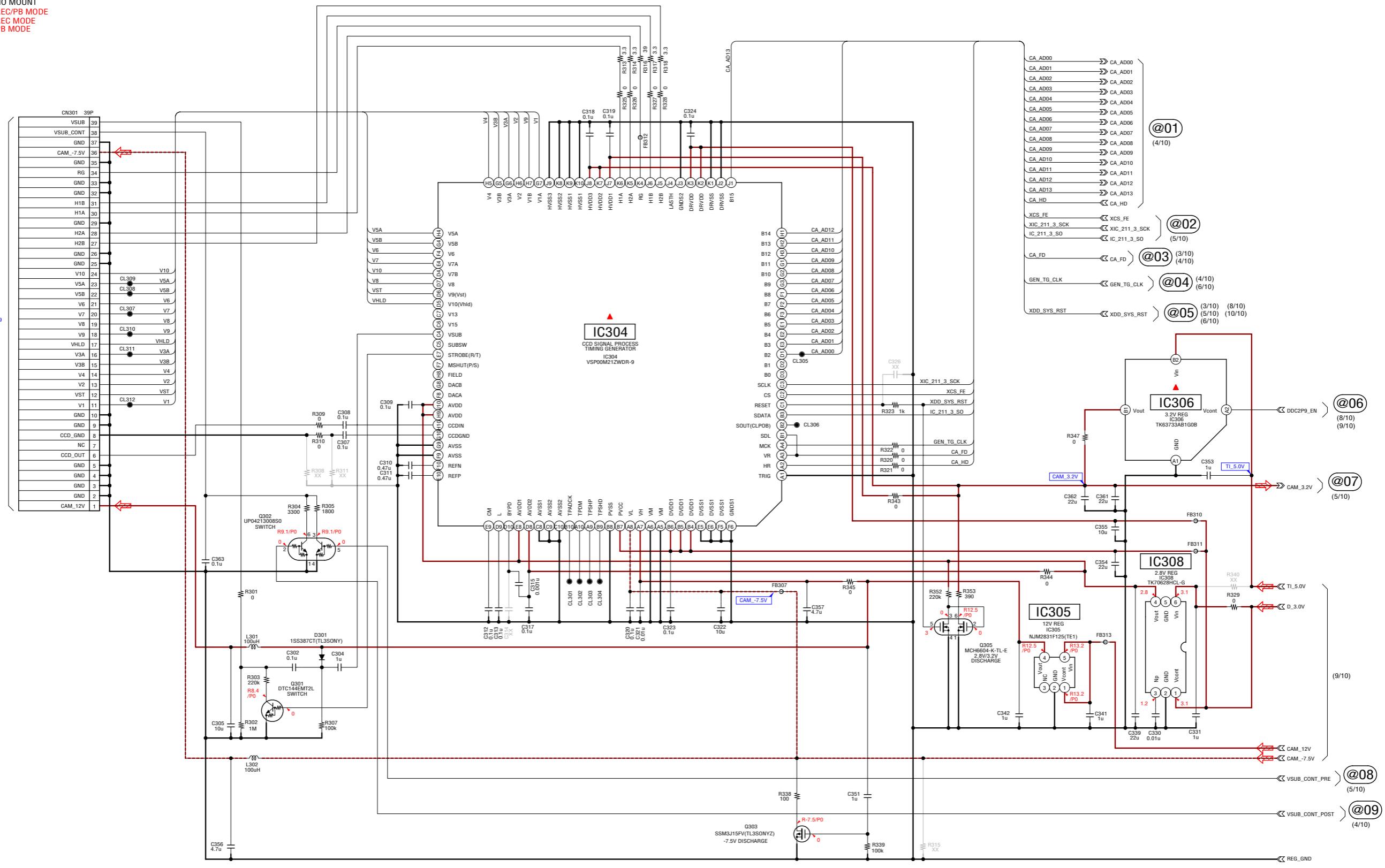
## SY-173 BOARD (1/10)

## CCD SIGNAL PROCESS

▲ Voltage measurement of the CSP ICs  
and the Transistors with ▲ mark, are  
not possible.

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

CD-701  
FLEXIBLE  
LND001-LND039  
(Page 4-5)

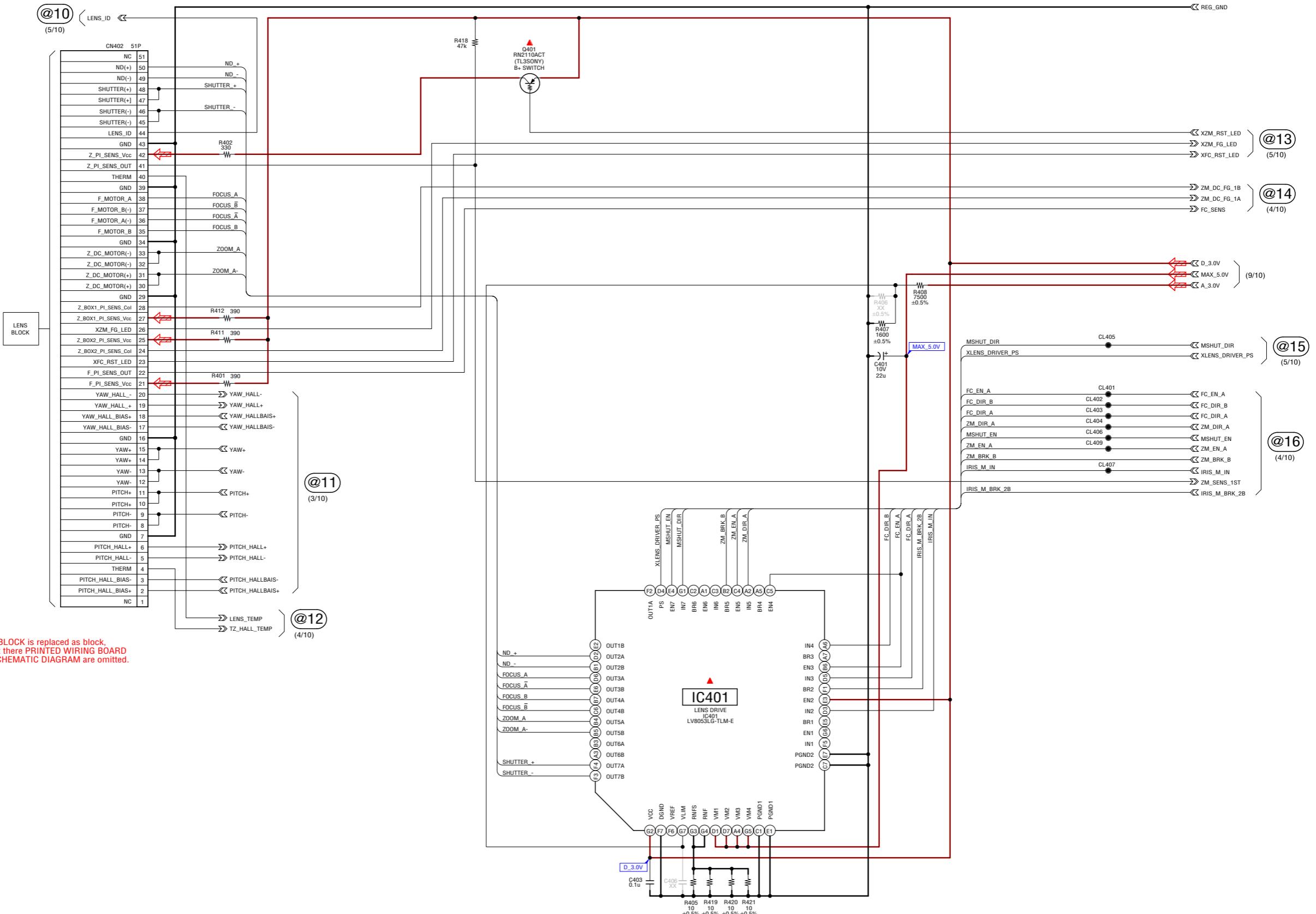


SY-173 BOARD (2/10)

## LENS DRIVE

**XX MARK: NO MOUNT**

▲:Voltage measurement of the CSP ICs and the Transistors with ▲ mark, are not possible.



