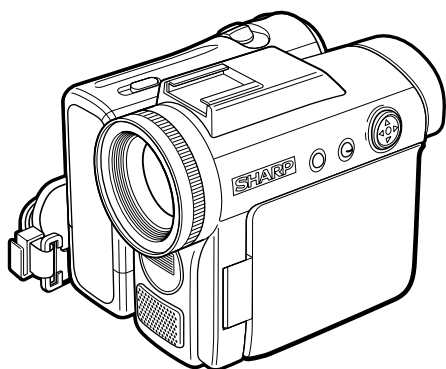


# SHARP SERVICE MANUAL

S53B3VL-Z7S//

LIQUID CRYSTAL DISPLAY CAMCORDER PAL



**VL-Z7S/E**  
**VL-Z7E-A**  
**VL-Z7E-W**  
**VL-Z8H**

## MODELS

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified be used.

## CONTENTS

	Page
1. SPECIFICATIONS .....	2
2. PART NAMES .....	3
3. DISASSEMBLY OF THE SET .....	4
4. MECHANISM ADJUSTMENT JIGS AND PARTS .....	8
5. INSPECTION AND MAINTENANCE	
ITEMS AND INTERVALS .....	9
6. ADJUSTING AND CHECKING OF MECHANISM .....	10
7. ADJUSTMENT OF RUNNING SYSTEM .....	13
8. ASSEMBLING OF MECHANISM SECTION AND PART REPLACEMENT	
(DISASSEMBLING AND ASSEMBLING) .....	15
9. METHOD OF ADJUSTING THE ELECTRIC CIRCUIT .....	25
10. USEFUL TIPS .....	44
11. SIGNAL FLOW DIAGRAMS .....	45
12. BLOCK DIAGRAMS .....	48
13. SCHEMATIC DIAGRAMS .....	54
14. SEMICONDUCTOR LEAD IDENTIFICATION .....	118
15. PRINTED WIRING BOARD ASSEMBLIES .....	120
16. REPLACEMENT PARTS LIST .....	137
17. PACKING OF THE SET .....	160

## 1. SPECIFICATIONS

Signal System: PAL standard  
Recording System: 2 rotary heads, helical scanning system  
Cassette: Digital VCR Mini DV video cassette  
Recording/Playback Time: 90 minutes (DVM60, LP mode)  
Tape Speed: SP mode: 18.831mm/second  
LP mode: 12.568 mm/second  
Pickup Device: 1/4" (6.4 mm, effective size: 4.5 mm) CCD image sensor  
(with approx. 1,330,000 pixels including optical black,  
effective pixels: 690,000 pixels in Tape Camera mode,  
1,250,000 pixels in Card Camera mode)  
Lens: 10 × optical zoom lens (F1.8, f=3.8-38.0 mm)  
Lens Filter Diameter: 30 mm  
Monitor: 2.5" (6.4 cm) CGSilicon  
Built-in Microphone: Electret stereo microphone  
Color Temperature Compensation: Auto white balance with white balance lock  
Minimum Illumination: 3 lux\* (with gain-up, F1.8)  
Still Image Compression System: JPEG base line conformance  
Still Image Recording Format: JPEG (Exif2.2)  
Still Image Recording Medium: SD Memory Card, MultiMediaCard  
Power Requirement: DC 7.4 V  
Power Consumption: 4.0 W (during camera recording in Tape Camera mode using the viewfinder in Full  
Auto mode with the DIS function on)  
4.6 W (during camera recording in Tape Camera mode using the LCD monitor  
in Full Auto mode with the DIS function and backlight in normal mode)  
Operating Temperature: 0°C to +40°C  
Operating Humidity: 30% to 80%  
Storage Temperature: -20°C to +60°C  
Dimensions (approx.): 82.8 mm (W) × 86.2mm (H) × 103.5 mm (D)  
Weight (approx.): 510 g(without battery pack, lithium battery, video cassette, lens cap and card)

### **AC Adapter (UADP-A016TAZZ)**

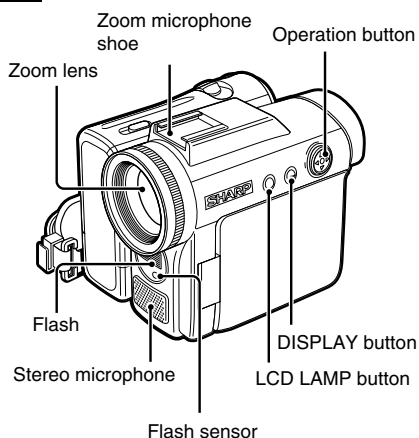
Power Requirement: AC 110-240 V, 50/60 Hz  
DC Output: 10 V  
Dimensions (approx.): 49.0 mm (W) × 27.5 mm (H) × 79.0 mm (D)  
Weight (approx.): 125 g

Specifications are subject to change without notice.

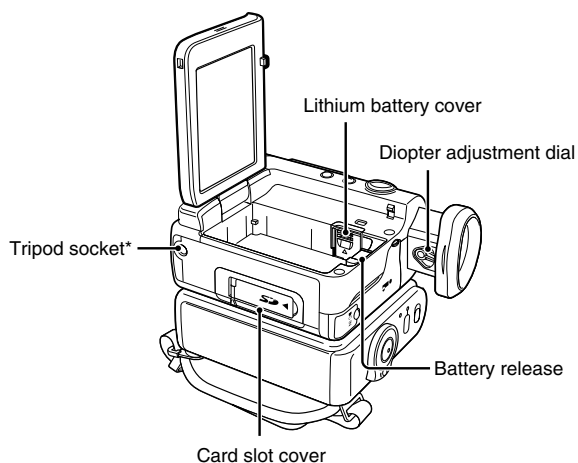
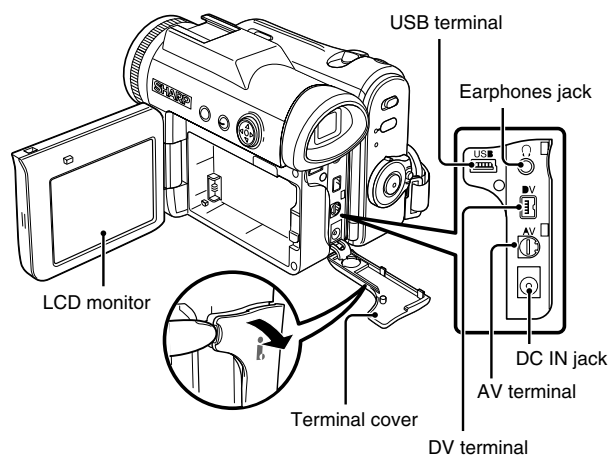
\*Minimum illumination: Since there is no widely accepted testing procedure for determining minimum illumination capability, lux ratings are comparable only between models from the same manufacturer.

## 2. PART NAMES

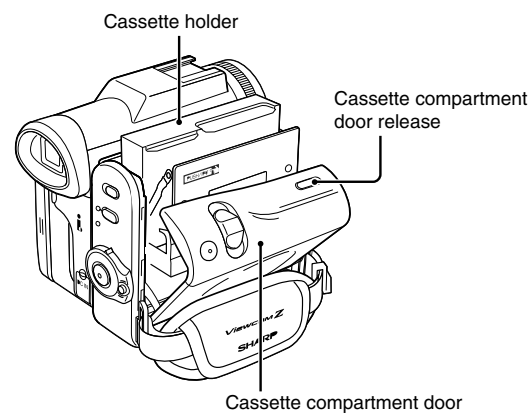
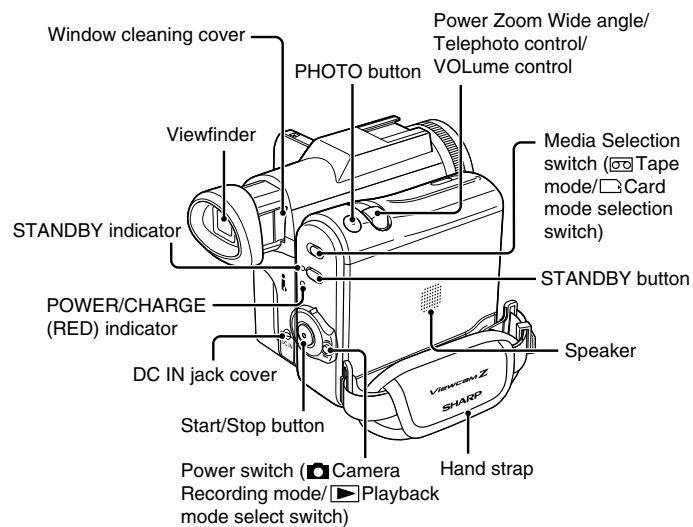
### Front view



### Left view



### Right view



\* When attaching a tripod with a guide pin, do not attach the pin to the bottom of the camcorder.

### 3. DISASSEMBLY OF THE SET

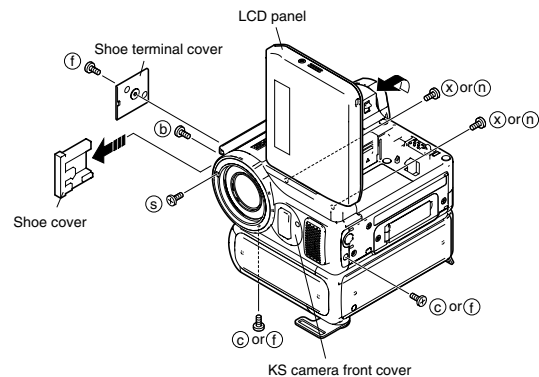
#### 3-1. Procedure for disassembling the cabinet

##### Note:

Before removing the cabinet, turn OFF the power and make sure that the battery is not connected.

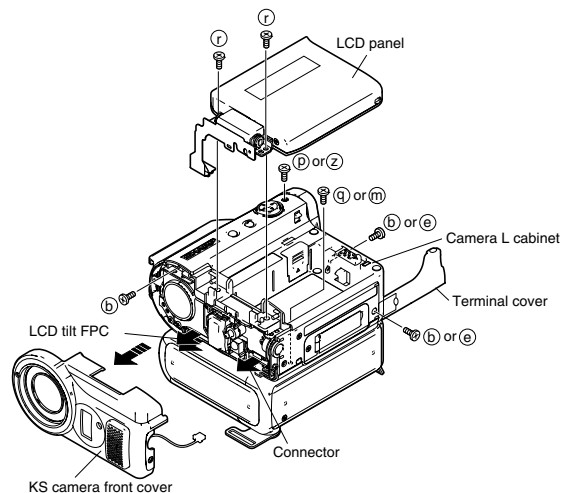
1.

- Remove the screw ((s) XiPSF14P06000).
- Remove the shoe cover by sliding it forward, remove the screw ((f) XiPSF17P04000) and remove the shoe terminal cover.
- Remove the screw ((b) XiPSN17P03000).
- Open the LCD panel 90 degrees and remove the two screws Z7S/SA/R/E/EW/X/EEW/EWW/Z8H: ((x) LX-HZ0050TAFN) or Z7EEA/EWA: ((n) LX-HZ0050TAFN).
- Remove the two screws Z7S/SA/R/E/EW/X/EEW/EWW/Z8H: ((c) XiPSN17P04000) or Z7EEA/EWA: ((f) XiPSF17P04000) and remove the KS camera front cover by pulling it forward.



2.