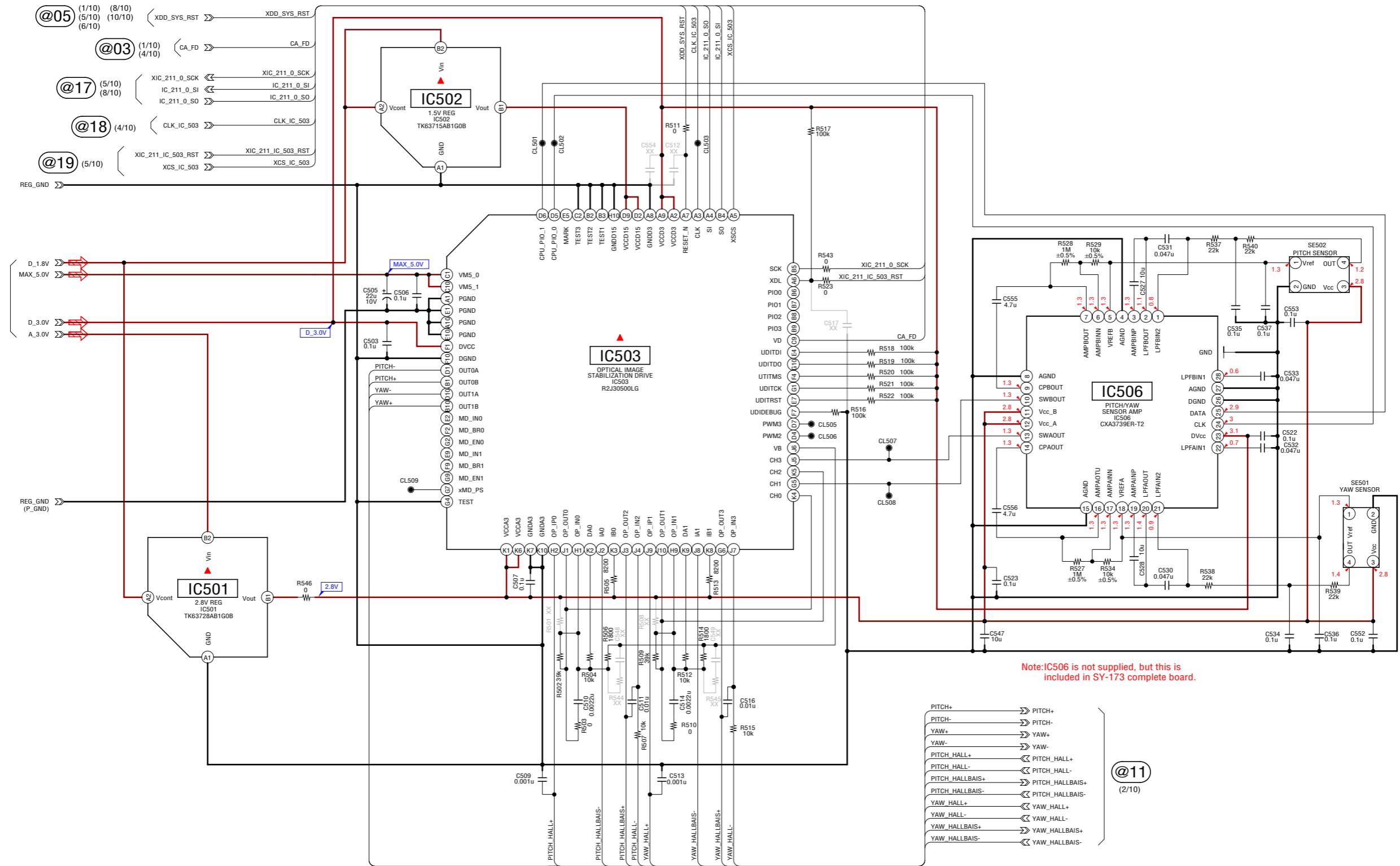
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

## SY-173 BOARD (3/10)

### OIS DRIVE

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

▲ Voltage measurement of the CSP ICs  
and the Transistors with ▲ mark, are  
not possible.



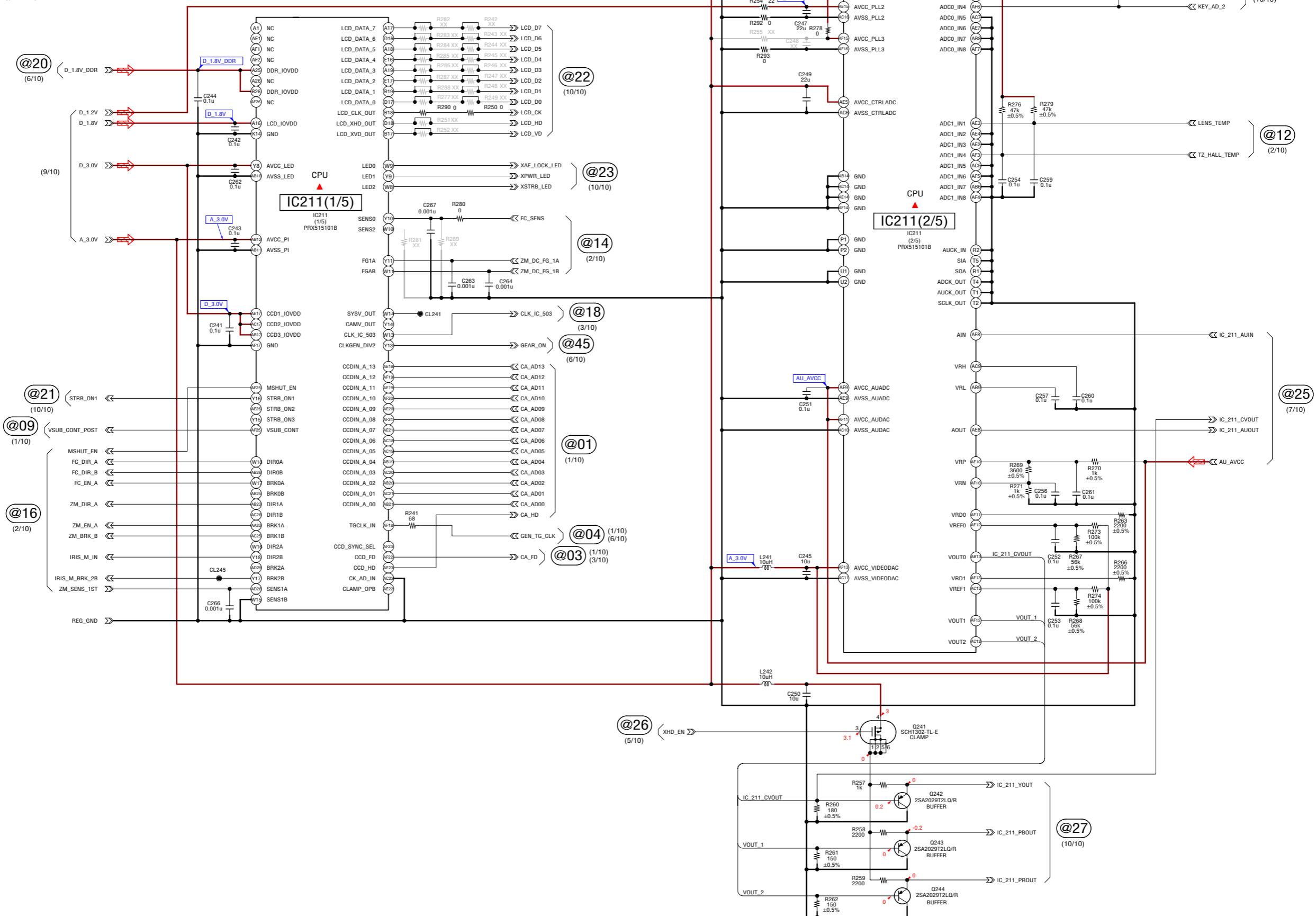
1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17

## A SY-173 BOARD (4/10) CPU (SIGNAL PROCESS 1)

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

▲: Voltage measurement of the CSP ICs and the Transistors with ▲ mark, are not possible.

Note: IC211 is not supplied, but this is included in SY-173 complete board.