- Disconnect the connector of the KS camera front cover.
- Disconnect the two LCD tilt FPCs of the liquid crystal panel.
- Remove the two screws ((r) XiPSN20P08000) and remove the LCD panel.
- Remove the screw Z7S/SA/R/E/EW/X/EEW/EWW/Z8H: ((p) LX-HZ0063TAFN) or Z7EEA/EWA: ((z) LX-HZ0063TAFN) and screw Z7S/SA/R/E/EW/X/EEW/EWW/Z8H: ((q) XiPSN17P06000) or Z7EEA/EWA: ((m) XiPSF17P06000) that hold the camera L cabinet, open the terminal cover and Z7S/SA/R/E/EW/X/EEW/EWW/Z8H: remove the three screws ((b) XiPSN17P03000) or Z7EEA/EWA: remove the one screw ((b) XiPSN17P03000) and the two screws ((e) XiPSF17P03000).



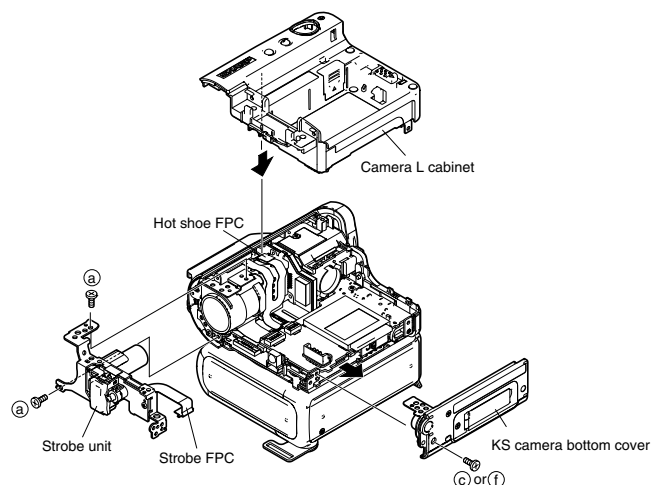
3.

- Disconnect the hot shoe FPC of the hot shoe and remove the camera L cabinet.
- Remove the screw Z7S/SA/R/E/EW/X/EEW/EWW/Z8H: ((c) XiPSN17P04000) or Z7EEA/EWA: ((f) XiPSF17P04000) and remove the KS camera bottom cover.
- Disconnect the strobe FPC, remove the two screws ((a) XiPSN17P02000) and remove the strobe unit.

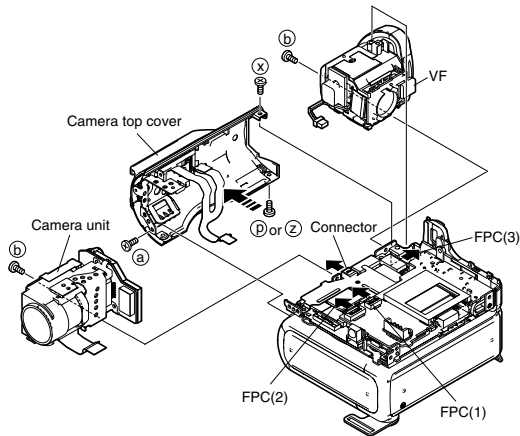
##### ⚠ Precautions in servicing the strobe unit

Once put in the card mode, the main condenser of the strobe unit stays still electrically charged. If touching the strobe unit or its nearby parts, you may get an electric shock.

To avoid this, connect a 7 kΩ resistor (300-V withstand voltage) across the main condenser for about 10 seconds. The condenser will be discharged.

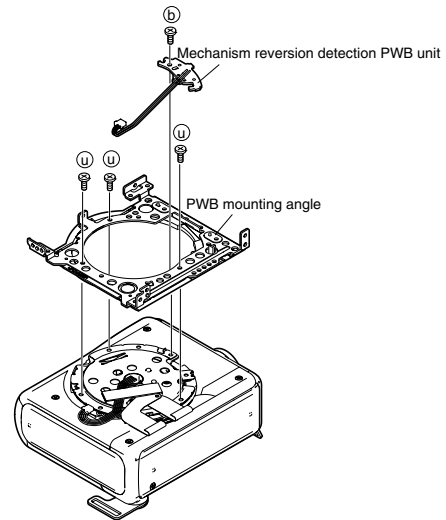


4.



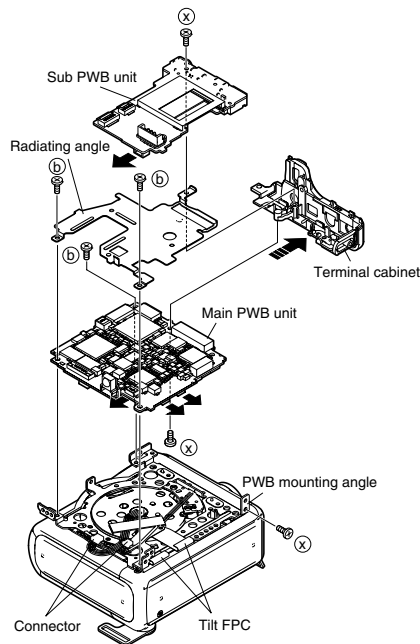
- Remove the screw ((x) LX-HZ0050TAFN), screw Z7S/SA/R/E/EW/X/EEW/EWW/Z8H: ((p) LX-HZ0063TAFN) or Z7EEA/EWA: ((z) LX-HZ0063TAFN) and screw ((a) XiPSN17P02000), disconnect the FPC (1) and remove the camera top cover.
- Remove the screw ((b) XiPSN17P03000) from the camera unit, disconnect the FPC (2) and remove the camera unit.
- Remove the screw ((b) XiPSN17P03000), disconnect the connector and FPC (3) and remove the VF.

6.



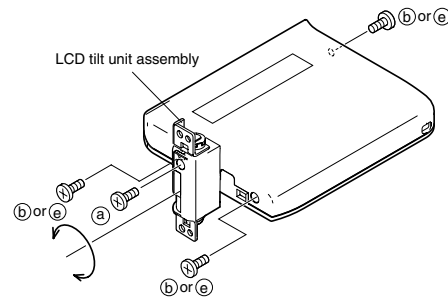
- Remove the screw ((b) XiPSN17P03000) and remove the Mechanism reversion detection PWB unit.
- Remove the three screws ((u) LX-BZ0221TAFN) and remove the PWB mounting angle.

5.



- Disconnect the two connectors of the sub PWB unit and main PWB unit.
- Remove the two screws ((b) XiPSN17P03000) from the radiating angle, remove the screw ((b) XiPSN17P03000) from the PWB unit and remove each unit.
- Disconnect the two FFCs of the main PWB unit.
- Remove the two screws ((x) LX-HZ0050TAFN), remove the screw ((x) LX-HZ0050TAFN) from the PWB mounting angle and remove the terminal cabinet.

7.

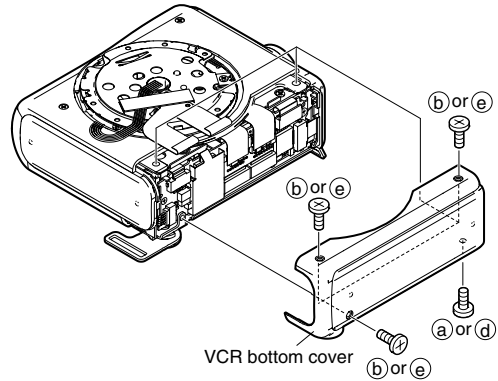


- Turn the LCD tilt unit assembly 90 degrees.
- Remove the three screws Z7S/SA/R/E/EW/X/EEW/EWW/Z8H: ((b) XiPSN17P03000) or Z7EEA/EWA: ((e) XiPSF17P03000).
- Remove the screw ((a) XiPSN17P02000).

### 3-2. Procedure for disassembling the cabinet

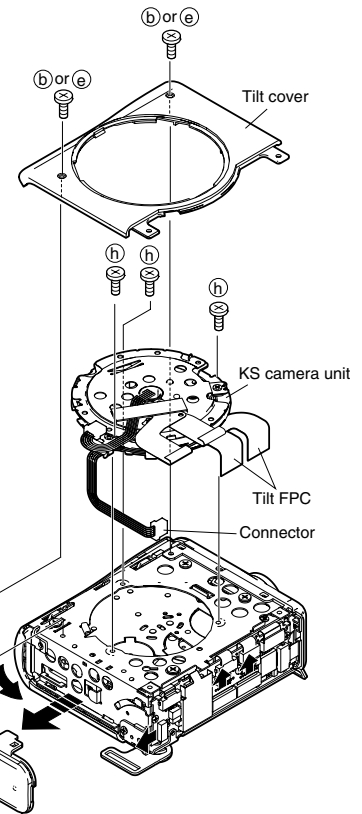
1.

- Remove the three screws Z7S/SA/R/E/EW/X/EEW/EWW/Z8H: ((b) XiPSN17P03000) or Z7EEA/EWA: ((e) XiPSF17P03000) remove the screw Z7S/SA/R/E/EW/X/EEW/EWW/Z8H: ((a) XiPSN17P02000) or Z7EEA/EWA: ((d) XiPSF17P02000) and remove the VCR bottom cover.



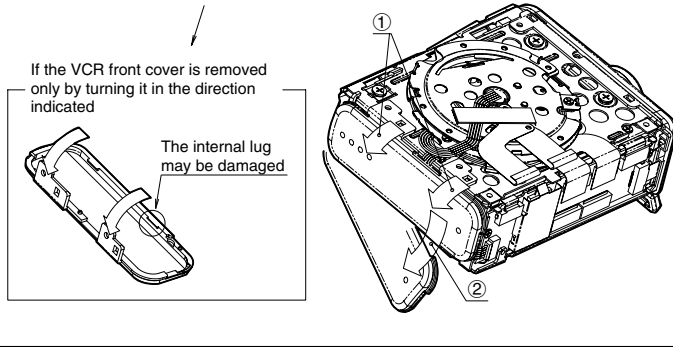
2.

- Remove the two screws Z7S/SA/R/E/EW/X/EEW/EWW/Z8H: ((b) XiPSN17P03000) or Z7EEA/EWA: ((e) XiPSF17P03000) and remove the tilt cover.
- Remove the VCR front cover with the cassette cover opened.
- Disconnect the connector and two tilt FPCs, remove the three screws ((h) LX-BZ0220T AFC) and remove the KS camera tilt.



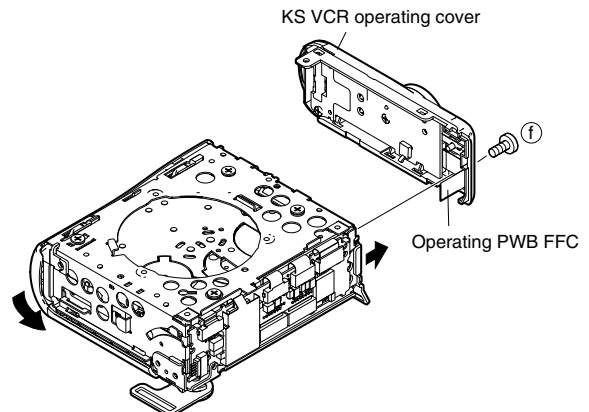
How to remove the VCR front cover

- Remove the two couplings and turn the VCR front cover about 20 degrees in the direction indicated by (1).
  - Turn the VCR front cover while sliding it in the direction indicated by (2) to disengage the internal lug.
- \* If the VCR front cover is removed by turning it forcibly in the direction indicated by (1), the internal lug may be damaged.