1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17

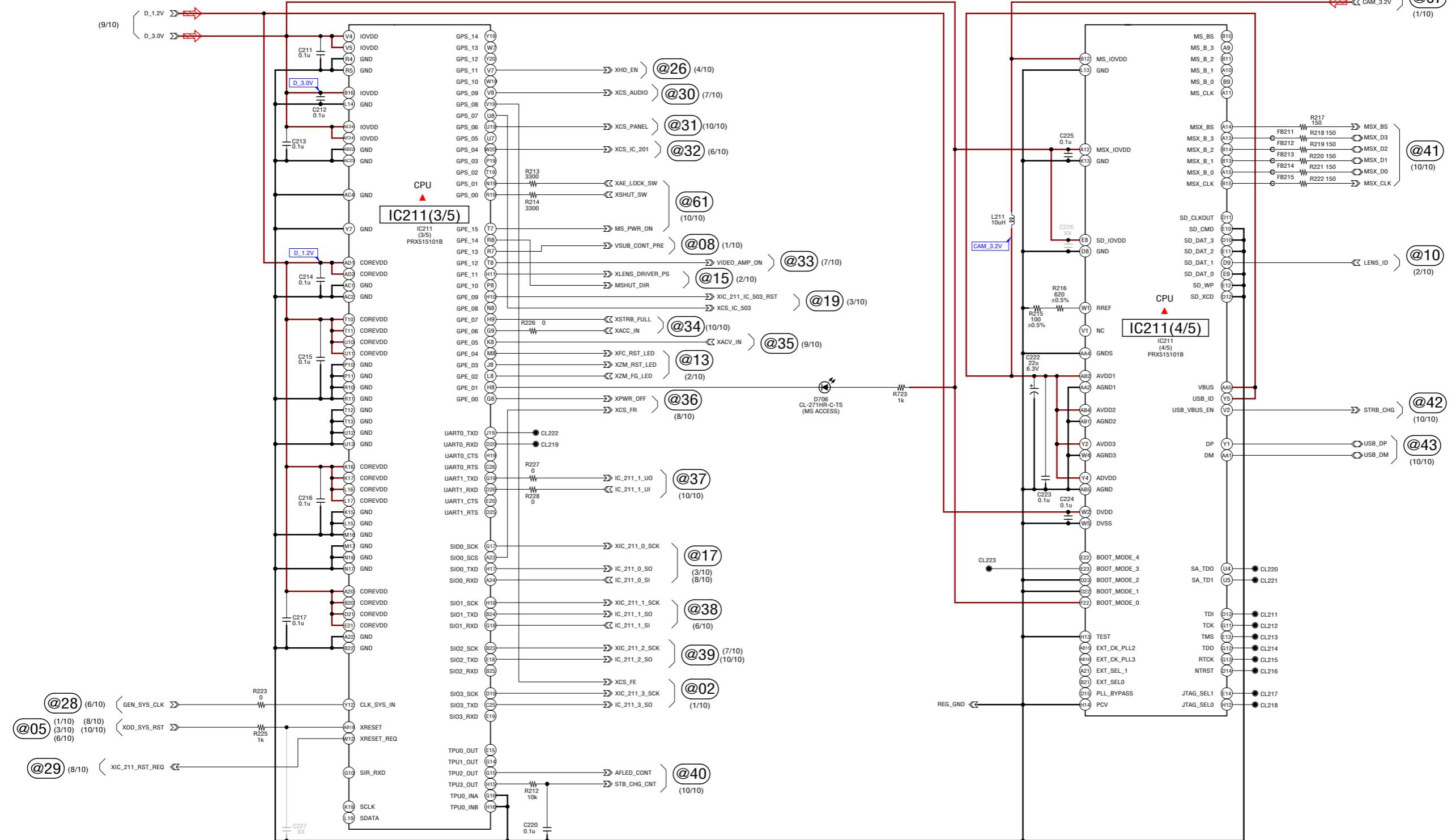
# SY-173 BOARD (5/10)

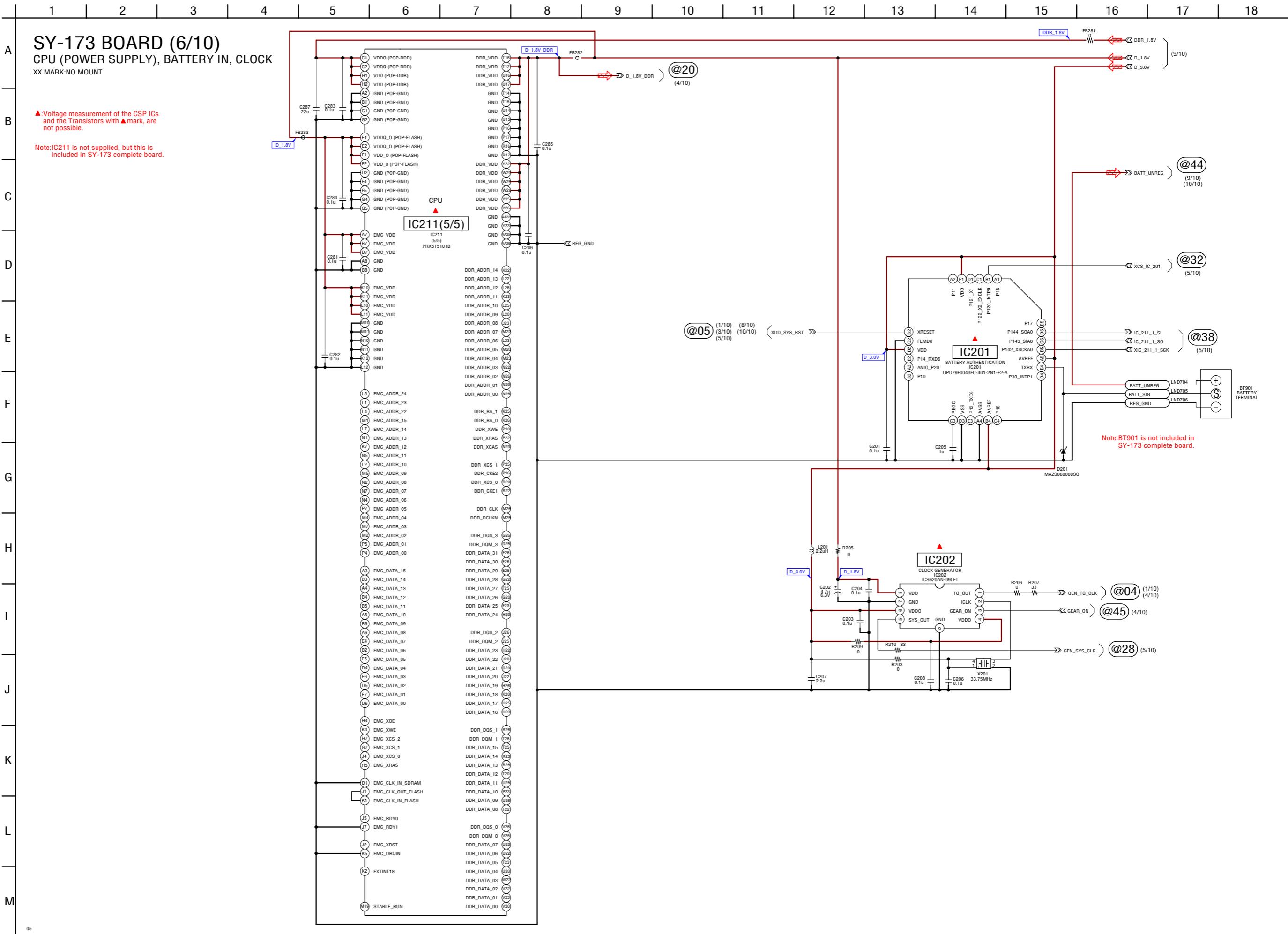
## CPU (SIGNAL PROCESS 2)

XX MARK: NO MOUNT

▲:Voltage measurement of the CSP ICs  
and the Transistors with ▲ mark, are  
not possible.

Note: IC211 is not supplied, but this is  
included in SY-173 complete board.





1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12

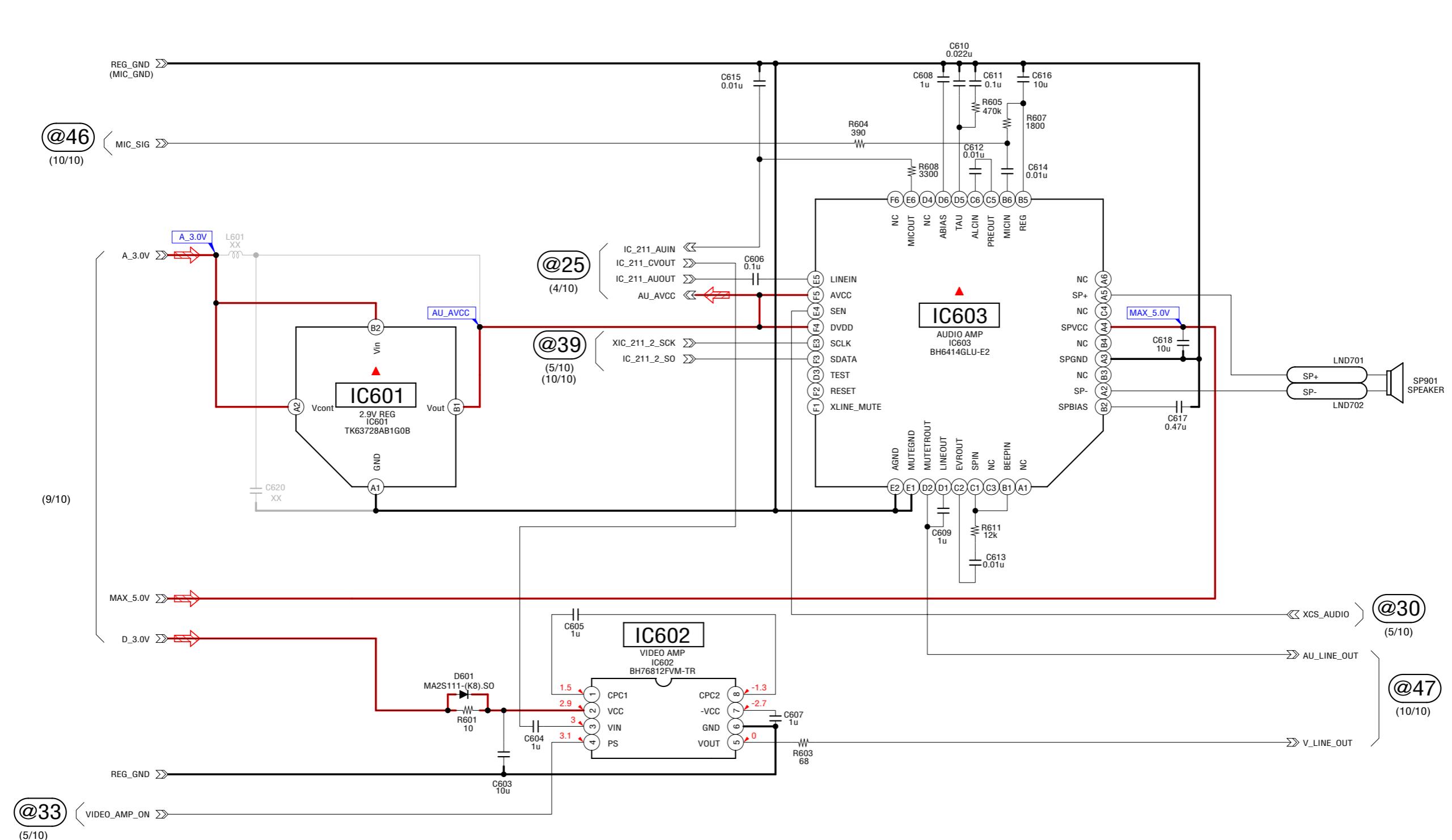
# SY-173 BOARD (7/10)