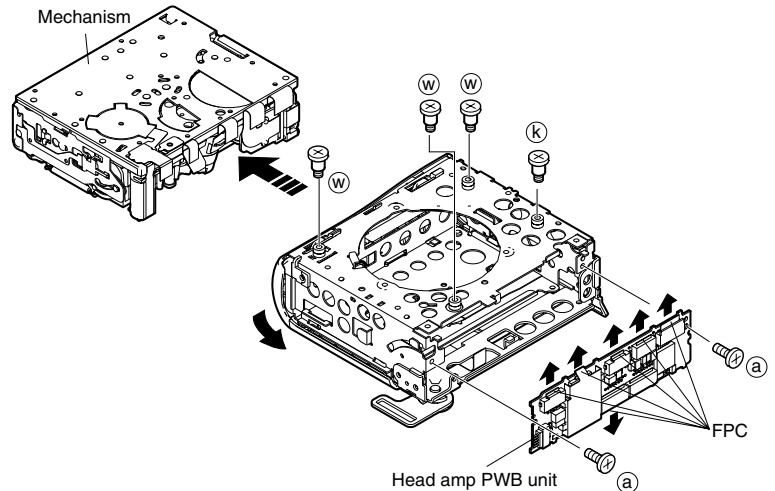
3.

- Remove the screw ((f) XiPSF17P04000) with the cassette lid opened, disconnect the operation PWB FFC and remove the KS VCR operating cover.



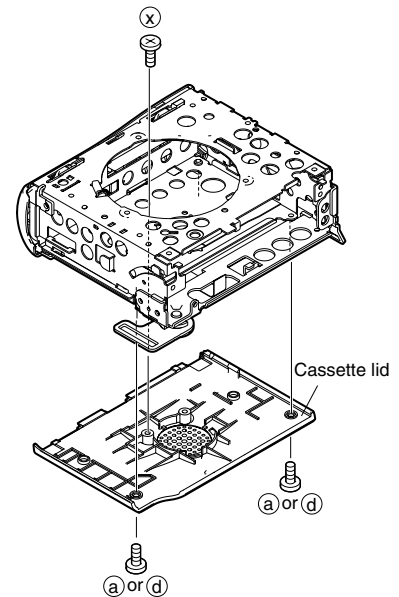
4.

- Disconnect the six FPCs of the head amp circuit board unit.
- Remove the two screws ((a) XiPSN17P02000) and remove the head amp PWB unit.
- Remove the three screws ((w) LX-BZA022WJFN) and remove the screw ((k) LX-BZA023WJFD).
- Remove the mechanism with the cassette lid opened.



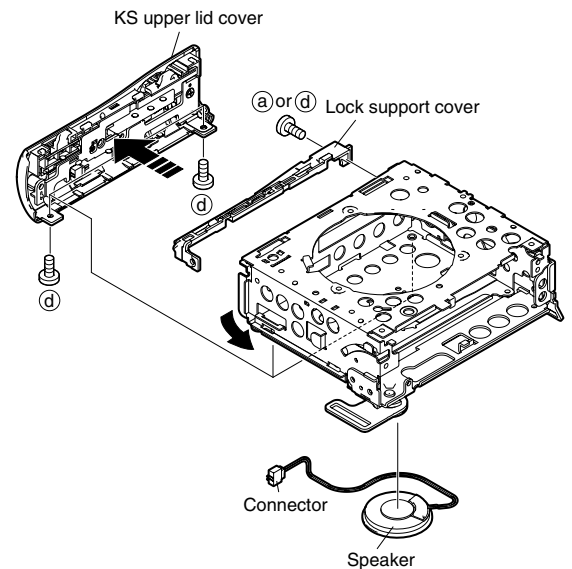
5.

- Remove the screw ((x) LX-HZ0050TAFN).
- Remove the two screws Z7S/SA/R/E/EW/X/EEW/EWW/Z8H: ((a) XiPSN17P02000) or Z7EEA/EWA: ((d) XiPSF17P02000) and remove the cassette lid.



6.

- Remove the two screws ((d) XiPSF17P02000).
- Disconnect the connector of the speaker while removing the KS upper lid cover with the cassette control lid opened.
- Remove the screw Z7S/SA/R/E/EW/X/EEW/EWW/Z8H: ((a) XiPSN17P02000) or Z7EEA/EWA: ((d) XiPSF17P02000) and remove the lock support cover.
- Remove the speaker.

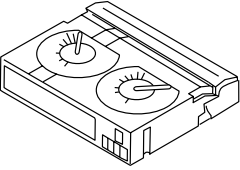

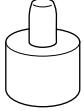
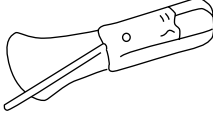
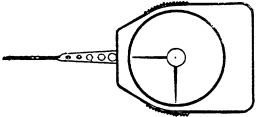
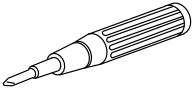
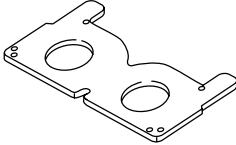
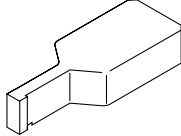
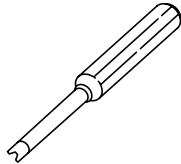
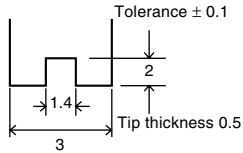
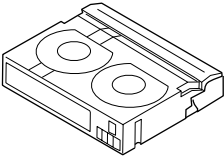
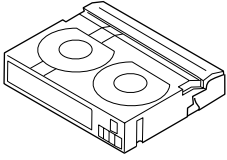
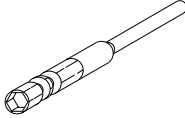


## 4. MECHANISM ADJUSTING JIGS AND PARTS

### 4-1. Mechanism checking and adjusting jigs

<Note: Order of descriptions>

Sketch  
1. Name  
2. Part code  
3. Code  
\* Model number and usage

 <p>1. Cassette torque meter for PB 2. 9DASD-1015 3. DB * 1mN·m/1.5mN·m</p>	 <p>1. Torque gauge 2. JiGTG0045 3. CN * For measurement of VS-REW winding torque</p>	 <p>1. Torque gauge head 2. 9EQTGH-DH5000 3. BW * For torque gauge shown left</p>	 <p>1. Tension gauge 4N 2. JiGSG0400 3. BK * For measurement of pinch roller press force</p>	 <p>1. Dial tension gauge 2. 9DAPTG-10-10W 3. CA * PTG-10</p>
 <p>1. Torque driver 150mN·m 2. JiGTD1500RTDH 3. CB</p>	 <p>1. Master plane 2. 9EQMP-VLPD1 3. CL * For checking of height of reel table</p>	 <p>1. Height adjustment jig 2. 9DAHG-PD1 3. BZ * For height adjustment</p>	 <p>1. Driver for height adjustment 2. 9EQDRIVER-DH5 3. BC</p>	<p>* For adjustment of guide roller * Bit shape (see figure below)</p> 
 <p>1. Alignment tape - (I) 2. VR3-GAZXS 3. CF * Adjustment of running system (Linear signal)</p>	 <p>1. Alignment tape - (II) 2. VR3-JPZQS 3. CG * For adjustment of SW point (Color bar signal) * 90ADVC-TAPEPAL available</p>	 <p>1. Bit for hexagon nut with opposite side distance of 3 mm 2. 95CM22001 3. BL * For installation of Tu guide nut</p>	<p>&lt;Miscellaneous&gt;</p> <p>(1) Vernier calipers (2) Precision screwdriver (Phillips head and slotted) (3) Long-nose pliers (with thin tips) (4) Tweezers</p>	

1. Name  
2. Part code  
3. Code  
\* Model number and usage

### 4-2. Parts for periodic inspection and maintenance

<Note: Order of descriptions>

<p>1. Oil Cosmo Hydro HV22 2. 9EQ-OIL-HV22 3. AE * Cosmo Oil Co., Ltd.</p>	<p>1. Cleaning paper 2. JiGDUSPER 3. AP * DUSPER Σ (SIGMA) (Ozu Co., LTD.)</p>	<p>1. Dry grease CFD-409Z * Sankei Chemical Co., LTD.</p>	<p>1. Cleaning liquid Industrial ethyl alcohol * Commercial item</p>
		<p>1. Grease Molykote YM-103 2. 99FGREASEYM103 * Dow Corning</p>	<p>1. Loctite adhesive (1401B) * Three Bond 1. Ultrathin cotton swab * Commercial item</p>

<How to make mechanism checking and adjusting jigs>

- (1) Reel hub for back tension measurement (Fig. 1)
- 1) Have the reel hub of a commercially available cassette tape ready. (Disassemble the cassette tape and remove the tape from the reel hub.)
  - 2) Attach one end of a thread (having a length of about 20cm) to the reel hub using Scotch tape etc.
  - 3) Attach a weight of about 0.21N to the top face of the reel hub.
- (2) Thread for pinch roller press force measurement
- 1) Have a commercially available thread having a length of about 20cm ready.

- 2) Tie both ends together to loop the thread.

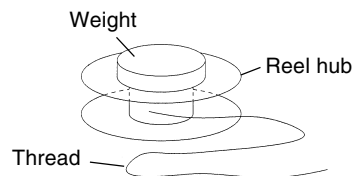


Fig. 1

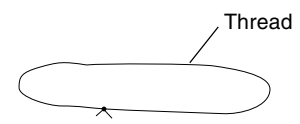


Fig. 2



## 5. INSPECTION AND MAINTENANCE ITEMS AND INTERVALS

In order to maintain the quality of the mechanism section, perform the following maintenance and inspection. After repairing the mechanism section, perform the following maintenance regardless of the number of hours of use by the user.

### 5-1. Maintenance and inspection list

○... Replace. □... Clean. △... Lubricate. ★... Check.