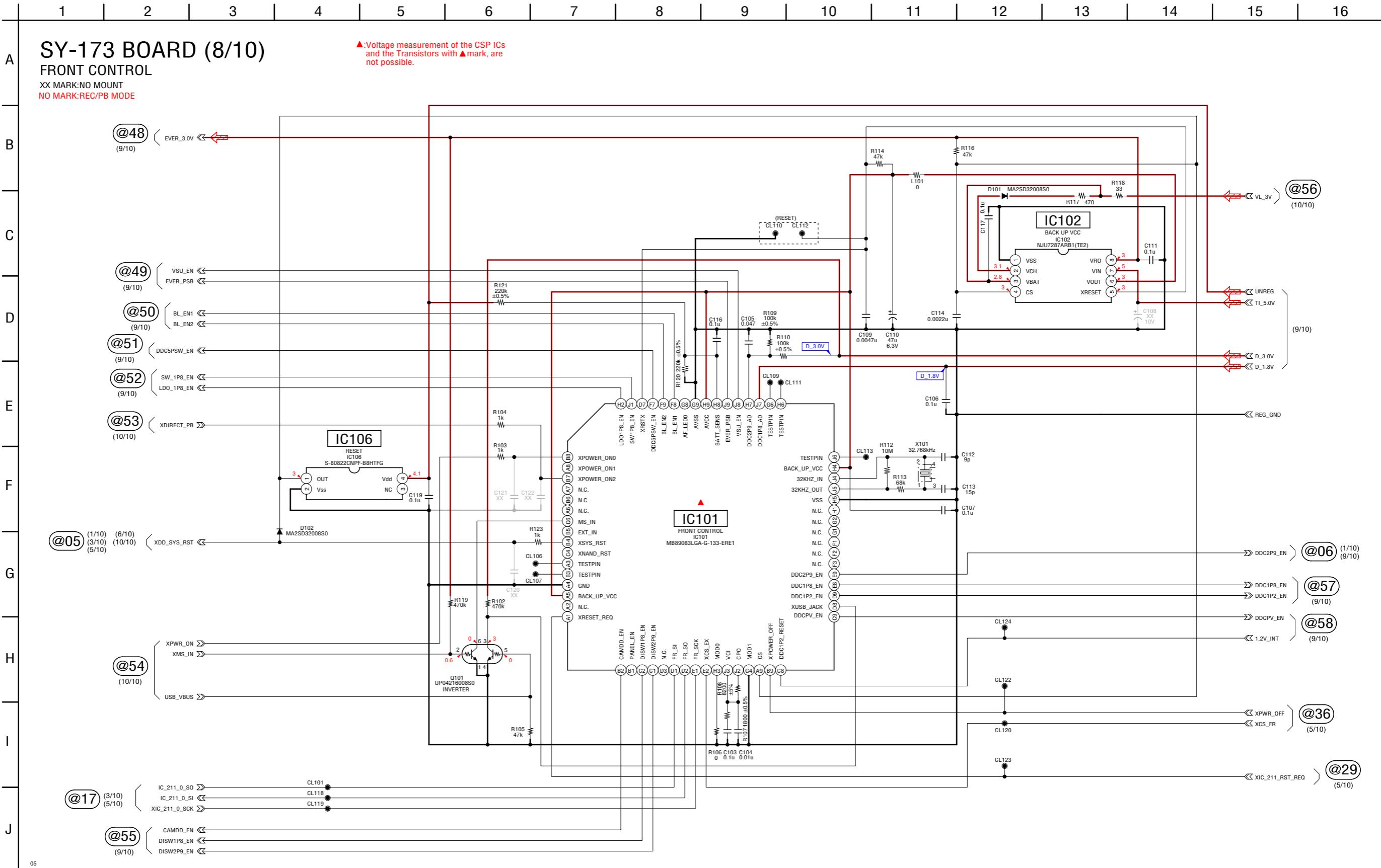
AUDIO, VIDEO

XX MARK: NO MOUNT

NO MARK: REC/PB MODE

▲: Voltage measurement of the CSP ICs  
and the Transistors with ▲ mark, are  
not possible.