	Inspection and maintenance location	Number of hours of use (h)					Symptoms observed at the time of maintenance	Notes and remarks
		500	1,000	1,500	2,000	3,000		
Running system	Tape running section (See7-3.)	□	□	□	□	□	<ul style="list-style-type: none"> <li>• Block noise</li> <li>• Clogging of head</li> <li>• Damage to tape</li> </ul>	<p><b>Note:</b> If no envelope output is obtained in spite of the video head being cleaned, replace the drum component. (If the envelope output is normal, refer to "10. USEFUL TIPS".)</p>
	Drum section, Video head (See 7-3.)	□	□	□	□	□		
		<p>&lt;Rollers&gt;  <ul style="list-style-type: none"> <li>• Replace if abnormal rotation or swing (large) is found.</li> </ul> <p>&lt;Others&gt;  <ul style="list-style-type: none"> <li>• Cleans the portions that come in contact with the tape (the lower drum helical portion in particular). Use the specified cleaning liquid.</li> </ul> </p> </p>						
Driving system	Pinch roller	□	□	□	□○	□	<ul style="list-style-type: none"> <li>• Tape not running</li> <li>• Tape sagged</li> <li>• Block noise</li> <li>• Abnormal noise</li> </ul>	<ul style="list-style-type: none"> <li>• Replace if any abnormal condition is found.</li> </ul>
	Capstan motor (Timing belt)	—	○	—	○	○		
	Swing arm S reel table, Tu reel table	—	★○	—	★○	★○	<ul style="list-style-type: none"> <li>• Abnormal noise</li> </ul>	<ul style="list-style-type: none"> <li>• Apply oil. [Oil] Cosmo Hydro HV22 <b>Note:</b> Apply oil to the shaft and lightly wipe it off with a cloth.</li> </ul>
	Center gear boss Relay pulley shaft	—	△	—	△	△		
	Loading motor Mode SW	—	★○	—	★○	★○		
Performance check	Abnormal noise	★	★	★	★	★	<ul style="list-style-type: none"> <li>• Tape not running</li> <li>• Tape sagged</li> <li>• Damage to tape</li> <li>• Abnormality in reproduced picture</li> </ul>	<ul style="list-style-type: none"> <li>• If a part is out of spec, replace it.</li> </ul>
	PB and VS/R winding torque	—	★	—	★	★		
	PB, VS/R and loading back tension S reel table unloaded torque	—	★	—	★	★		

[Oil] Cosmo Hydro HV22

[Grease] Molykote YM-103

Sankei Chemical CFD-409Z

[Loctite adhesive] Three Bond 1401B

[Cleaning liquid] Industrial ethyl alcohol

### 5-2. Cautions in handling the mechanism

- (1) Cut washers removed at the time of part replacement etc. should be replaced with new ones without fail.
- (2) Because no volume adjustment is available in this mechanism, cleaning or part replacement should be performed if the setting is not satisfied.
- (3) About oil
  - a) Be sure to use the specified oil. (If any oil other than the specified oil is used, various troubles will occur.)
  - b) When lubricating the bearing, be sure to oil free from foreign particles such as dust. (If oil in which foreign particles such as dust are mixed is used, it will cause wear and seizure to the bearing.)
  - c) The term "One drop of oil" here means the amount of oil on the point of a needle etc. shown in Fig.1.
- (4) Repairing of circuits, final adjustment of running system, etc. should be performed with the cassette controller assembly installed in the mechanism.
- (5) When operating the mechanism singly, apply voltage to the loading motor to drive it. The voltage between the terminals should be 3 to 4V DC. (Do not apply external voltage to the loading motor with the mechanism connected with the main circuit board. Doing so could cause a failure.)  
(Turning the gears forcedly by hand may cause them to get damaged.)  
When placing the mechanism singly, use an appropriate spacer so that the capstan motor is not rubbed.
- (6) When installing the cassette controller, push the portion indicated by "A" in Fig.2. Do not push other portions.
- (7) Take care not to deform the components of the mechanism.

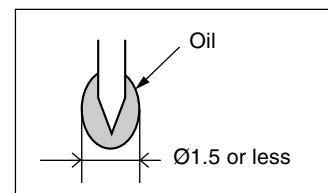


Fig. 1

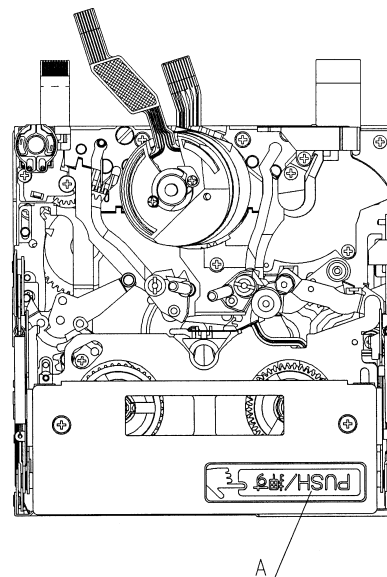


Fig. 2

## 6. ADJUSTING AND CHECKING OF MECHANISM

The items described here are relevant to the general on-site servicing (field service). This section does not cover adjustment and replacement for which sophisticated equipment, jigs and techniques are required.

In order to maintain the initial characteristics of the mechanism, it is necessary to perform maintenance and inspection and also it is essential not to damage the tape etc. In the case of an adjustment that requires a jig, be sure to use the specified jig.

<Caution>

- (1) When adjusting and checking the mechanism, be sure to see that the power supply and the status are as indicated in **Caution** on the title.
- (2) Do not apply external voltage to the loading motor with the mechanism connected with the main circuit board. (Doing so could cause a failure.)
- (3) When running the tape, be sure to do so with the cassette controller assembly installed.

### 6-1. Checking of PB (REC) winding torque

AC adapter used, Cassette controller assembly installed

- (1) Set the torque cassette with the cassette controller installed in the mechanism. In the SP record mode (or in the PB mode if signals have been SP-recorded on the tape), check that the winding torque is within spec.  
<Spec for PB (REC) winding torque>(If there is a torque ripple, read the center value.)  
0.7+0.2/-0.05N·m, Ripple: 0.1mN·m or less

### 6-2. Checking of VS-REW winding torque

AC adapter used, Cassette controller assembly not installed (Mechanism only)

- (1) Remove the cassette controller, turn ON the down SW while referring to 8-3, operate in the test mode (T01) and select the VS-REW mode.
- (2) Set the torque gauge in the S reel table, push the tip of the tension pole with your finger in the direction shown by Arrow A to release the tension band, and check that the winding torque is within spec. (Fig.1) (Do not apply the own weight of the torque gauge or rotate it during measurement.)  
<Spec for VS-REW winding torque>  
(If there is a torque ripple, read the center value.)  
1.5 ± 0.15N·m, Ripple: 0.15mN·m or less
- (3) After checking the winding torque, remove the torque gauge and turn OFF the down SW. The mechanism will automatically go into the standby mode.

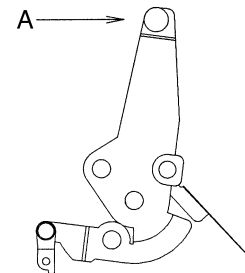


Fig.1 How to release the tension band when measuring the VS-REW winding torque

### 6-3. Checking of height of reel table

3 to 4V DC, Cassette controller assembly not installed (Mechanism only)

- (1) Remove the cassette controller. (Refer to 8-2.)
- (2) Apply 3 to 4V DC to the loading motor while referring to 8-1 and select the PB mode.
- (3) Fit the holes of the master plane to the two guides (portions A and B) shown in the Fig.2, taking great care not to allow master plane to strike the running parts such as the drum and guide roller or the MIC contact.
- (4) Using a pair of vernier calipers etc., measure the heights of the reel-supporting faces of the S reel table and Tu reel table from the top face of the master plane and check that the measured heights satisfy the set values. (Fig.3)  
When measuring the height of the S reel table, push the tip of the tension pole with your finger in the direction shown by Arrow A to release the tension band. (Fig.1)
- (5) If the measured height does not satisfy the set value, replace the reel table and make checking again.

<Note> After replacement, select the L start mode (see 8-1) and check that the reel table rotates smoothly.

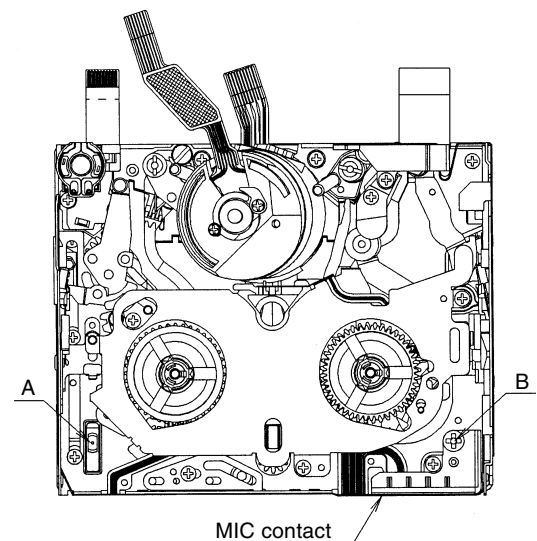


Fig.2 Checking of reel table

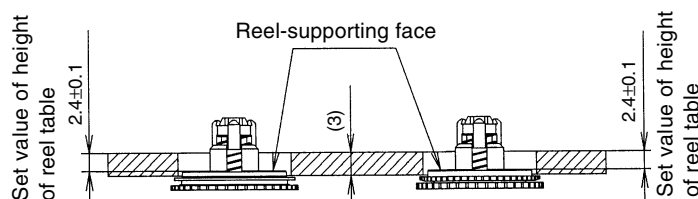


Fig.3

## 6-4. Checking and adjusting of tension pole position during REC (PB)

3 to 4V DC, Cassette controller assembly not installed (Mechanism only)

### (1) Checking

Check that the tension pole is located in the prescribed position as shown in Fig.4 at the start of a 60-minute tape.

If the tension pole is not located in the prescribed position, take out the tape and make adjustment according to the procedure shown below.

### (2) Adjusting (See Fig.4.)

1. Select the PB mode without setting a tape.
2. Slightly loosen the screw 1 (to such an extent that the T band adjustment base 2 can be moved.)
3. If the tension pole is dislocated inward from the prescribed position, shift the T band adjustment base 2 in the direction shown by Arrow (A). If it is dislocated outward from the prescribed position, shift the T band adjustment base 2 in the direction shown by Arrow (B). Then fix the T band adjustment base 2 with the screw 1.

(For how much the T band adjustment base is to be shifted, refer to Fig.4.)

4. Check the tension pole position as described in "(1) Checking" above.
5. If out of position, make readjustment.

Tension pole position  
(Based on drum base outside shape)

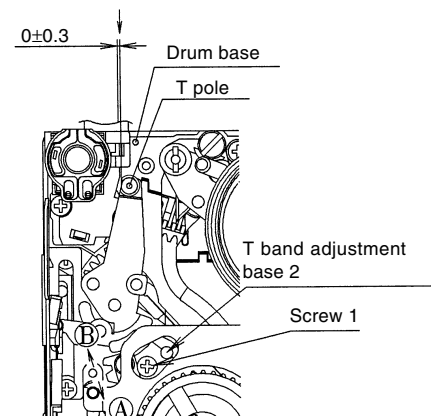


Fig.4 Adjusting of position (tape exists)

## 6-5. Checking and adjusting of REC (PB) back tension torque

AC adapter used, Cassette controller assembly installed

### (1) Checking

Set the torque cassette (SD-1015). In the SP record mode (or in the PB mode if signals have been SP-recorded on the tape), check that the feed-side torque is within the following spec.

<Spec>(If there is a torque ripple, read the center value.)

$0.55 \pm 0.05\text{N}\cdot\text{m}$

### (2) Adjusting (See Fig.5.)

If the measured back tension torque is out of spec, make adjustment according to the following procedure.

1. Slightly loosen the screw 3.
2. If the back tension is higher, shift the T-SPR adjustment ANG in the direction shown by Arrow (D). If it is lower, shift the T-SPR adjustment ANG in the direction shown by Arrow (C).
3. After adjusting the back tension torque, fix the T-SPR adjustment ANG with the screw 3. Apply loctite adhesive to screw 3.

<Reference>

Screw tightening torque: 0.04 N·m

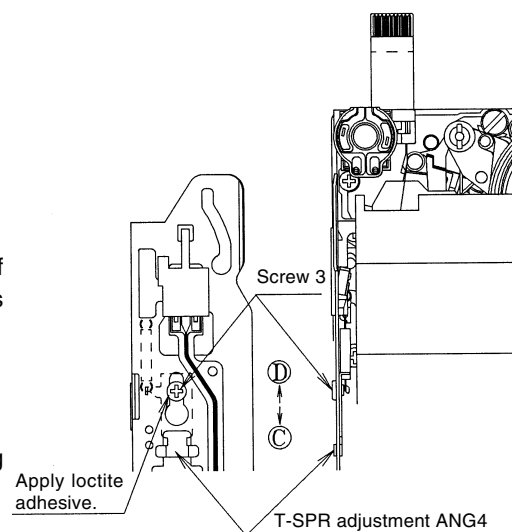


Fig.5 Checking (tape exists)

## 6-6. Checking of S reel table unloaded torque

3 to 4V DC, Cassette controller assembly not installed (Mechanism only)

- (1) Remove the cassette controller assembly, apply 3 to 4V DC to the loading motor and select the L start mode. (See 8-1.)
- (2) Move the swing arm to the Tu reel table side. At this time, take care not to damage the gears etc. (See Fig.6.)
- (3) Set the reel hub for back tension measurement on the S reel table.
- (4) Using the dial tension gauge, pull the thread of the reel hub in the direction shown by Arrow A and check that the tension is within spec.

<Spec>

(If the tension fluctuates, read the center value.)

10mN or less

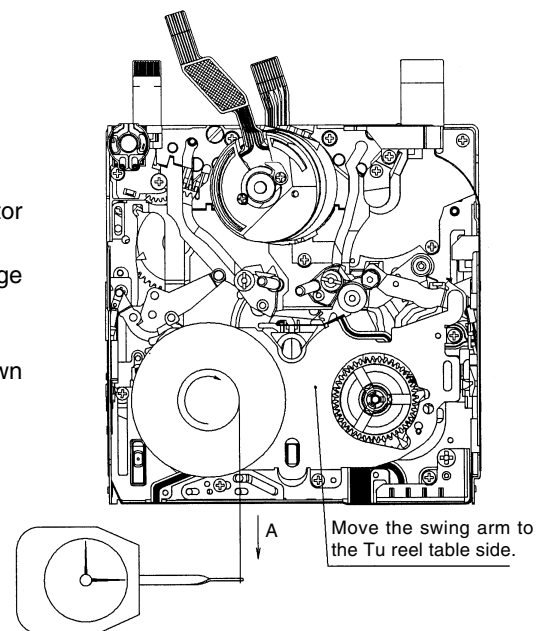


Fig.6 How to measure the S reel table unloaded torque

### 6-7. Checking of loading back tension

3 to 4V DC, Cassette controller assembly not installed (Mechanism only)

- (1) Apply 3 to 4V DC to the loading motor and select the L start mode. (See 8-1.)
- (2) Move the swing arm to the S reel table side. At this time, take care not to damage the gears etc. (See Fig.7.)
- (3) Set the reel hub for back tension measurement on the Tu reel table.
- (4) Using the dial tension gauge, pull the thread of the reel hub in the direction shown by Arrow A and check that the tension is within spec.

<Spec>

(If the tension fluctuates, read the center value.)

$27.5 \pm 7.5\text{mN}$

### 6-8. Checking of VS-REW back tension

3 to 4V DC, Cassette controller assembly not installed (Mechanism only)

- (1) Apply 3 to 4V DC to the loading motor and select the VS-REW mode. (See 8-1.)
- (2) Move the swing arm to the S reel table side. At this time, take care not to damage the gears etc.
- (3) Set the torque gauge in the Tu reel table.
- (4) While turning the torque gauge counterclockwise (one turn in three seconds), check that the torque is within spec.

<Spec>

(If the tension fluctuates, read the center value.)

$0.8+0.2/-0.05\text{mN}\cdot\text{m}$

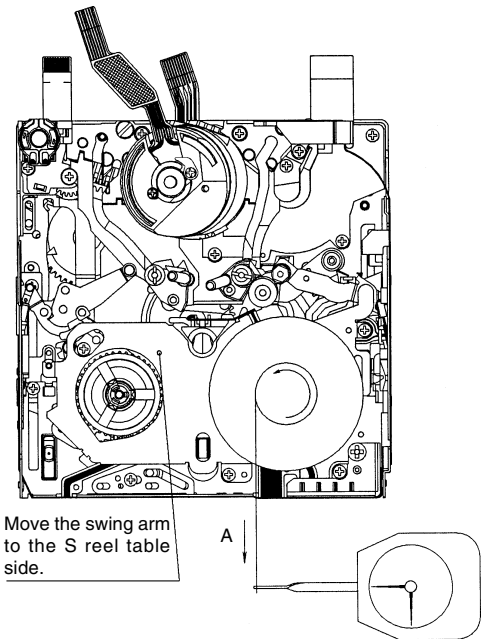


Fig.7 How to measure the loading back tension

### 6-9. Checking of pinch roller press force

3V DC, Cassette controller assembly not installed (Mechanism only)

- (1) Hook the thread for pinch roller press force measurement over the pinch lever (position A in Fig.8).
- (2) Put the mechanism into the PB mode to press the pinch roller against the capstan shaft.
- (3) Hook the thread for pinch roller press force measurement over the tension gauge and pull the tension gauge in the direction shown by Arrow B in Fig.10 so that the pinch roller is slightly separated from the capstan shaft.
- (4) Return the pinch roller gradually and read the value indicated when the pinch roller comes in parallel contact with the capstan shaft (see Fig.9). Check that the read value is within the following spec.

<Spec>

$1.8+0.4/-0.4\text{N}$

<Note> After measuring the press force of the pinch roller, promptly exit from the PB mode to separate the pinch roller from the capstan shaft. (If the pinch roller is left pressed against the capstan shaft for a long time, the pinch roller will be deformed.)

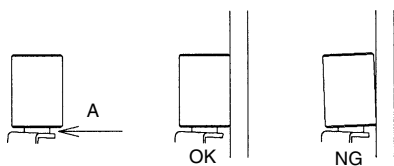


Fig.8

Fig.9

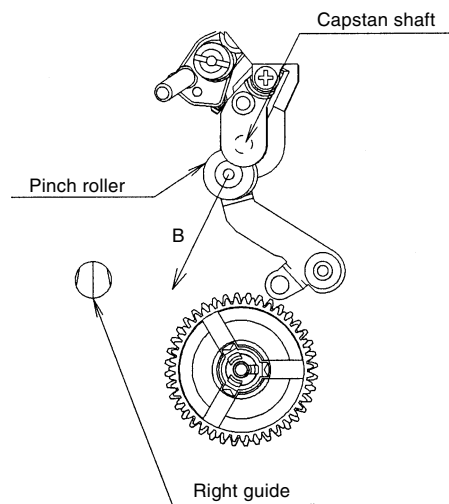
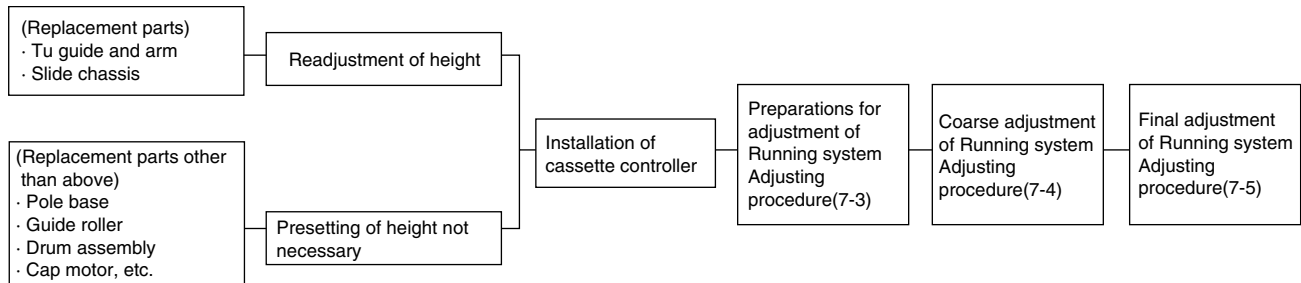


Fig.10

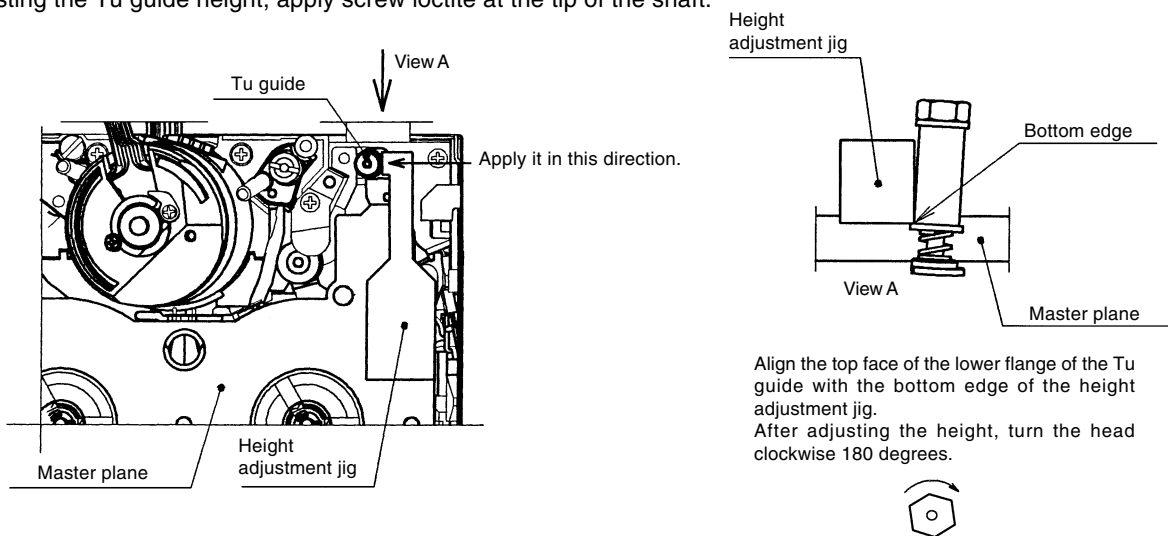
## 7. ADJUSTMENT OF RUNNING SYSTEM

### 7-1. Outline of adjustment of running system



### 7-2. Adjustment of height of running system

- After replacement of the Tu guide and slide chassis, adjust the height of the Tu guide using the height adjustment jig.
- If wrinkles are found in the tape, turn the Tu guide to remove them.  
(For further details, refer to "Coarse adjustment of running system".)
- After adjusting the Tu guide height, apply screw loctite at the tip of the shaft.



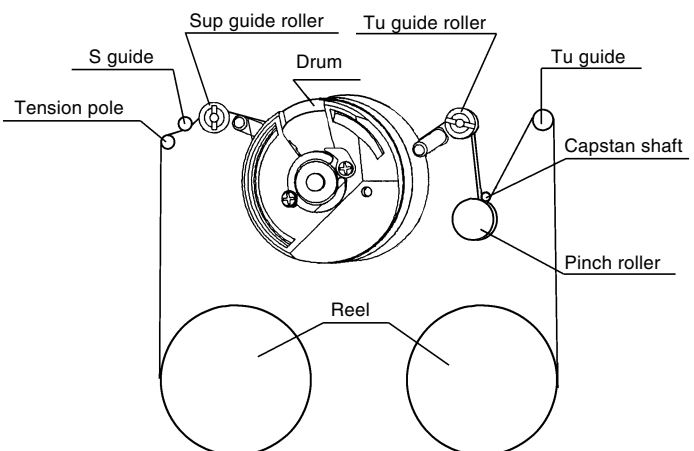
### 7-3. Preparations for adjustment of running system

Measuring instrument and Jig : Oscilloscope, Adjustment remote control, Height adjustment screwdriver, Alignment tapes (for adjustment of running system and adjustment of SW point), Master plane, Height adjustment jig

#### <Method and description>

- (1) Clean the surfaces that come in contact with the tape. (Clean well the drum surface and the lower drum helical surface in particular.)
- (2) Install the cassette controller.
- (3) Connect the oscilloscope to each TP of the joint circuit board.
- (4) Turn ON the power of the AC adapter.
- (5) Select TEST mode T-05 with the adjustment remote control.
- (6) Play back the alignment tape for running system adjustment and check that the tape is moving in the SP mode.
- (7) While observing the PB envelope on the oscilloscope, adjust the running system so that the envelope becomes flat in states of [+1/4 shift] and [-1/4 shift].  
(Each time the PB key is pressed, the shift amount changes as shown below.)