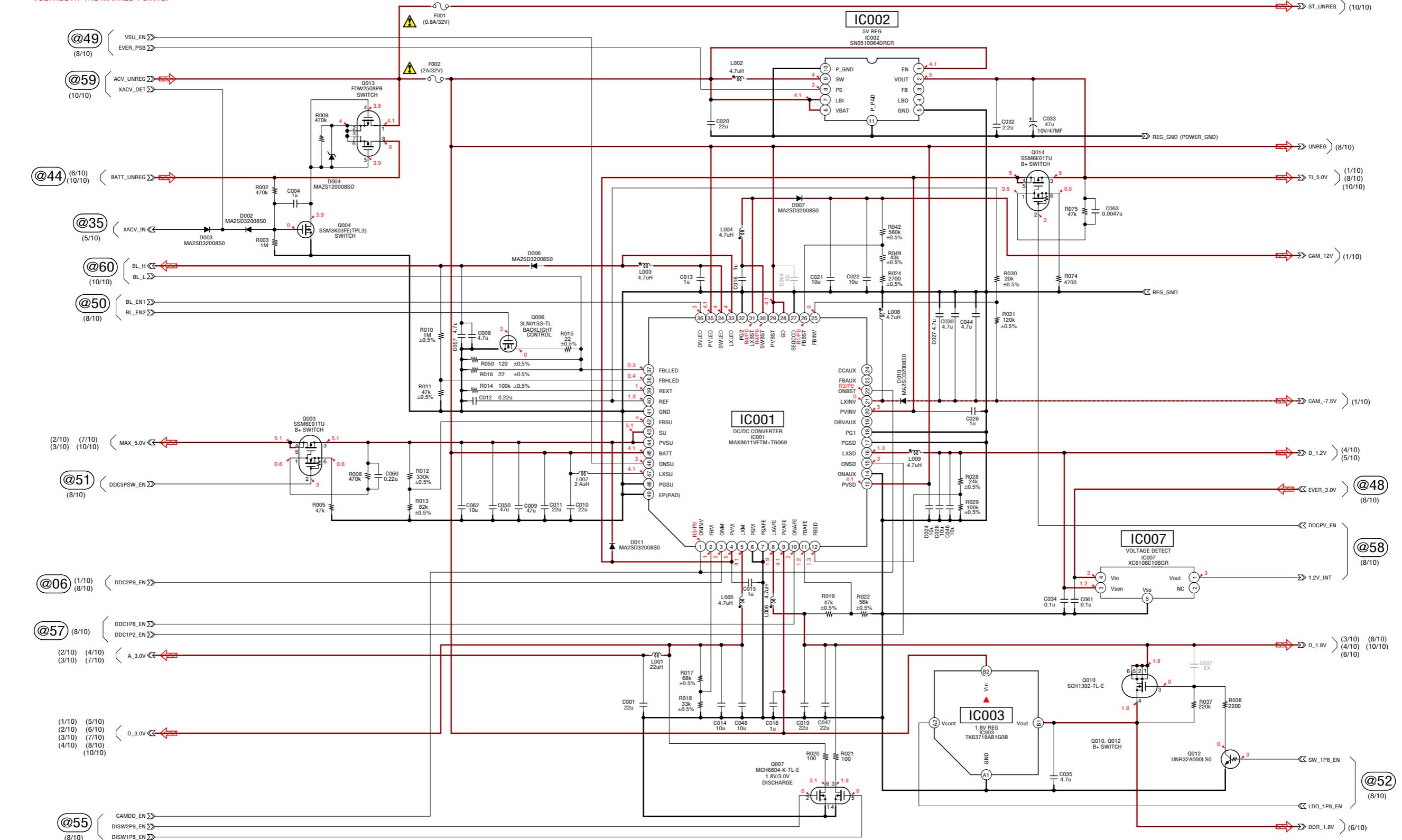


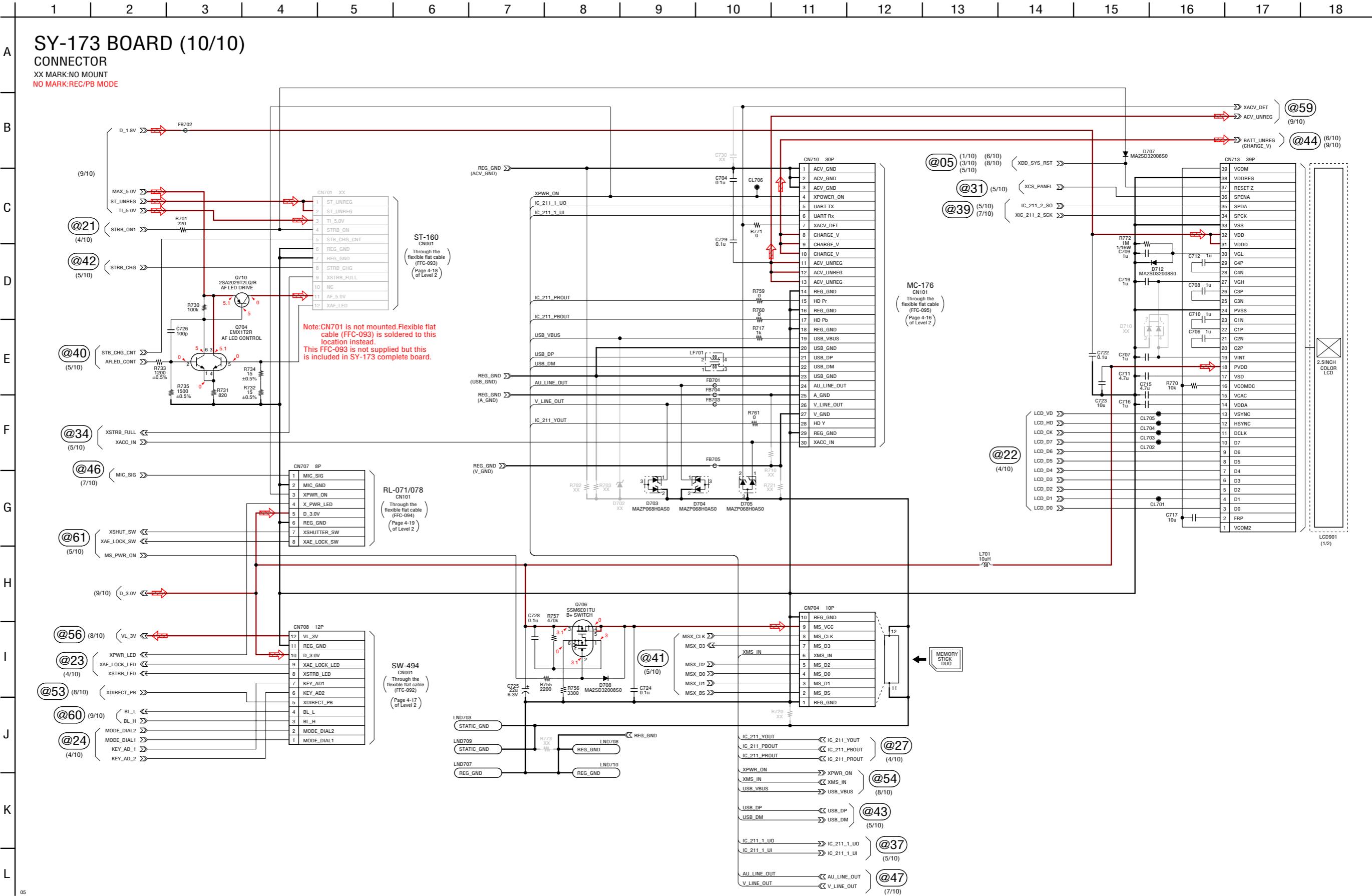
## SY-173 BOARD (9/10)

### DC/DC CONVERTER

▲:Voltage measurement of the CSP ICs  
and the Transistors with ▲mark, are  
not possible.

XX MARK: NO MOUNT  
NO MARK: REC/PB MODE  
R: REC MODE  
P: PB MODE  
\*:IMPOSSIBLE TO MEASURE THE  
VOLTAGE AT THE MARKED POINTS.





## 4-3. PRINTED WIRING BOARDS

### Link

• CD-701 FLEXIBLE BOARD

• SY-173 BOARD (SIDE B)

• SY-173 BOARD (SIDE A)

• COMMON NOTE FOR PRINTED WIRING BOARDS

• MOUNTED PARTS LOCATION

## 4-3. PRINTED WIRING BOARDS

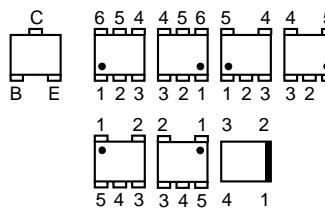
### 4-3. PRINTED WIRING BOARDS

#### THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS

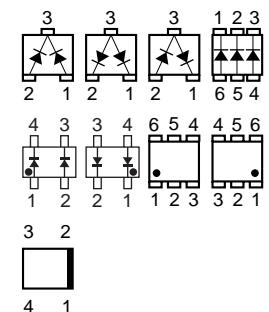
- : Uses unleaded solder.
- : Circuit board
- : Flexible board
- Pattern from the side which enables seeing.  
 : pattern of the rear side  
(The other layers' patterns are not indicated)
- Through hole is omitted.
- Circled numbers refer to waveforms.
- There are a few cases that the part printed on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