+1/4 shift ⇄ Normal ⇄ -1/4 shift ⇄ Normal



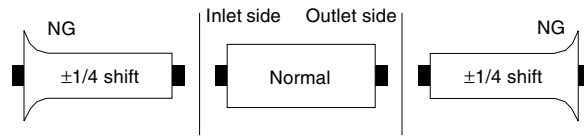
## 7-4. Coarse adjustment of running system

(Cassette controller installed)

### 1. Adjustment of height of Su and Tu guide rollers

#### <Method and description>

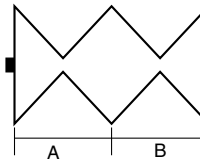
- (1) Play back the alignment tape for running system adjustment and make adjustment so that the inlet and outlet sides of the envelope become flat.
- (2) In states of [+1/4 shift] and [-1/4 shift], make adjustment in the same manner as described in (1) above.



### 2. Checking of V/SR envelope waveform

#### <Method and description>

- (1) In the V/SR mode, check that the envelope waveform is shaped uniformly.
- (2) If the envelope waveform is not shaped uniformly, fine-adjust the guide roller and Tu guide.

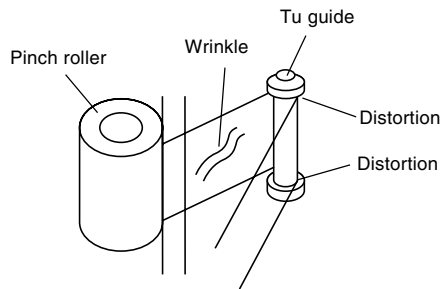


Make adjustment so that  $A \approx B$ .

### 3. Checking for wrinkles in tape

#### <Method and description>

- (1) In the PB mode and V/SR mode, check the tape for distortion between the Tu guide and the pinch roller.
  - ⇒ If wrinkles are found, make adjustment within a range of  $\pm 180$  degrees.
  - ⇒ After making adjustment, apply loctite adhesive to the tip of the shaft.



### 4. Checking of envelope waveform rise time

#### <Method and description>

- (1) Check the envelope waveform rise time in switching from the V/SR mode to the PB mode. ⇒ 5 seconds or less
- (2) Check the envelope waveform rise time in switching from the STOP mode to the PB mode. ⇒ 5 seconds or less

## 7-5. Final adjustment of running system

(Cassette controller installed)

### 1. Adjustment of height of Sup and Tu guide rollers

#### <Method and description>

- (1) If the ratio of MIN to MAX of the envelope waveform is less than 60%, adjust the height of the guide roller again. (See Fig.1.)
- (2) Perform unloading and then loading again, select the PB mode and check that there are no significant changes in the envelope waveform.

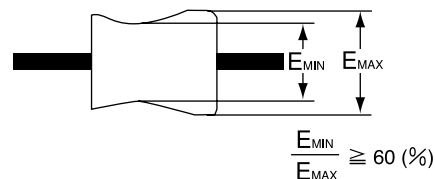


Fig.1

### 2. Adjustment of PB SWP

#### <Method and description>

- (1) Play back the alignment tape for SW point adjustment.
- (2) Using the adjustment remote control, make SWP automatic adjustment.
- (3) Check that an OK is given as a result of self-judgment. In the case of a NG, adjust the GR height again.

\* After replacement of the mechanism and drum, adjust the phase and equalizer using the adjustment remote control. (Refer to "9. METHOD OF ADJUSTING THE ELECTRICAL CIRCUITS".)

## 8. ASSEMBLING OF MECHANISM SECTION AND PART REPLACEMENT (DISASSEMBLING AND ASSEMBLING)

This section describes the method of assembling the mechanism section and the method of part replacement.  
For how to remove the cabinet etc., refer to "3. DISASSEMBLY OF THE SET".

### <Cautions>

1. Cut washers removed at the time of part replacement etc. should be replaced with new ones without fail.
2. When assembling the mechanism, take care to prevent screws, washers and foreign matter from getting into it. If such things get into the mechanism, it will cause the mechanism to malfunction.
3. Be sure to use the specified cleaning liquid, oil, grease and loctite adhesive shown below. Failure to do so will cause the mechanism to malfunction.

Oil: Cosmo Hydro HV22 (Cosmo Oil)      Loctite adhesive: 1401B (Three Bond)  
Grease: Molykote YM-103 (Dow Corning), Suncall CFD-409Z (Sankei Chemical Co., LTD.)  
Cleaning liquid: Industrial ethyl alcohol

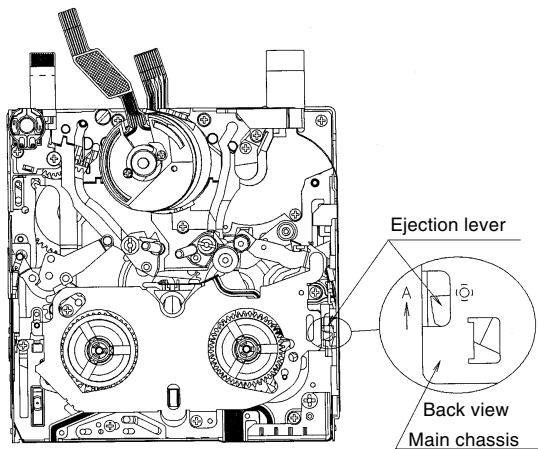
### 8-1. Mechanism mode

To operate the mechanism singly, apply 3 to 4V DC to the loading motor.

(Do not apply external voltage to the loading motor with the mechanism connected with the main circuit board. Doing so could cause a failure.)

#### (1) Ejection mode

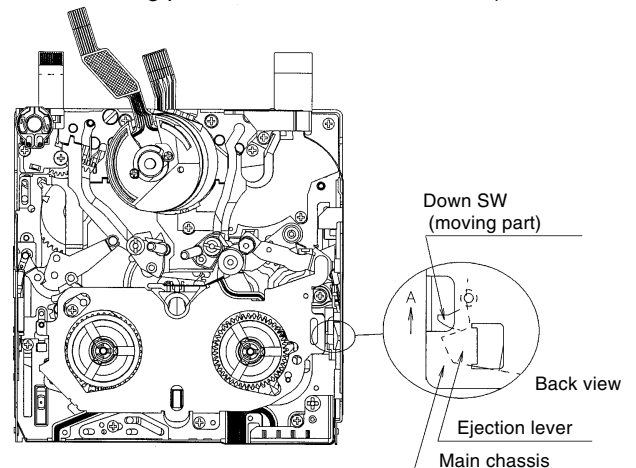
This mode is used to take out a cassette. In this mode, the ejection lever is shifted farthest in the direction shown by Arrow A. (In this mode, the cassette controller assembly cannot be locked.)



EJECTION MODE

#### (2) Standby mode

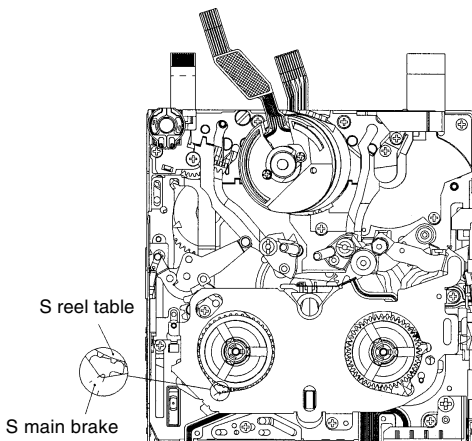
This mode is used to set a cassette. In this mode, the slide chassis is farthest away from the drum and the ejection lever is turned (the cassette controller assembly can be locked). (The tip of the ejection lever is hidden behind the main chassis and the moving part of the down SW is visible.)



STANDBY MODE

#### (3) L start mode

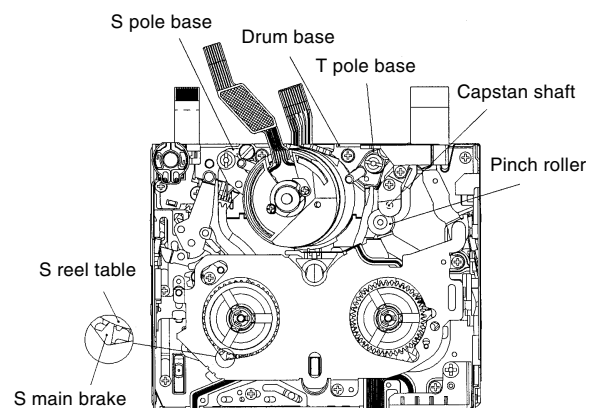
This mode is used for the Tu reel hub to take up the tape of a cassette whose leader tape is visible. (In this mode, the S main brake is located away from the S reel table.)



L START MODE

#### (4) Stop mode

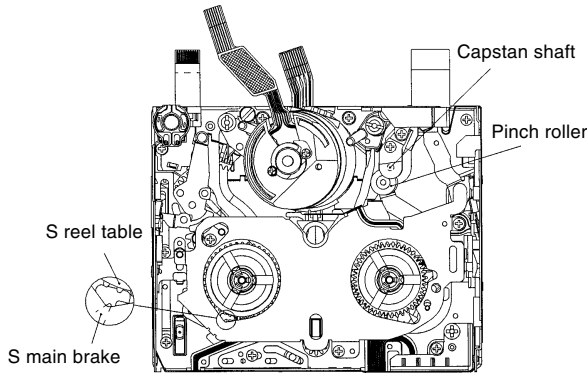
This mode is used for stopping (camera mode: RecLock). In this mode, the S and T pole bases are pressed against the drum base and the S main brake is engaged with the S reel table. However the pinch roller and capstan shaft are separated.



STOP MODE

(5) PB (Record, Fast forward, Fast rewind, VSF and VSR) mode

This mode is used for playback, recording, fast-forwarding, fast -rewinding, VSF and VSR. In this mode, the pinch roller is pressed against the capstan shaft and the S main brake is located away from the S reel table.



PB (RECORD, FAST FORWARD, FAST REWIND, VSF AND VSR) MODE

### 8-2. Cassette controller assembly

<Procedure for removing the cassette controller> (The cassette controller can be installed and removed without removing the cover.)

- (1) Apply 3 to 4V DC to the loading motor to establish the standby mode. When removing the cover from the cassette controller, remove the two screws (A). (See Fig.1.)
- (2) Push the lock lever in the direction shown by the arrow and move up the cassette controller. (See Fig.2.)
- (3) Remove the two screws (C) and remove the down guide (D) in the direction shown by the arrow (E). (See Fig.3 and Fig.4.)
- (4) Shift the cassette controller in the direction shown by the arrow (F), remove the inner arm guide shaft L and the groove of the inner arm R toward the inside of the mechanism, and turn the cassette controller. (See Fig.5 and Fig.6.)
- (5) Turn the cassette controller in the direction shown by the arrow (H) and shift it in the direction shown by the arrow (I) to remove it from the slide chassis. (See Fig.7.)

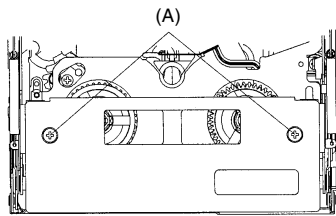


Fig.1

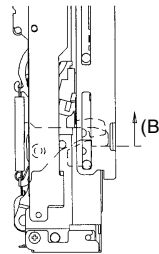


Fig.2

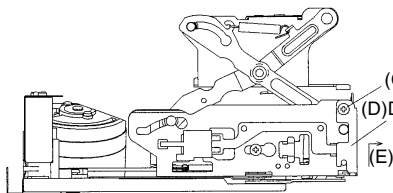


Fig.3

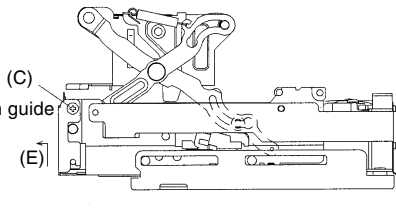


Fig.4

At this position, remove the groove of the inner arm R toward the inside of the mechanism.

At this position, remove the inner arm guide shaft L toward the inside of the mechanism.

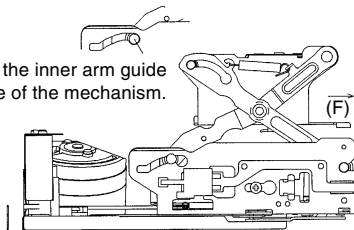


Fig.5

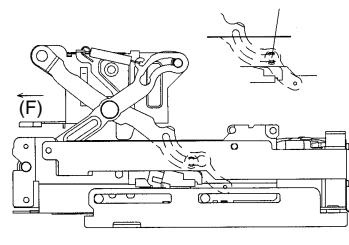


Fig.6



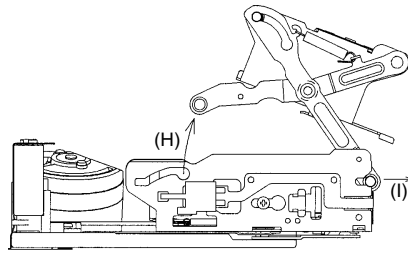


Fig.7

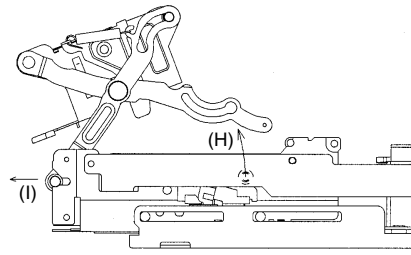


Fig.8

### 8-3. Method of operating on the circuit board with the cassette controller assembly removed

If this method is performed improperly, the tape may be damaged. Therefore do not use this method except in special cases such as measuring the VSR torque. Be sure to follow the cautions shown in this manual.

- (1) Apply 3 to 4V DC to the loading motor to establish the standby mode.
- (2) Insert a sheet of thick paper folded in two as shown in Fig.9 into the position shown in Fig.10 to turn OFF the down SW.  
(Pass the paper along the heavy line in the figure.)  
Note) To go into the REC mode, press the pin of the recognition SW.
- (3) Selecting the test mode (T-01) with the adjustment remote control without setting a tape will make it possible to operate the mechanism with the mode keys.
- (4) For ejecting, remove the paper inserted in step (2) above.

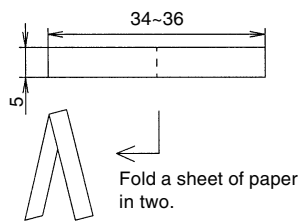


Fig.9

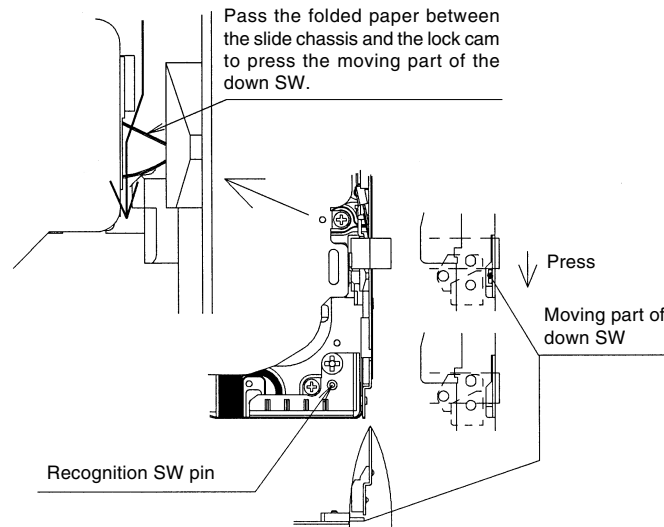


Fig.10

### 8-4. Phase-adjust

Phase-adjust the following parts.

- (1) Mode SW
- (2) Main cam
- (3) Sub cam (The main cam and sub cam should be also phase-adjusted for the chassis.)
- (4) S loading arm
- (5) Tu loading arm
- (6) Loading drive gear (main cam, sub cam, S loading gear)

Note) Check the marker position carefully before disassembling.

Note) When installing the loading drive gear, check that the main cam, sub cam, S loading gear are all phase-adjusted.

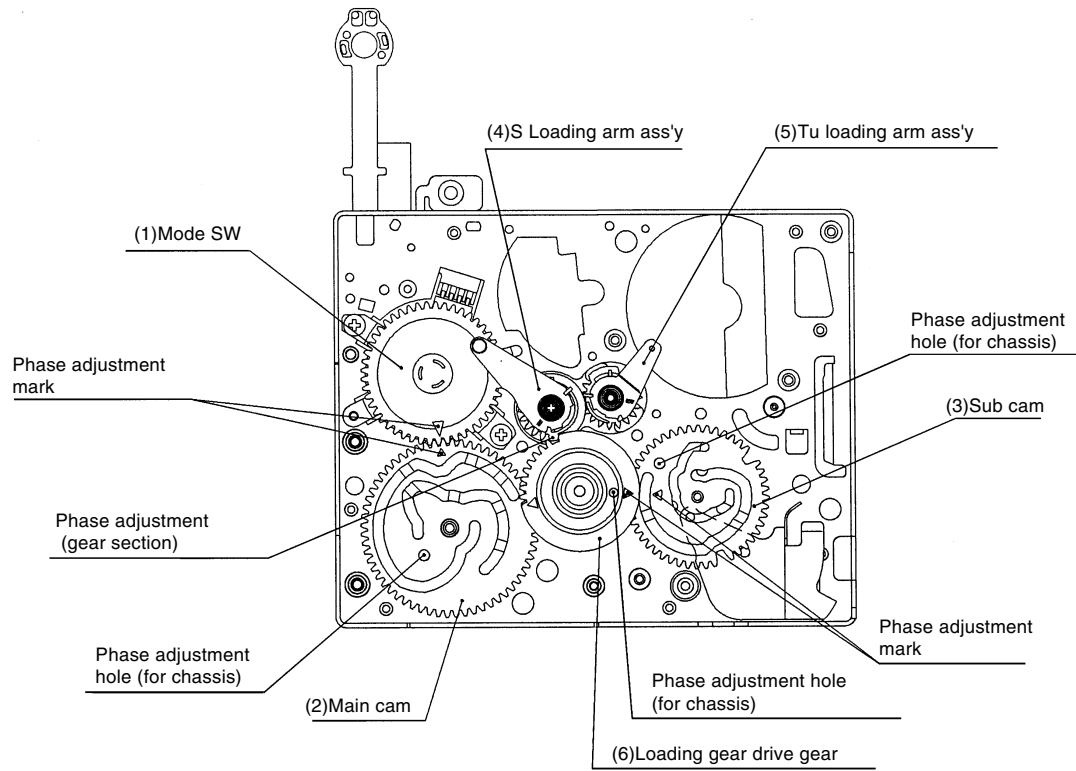


Fig.1

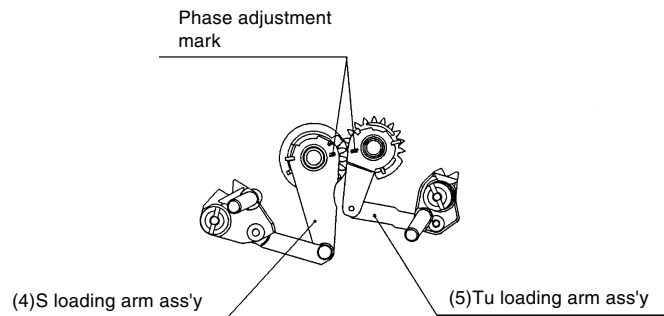


Fig.2

## 8-5. Assembling method

### 8-5-1. Method of assembling the main chassis assembly

Note) For reference, numbers are prefixed to parts names to show the sequence of assembly.

(For the greasing/oiling and cleaning locations, refer to the diagram of greasing/oiling locations.)

**1.**

Type	Tightening torque	Q'ty
A M1.4xL1.6(Special screw)	0.4mN·m	2

**2.**

Type	Tightening torque	Q'ty
B CWø1.2-ø3.0t-0.25		1
H CWø0.7-ø1.8-t0.2		1

**3.**

Type	Tightening torque	Q'ty
C S Tight M1.4xL2.0	0.4mN·m	5
D S Tight M1.4xL3.0	0.4mN·m	1
B CWø1.2-ø3.0t-0.25		1

**4.**

Type	Tightening torque	Q'ty
D S Tight M1.4xL3.0	0.4mN·m	3
E M1.4xL2.0(t0.2 special screw)	0.4mN·m	1

**5.**

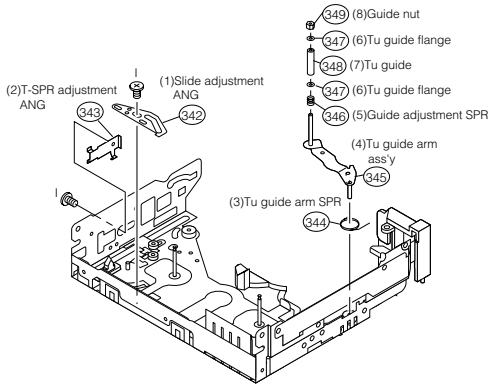
Type	Tightening torque	Q'ty
F M1.4xL1.5(t0.2 special screw)	0.4mN·m	1
G M1.2xL4.6 (t0.2 particularly special screw)	0.4mN·m	1
B CWø1.2-ø3.0t-0.25		1

**6.**

Type	Tightening torque	Q'ty
H CWø0.7-ø1.8-t0.2		1

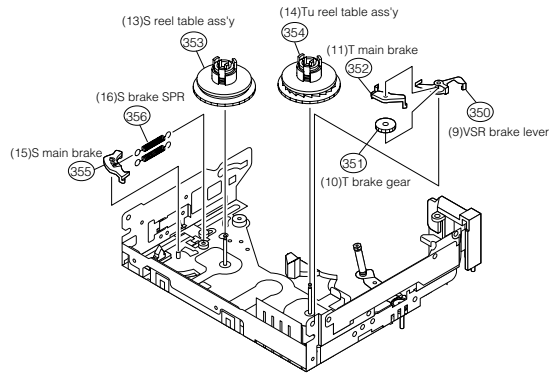
8-5-2. Method of assembling the slide chassis assembly

1.