#### • Chip parts.

##### Transistor

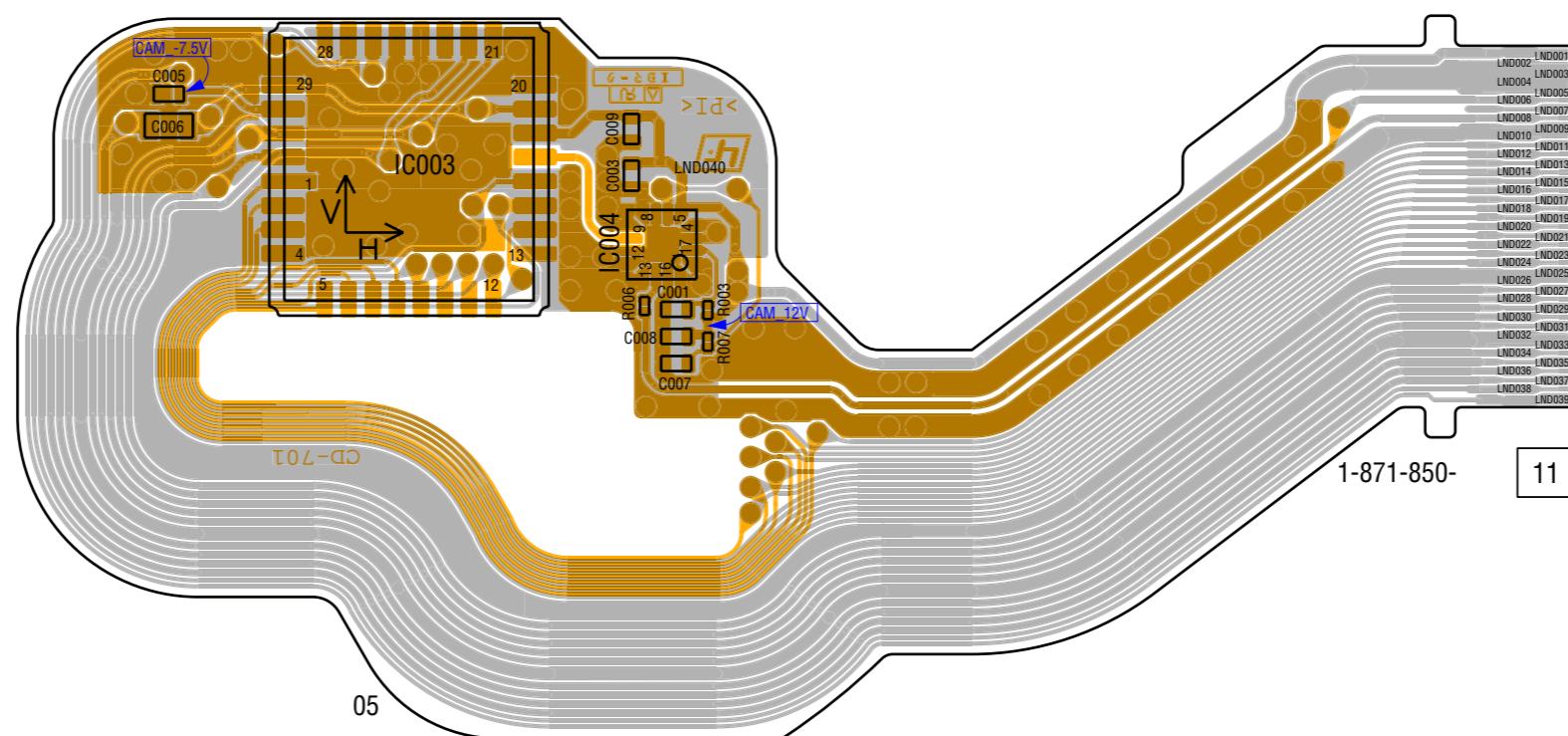


##### Diode



## CD-701 FLEXIBLE BOARD

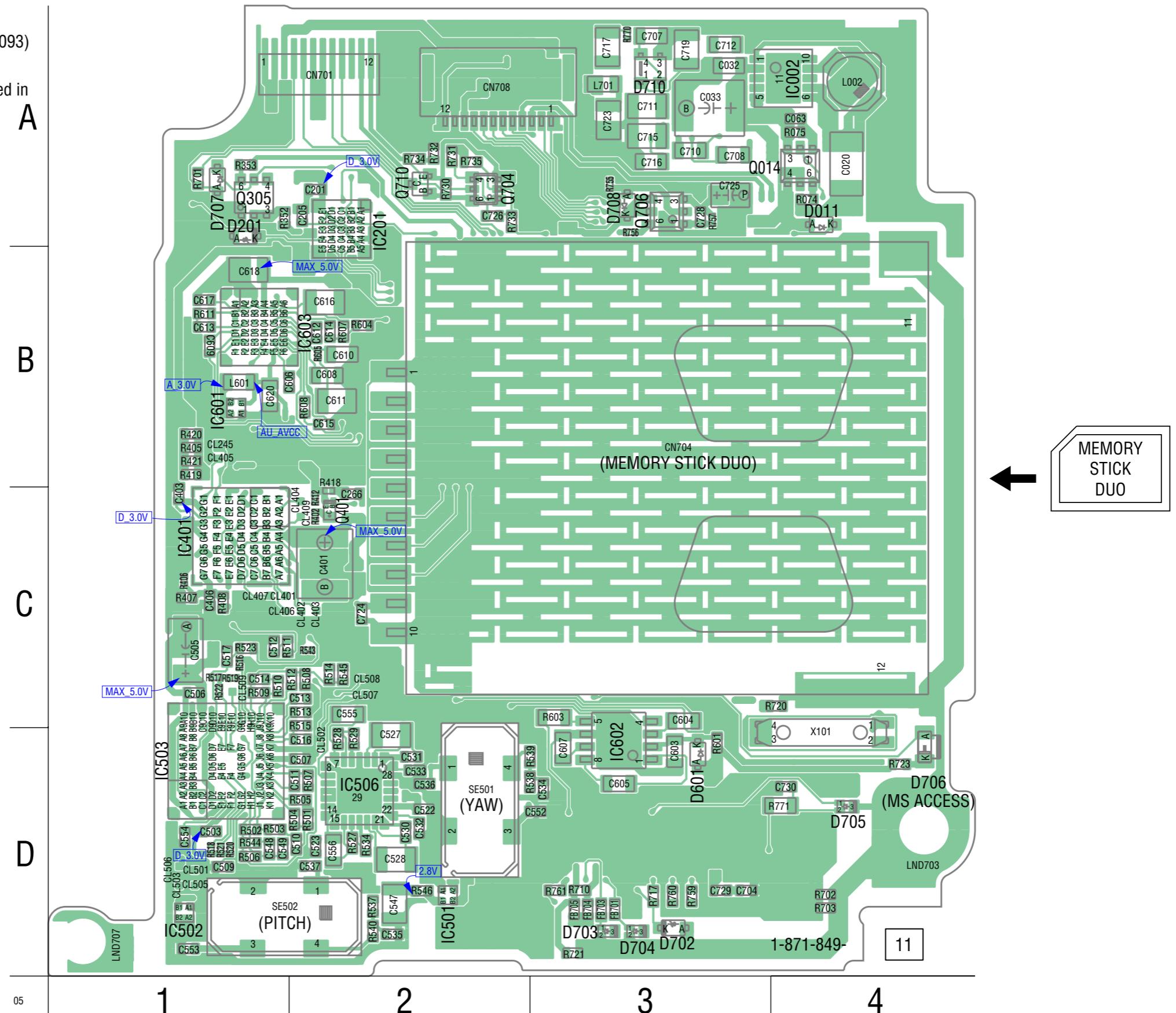
Note: CD-701 flexible complete board and IC003 are  
not supplied, but they are included in CCD block assy.



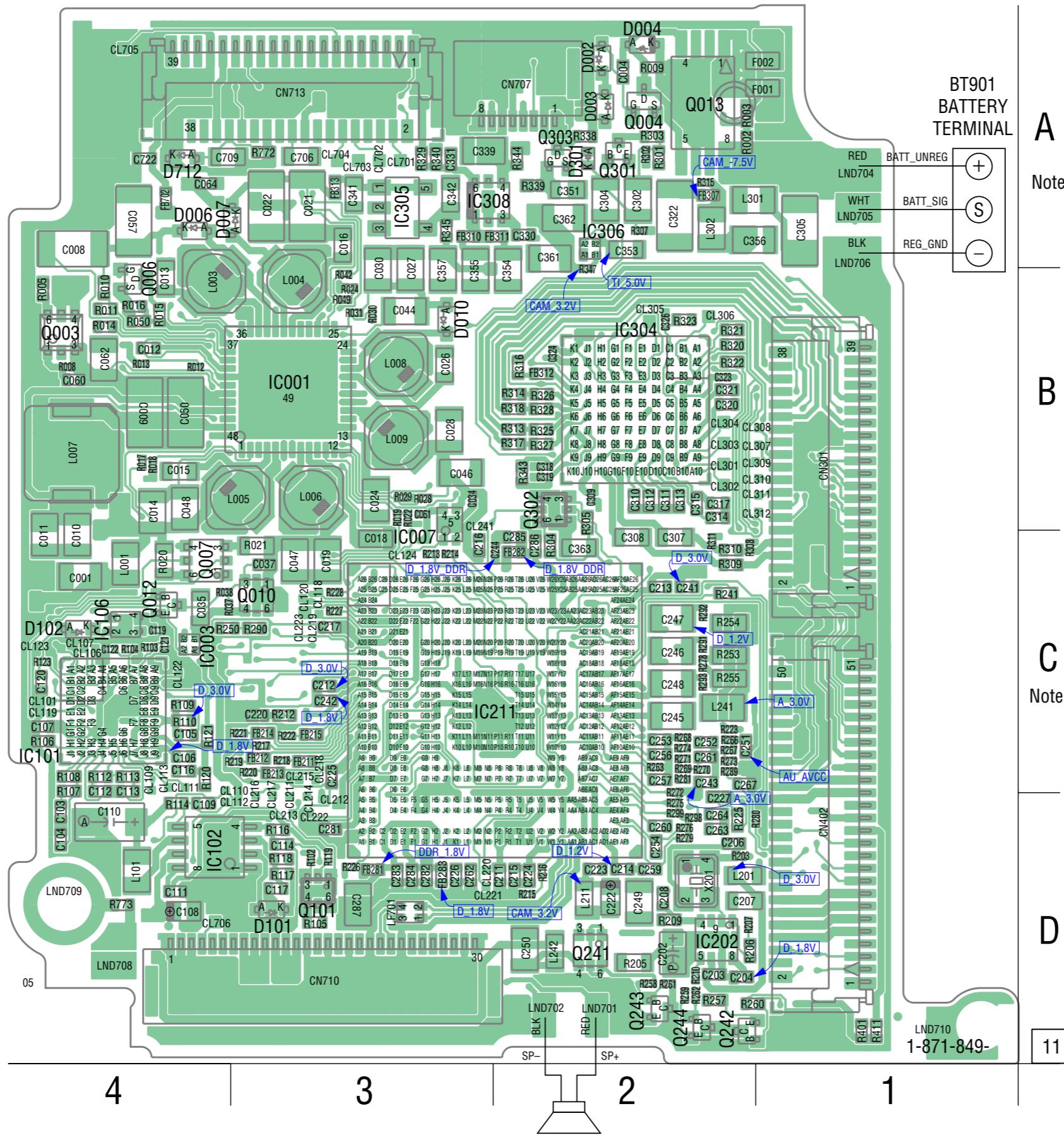
## SY-173 BOARD (SIDE A)

Note: CN701 is not mounted. Flexible flat cable (FFC-093) is soldered to this location instead.

This FFC-093 is not supplied, but this is included in SY-173 complete board.



## SY-173 BOARD (SIDE B)





### 4-3. PRINTED WIRING BOARDS

no mark : side A  
\* mark : side B

#### SY-173 BOARD

R756 A-3  
R757 A-3  
R759 D-3  
R760 D-3  
R761 D-3  
R770 A-3  
R771 D-4  
\* R772 A-3

SE501 D-2  
SE502 D-1

X101 D-4  
\* X201 D-2

## 5. REPAIR PARTS LIST

### NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- CAPACITORS:  
uF:  $\mu$ F
- COILS  
uH:  $\mu$ H
- RESISTORS  
All resistors are in ohms.  
METAL: metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F: nonflammable
- SEMICONDUCTORS  
In each case, u:  $\mu$ , for example:  
uA...:  $\mu$ A..., uPA...,  $\mu$ PA...,  
uPB...,  $\mu$ PB...,  $\mu$ PC...,  $\mu$ PC...,  
uPD...,  $\mu$ PD...
- Abbreviation  
AR : Argentine model  
AUS : Australian model  
BR : Brazilian model  
CH : Chinese model  
CND : Canadian model  
EE : East European model  
HK : Hong Kong model  
J : Japanese model  
JE : Tourist model  
KR : Korea model  
NE : North European model  
TW : Taiwan model

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

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

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

- Color Indication of Appearance Parts

Example:  
(SILVER) : Cabinet's Color  
(Silver) : Parts Color

## 5-2. ELECTRICAL PARTS LIST

Ref. No.    Part No.    Description

A-1253-768-A CCD BLOCK ASSY  
 (Not supplied) CD-701 FLEXIBLE BOARD, COMPLETE

\*\*\*\*\*

(CD-701 flexible complete board and IC003 are not supplied, but they are included in CCD block assy.)

< CAPACITOR >

C001	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C003	1-100-505-91	CERAMIC CHIP	0.1uF	20%	16V
C005	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C006	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C007	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C008	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C009	1-100-505-91	CERAMIC CHIP	0.1uF	20%	16V

< IC >

\* IC003 (Not supplied) ICX629EQP-13 (Note)  
 \* IC004 8-753-275-39 IC CXA3741UR-T9

< RESISTOR >

R003	1-240-720-91	METAL CHIP	150K	5%	1/20W
R006	1-694-535-91	SHORT CHIP	0		
R007	1-240-718-91	METAL CHIP	100K	5%	1/20W





Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
D706	6-501-216-01	DIODE CL-271HR-C-TS (MS ACCESS)	L005	1-457-066-21	INDUCTOR 4.7uH
D707	6-500-813-01	DIODE MA2SD32008S0	L006	1-457-066-21	INDUCTOR 4.7uH
D708	6-500-813-01	DIODE MA2SD32008S0	* L007	1-457-436-21	COIL, CHOKE 2.4uH
D712	6-500-813-01	DIODE MA2SD32008S0	L008	1-457-066-21	INDUCTOR 4.7uH
		< FUSE >	L009	1-457-066-21	INDUCTOR 4.7uH
△F001	1-576-843-21	FUSE (0.8A/32V)	L101	1-216-295-91	SHORT CHIP 0 (Note)
△F002	1-576-851-21	FUSE (2A/32V)	L201	1-412-983-31	INDUCTOR 2.2uH
		< FERRITE BEAD >	L211	1-400-137-11	INDUCTOR 10uH
FB211	1-469-580-11	INDUCTOR, FERRITE BEAD (1005)	L241	1-469-570-11	INDUCTOR 10uH
FB212	1-469-580-11	INDUCTOR, FERRITE BEAD (1005)	L242	1-400-137-11	INDUCTOR 10uH
FB213	1-469-580-11	INDUCTOR, FERRITE BEAD (1005)	L301	1-400-678-11	INDUCTOR 100uH
FB214	1-469-580-11	INDUCTOR, FERRITE BEAD (1005)	L302	1-400-678-11	INDUCTOR 100uH
FB215	1-469-580-11	INDUCTOR, FERRITE BEAD (1005)	L701	1-400-137-11	INDUCTOR 10uH
		< LINE FILTER >	LF701	1-456-583-11	COMMON MODE CHOKE COIL
FB281	1-218-990-81	SHORT CHIP 0 (Note)			< TRANSISTOR >
FB282	1-469-081-21	INDUCTOR, FERRITE BEAD (1005)	Q003	6-550-576-01	TRANSISTOR SSM6E01TU
FB283	1-469-081-21	INDUCTOR, FERRITE BEAD (1005)	Q004	8-729-047-68	TRANSISTOR SSM3K03FE (TPL3)
FB307	1-400-331-11	FERRITE, EMI (SMD) (1005)	Q006	8-729-055-32	TRANSISTOR 3LN01SS-TL
FB310	1-400-331-11	FERRITE, EMI (SMD) (1005)	Q007	6-550-674-01	TRANSISTOR MCH6604-K-TL-E
FB311	1-400-331-11	FERRITE, EMI (SMD) (1005)	Q010	6-551-674-01	TRANSISTOR SCH1302-TL-E
FB312	1-400-620-21	INDUCTOR, FERRITE BEAD (1005)	Q012	6-550-236-01	TRANSISTOR UNR32A000LS0
FB313	1-400-331-11	FERRITE, EMI (SMD) (1005)	Q013	6-550-844-01	TRANSISTOR FDW2508P/GNL
FB701	1-469-580-11	INDUCTOR, FERRITE BEAD (1005)	Q014	6-550-576-01	TRANSISTOR SSM6E01TU
FB702	1-400-331-11	FERRITE, EMI (SMD) (1005)	Q101	8-729-054-52	TRANSISTOR UP04216008SO
FB703	1-469-580-11	INDUCTOR, FERRITE BEAD (1005)	Q241	6-551-674-01	TRANSISTOR SCH1302-TL-E
FB704	1-469-580-11	INDUCTOR, FERRITE BEAD (1005)	Q242	6-550-232-01	TRANSISTOR 2SA2029T2LQ/R
FB705	1-469-580-11	INDUCTOR, FERRITE BEAD (1005)	Q243	6-550-232-01	TRANSISTOR 2SA2029T2LQ/R
		< IC >	Q244	6-550-232-01	TRANSISTOR 2SA2029T2LQ/R
* IC001	6-710-930-01	IC MAX8611VETM+TG069	Q301	6-550-119-01	TRANSISTOR DTC144EMT2L
* IC002	6-709-726-01	IC SN0510064DRCR	Q302	8-729-054-47	TRANSISTOR UP04213008SO
* IC003	6-710-847-01	IC TK63718AB1G0B	Q303	6-550-791-01	TRANSISTOR SSM3J15FV (TL3SONYZ)
* IC007	6-710-970-01	IC XC6108C10BGR	Q305	6-550-674-01	TRANSISTOR MCH6604-K-TL-E
IC101	6-807-554-01	IC MB89083LGA-G-133-ERE1	* Q401	6-551-224-01	TRANSISTOR RN2110ACT (TL3SONY)
* IC102	6-710-971-01	IC NJU7287ARB1 (TE2)	Q704	8-729-053-52	TRANSISTOR HN1C01FE-Y/GR (TPLR3)
* IC106	6-711-152-01	IC S-80822CNPFB-B8HTFG	Q706	6-550-576-01	TRANSISTOR SSM6E01TU
* IC201	6-807-231-01	IC uPD79F0043FC-401-2N1-E2-A	Q710	6-550-232-01	TRANSISTOR 2SA2029T2LQ/R
* IC202	6-710-976-01	IC ICS620AN-09LFT			< RESISTOR >
IC211	(Not supplied)	IC PRX515101B	R002	1-218-985-11	RES-CHIP 470K 5% 1/16W
* IC304	6-709-616-01	IC VSP00M21ZWDR	R003	1-218-989-11	RES-CHIP 1M 5% 1/16W
* IC305	6-710-852-01	IC NJM2831F125 (TE1)	R005	1-218-973-11	RES-CHIP 47K 5% 1/16W
* IC306	6-710-849-01	IC TK63733AB1G0B	R008	1-240-726-91	METAL CHIP 470K 5% 1/20W
* IC308	6-710-845-01	IC TK70628HCL-G	R009	1-218-985-11	RES-CHIP 470K 5% 1/16W
IC401	6-708-988-01	IC LV8053LG-TLM-E	R010	1-218-989-11	RES-CHIP 1M 5% 1/16W
* IC501	6-710-813-01	IC TK63728AB1G0B	R011	1-208-927-11	METAL CHIP 47K 0.5% 1/16W
* IC502	6-709-769-01	IC TK63715AB1G0B	* R012	1-245-673-11	METAL CHIP 330K 0.5% 1/20W
* IC503	6-709-026-01	IC R2J30500LG	* R013	1-240-828-11	METAL CHIP 82K 0.5% 1/20W
IC506	8-753-276-73	IC CXA3739ER-T2	R014	1-208-935-11	METAL CHIP 100K 0.5% 1/16W
* IC601	6-710-813-01	IC TK63728AB1G0B	R015	1-208-643-11	METAL CHIP 22 0.5% 1/16W
IC602	6-707-834-01	IC BH76812FVM-STR	R016	1-208-643-11	METAL CHIP 22 0.5% 1/16W
IC603	6-707-336-01	IC BH6414GLU-SE2	R017	1-240-826-91	METAL CHIP 68K 0.5% 1/20W
		< COIL >	R018	1-240-820-11	METAL CHIP 33K 0.5% 1/20W
L001	1-400-676-11	INDUCTOR 22uH	R019	1-240-822-11	METAL CHIP 47K 0.5% 1/20W
L002	1-457-066-21	INDUCTOR 4.7uH			
L003	1-457-066-21	INDUCTOR 4.7uH			
L004	1-457-066-21	INDUCTOR 4.7uH			

• Refer to page 5-1 for mark △.

Note: Short chips are mounted to the location where FB281 and L101 are printed.



Ref. No.	Part No.	Description				Ref. No.	Part No.	Description				
R352	1-218-981-11	RES-CHIP	220K	5%	1/16W	R734	1-220-874-81	METAL CHIP	15	0.5%	1/16W	
R353	1-218-948-11	RES-CHIP	390	5%	1/16W	R735	1-208-687-11	METAL CHIP	1.5K	0.5%	1/16W	
R401	1-218-948-11	RES-CHIP	390	5%	1/16W	R755	1-240-699-91	METAL CHIP	2.2K	5%	1/20W	
R402	1-240-689-91	METAL CHIP	330	5%	1/20W	R756	1-240-701-91	METAL CHIP	3.3K	5%	1/20W	
R405	1-208-635-11	METAL CHIP	10	0.5%	1/16W	R757	1-240-726-91	METAL CHIP	470K	5%	1/20W	
R407	1-208-688-11	METAL CHIP	1.6K	0.5%	1/16W	R759	1-218-990-81	SHORT CHIP	0			
R408	1-208-908-11	METAL CHIP	7.5K	0.5%	1/16W	R760	1-218-990-81	SHORT CHIP	0			
R411	1-218-948-11	RES-CHIP	390	5%	1/16W	R761	1-218-990-81	SHORT CHIP	0			
R412	1-240-690-11	METAL CHIP	390	5%	1/20W	R770	1-240-707-91	METAL CHIP	10K	5%	1/20W	
R418	1-240-714-91	METAL CHIP	47K	5%	1/20W	R771	1-216-864-11	SHORT CHIP	0			
R419	1-208-635-11	METAL CHIP	10	0.5%	1/16W	R772	1-218-989-11	RES-CHIP	1M	5%	1/16W	
R420	1-208-635-11	METAL CHIP	10	0.5%	1/16W						< SENSOR >	
R421	1-208-635-11	METAL CHIP	10	0.5%	1/16W							
R502	1-208-721-11	METAL CHIP	39K	0.5%	1/16W	* SE501	1-479-022-61	SENSOR, ANGULAR VELOCITY				
R503	1-218-990-81	SHORT CHIP	0			* SE502	1-479-022-51	SENSOR, ANGULAR VELOCITY				
R504	1-208-911-11	METAL CHIP	10K	0.5%	1/16W						< SPEAKER >	
R505	1-208-909-11	METAL CHIP	8.2K	0.5%	1/16W	SP901	1-826-614-21	LOUDSPEAKER (1.0CM)				
R506	1-208-893-11	METAL CHIP	1.8K	0.5%	1/16W						< VIBRATOR >	
R507	1-208-911-11	METAL CHIP	10K	0.5%	1/16W	X101	1-781-525-21	VIBRATOR, CRYSTAL (32.768kHz)				
R509	1-208-721-11	METAL CHIP	39K	0.5%	1/16W	* X201	1-813-712-21	QUARTZ CRYSTAL OSCILLATOR (33.75MHz)				
R510	1-218-990-81	SHORT CHIP	0									
R511	1-218-990-81	SHORT CHIP	0									
R512	1-208-911-11	METAL CHIP	10K	0.5%	1/16W							
R513	1-208-909-11	METAL CHIP	8.2K	0.5%	1/16W							
R514	1-208-893-11	METAL CHIP	1.8K	0.5%	1/16W							
R515	1-208-911-11	METAL CHIP	10K	0.5%	1/16W							
R516	1-240-718-91	METAL CHIP	100K	5%	1/20W							
R517	1-240-718-91	METAL CHIP	100K	5%	1/20W							
R518	1-240-718-91	METAL CHIP	100K	5%	1/20W							
R519	1-240-718-91	METAL CHIP	100K	5%	1/20W							
R520	1-240-718-91	METAL CHIP	100K	5%	1/20W							
R521	1-240-718-91	METAL CHIP	100K	5%	1/20W							
R522	1-240-718-91	METAL CHIP	100K	5%	1/20W							
R523	1-218-990-81	SHORT CHIP	0									
R527	1-218-989-11	RES-CHIP	1M	5%	1/16W							
R528	1-218-989-11	RES-CHIP	1M	5%	1/16W							
R529	1-208-911-11	METAL CHIP	10K	0.5%	1/16W							
R534	1-208-911-11	METAL CHIP	10K	0.5%	1/16W							
R537	1-218-969-11	RES-CHIP	22K	5%	1/16W							
R538	1-218-969-11	RES-CHIP	22K	5%	1/16W							
R539	1-218-969-11	RES-CHIP	22K	5%	1/16W							
R540	1-218-969-11	RES-CHIP	22K	5%	1/16W							
R543	1-694-535-91	SHORT CHIP	0									
R546	1-218-990-81	SHORT CHIP	0									
R601	1-218-929-11	RES-CHIP	10	5%	1/16W							
R603	1-216-807-11	METAL CHIP	68	5%	1/10W							
R604	1-218-948-11	RES-CHIP	390	5%	1/16W							
R605	1-240-726-91	METAL CHIP	470K	5%	1/20W							
R607	1-218-956-11	RES-CHIP	1.8K	5%	1/16W							
R608	1-218-959-11	RES-CHIP	3.3K	5%	1/16W							
R611	1-218-966-11	RES-CHIP	12K	5%	1/16W							
R701	1-218-945-11	RES-CHIP	220	5%	1/16W							
R717	1-218-953-11	RES-CHIP	1K	5%	1/16W							
R723	1-218-953-11	RES-CHIP	1K	5%	1/16W							
R730	1-218-977-11	RES-CHIP	100K	5%	1/16W							
R731	1-218-952-11	RES-CHIP	820	5%	1/16W							
R732	1-220-874-81	METAL CHIP	15	0.5%	1/16W							
R733	1-208-889-11	METAL CHIP	1.2K	0.5%	1/16W							

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



### Printing a text

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

#### Application of printing:

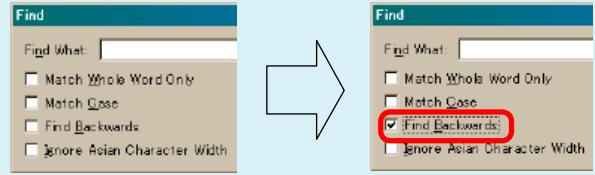
To set a range to be printed within a page, select the graphic selection tool  and drag on the page to enclose a range to be printed, and then click the Print button.

### Finding a text

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

#### Application to the Service Manual:

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



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

#### Application to the Service Manual:

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

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

### Switching a page

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

### Reversing the screens displayed once

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

#### Application to the Service Manual:

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

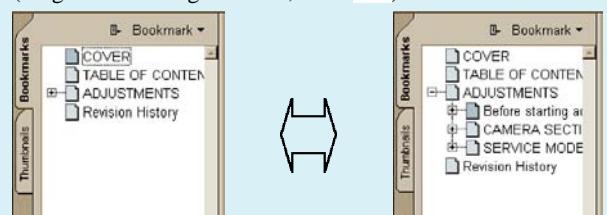
### Moving with link

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

#### Moving with bookmark:

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

(To go back to original state, click .



### Zooming or rotating the screen display

#### “Zoom in/out”

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



#### “Rotate”

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

#### Application to the Service Manual:

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

## Revision History

Ver.	Date	History	Contents	S.M. Rev. issued
1.0	2007.03	Official Release	—	—