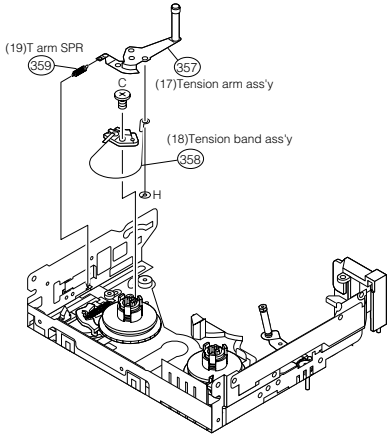


	Type	Tightening torque	Q'ty
I	Precision type 2-M1.4xL1.0	0.4mN·m	2

2.



3.



	Type	Tightening torque	Q'ty
C	S Tight M1.4xL2.0	0.4mN·m (Tightening fully) 0.05mN·m (Tightening temporarily)	1
H	CWø0.7-ø1.8-t0.2		1

### 8-5-3. Method of combining the main chassis assembly and the slide chassis assembly

- (1) Position the assemblies as shown in the figure below (the pole base is slightly protruded).
- (2) Insert the operation pins (tension arm, Tu guide arm) of the slide chassis assembly into the locations of the main chassis assembly shown in the figure below, fit the SL drive lever pin of the main chassis assembly into the groove of the slide chassis (the groove of the slide adjustment ANG), and then fix with the two screws.

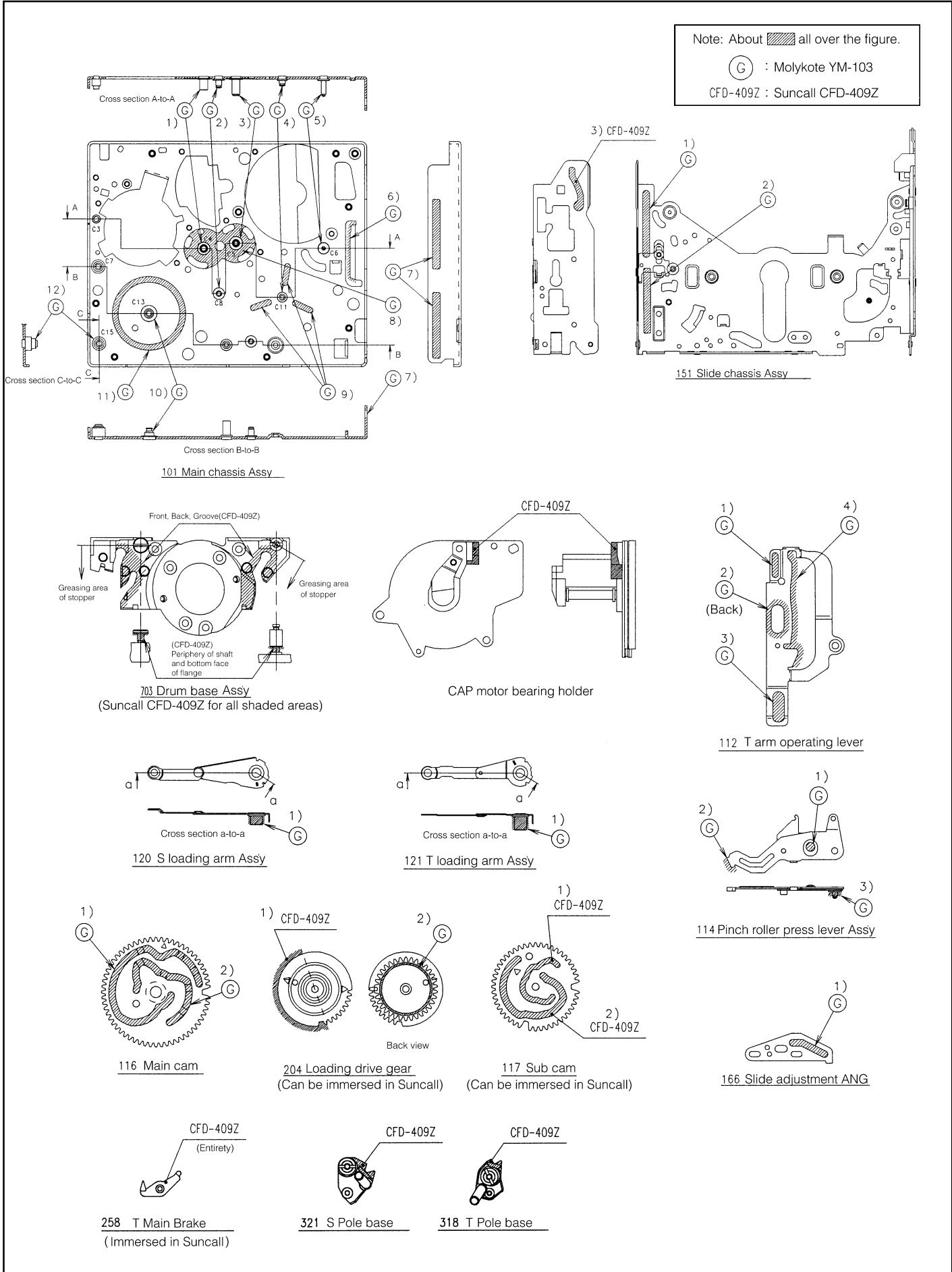
1.

	Type	Tightening torque	Q'ty
C	S Tight M1.4xL2.0	0.4mN·m	2
D	S Tight M1.4xL3.0	0.4mN·m	1
J	Wø2.1-ø4-t0.25		2

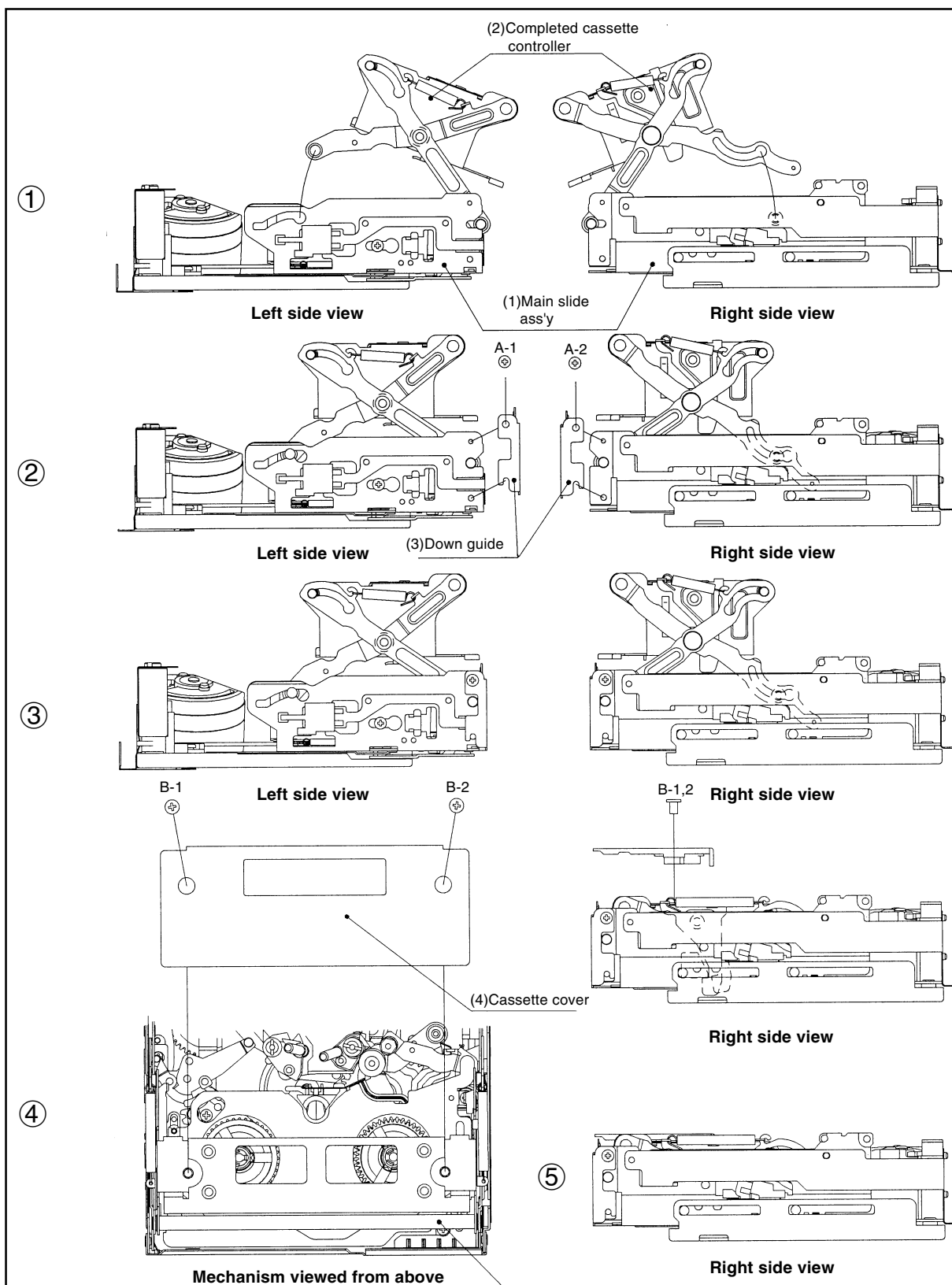
2.

	Type	Tightening torque	Q'ty
D	S Tight M1.4xL3.0	0.4mN·m	1
I	Precision type 2-M1.4xL1.0	0.4mN·m	2

8-5-4. Diagram of greasing/oiling locations



### 8-6. Method of installing the cassette controller



C: Move down the cassette controller by pushing this portion. When the cassette controller is locked, attach the cassette cover.

Type	Tightening torque	Q'ty
A M1.4xL2.0(Precision type 2)	0.4mN·m	2
B M1.7x2.5(Precision type 2)		2

### 8-7. Method of taking out the cassette with the mechanism operating singly

- (1) Apply 3 to 4V DC to the loading motor for slight unloading.
- (2) If the tape is slack, turn the rotor (mechanism backside) of the capstan motor by hand to take up the slack in the tape.
- (3) Repeat steps (1) and (2) above. When the pole base is completely unloaded, check that the tape is not slack.
- (4) Then apply 3 to 4V DC to the loading motor again. The cassette controller will move up.
- (5) Take out the cassette.

Note) When applying 3 to 4V DC to the loading motor for unloading, do so as shown in Fig.1.

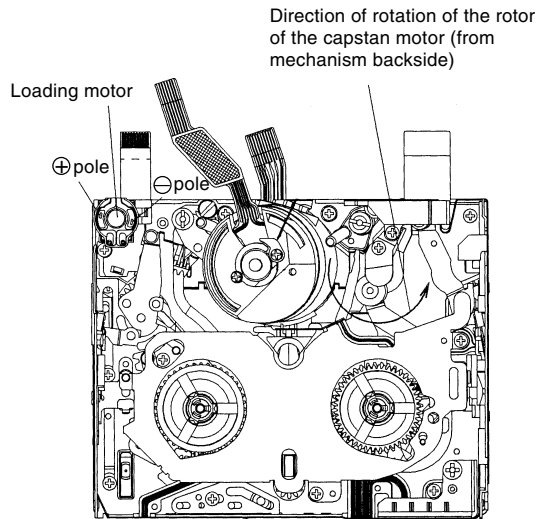


Fig.1



## 9. METHOD OF ADJUSTING THE ELECTRIC CIRCUIT

### -Before making adjustment-

- It seems that, in most cases, this adjusting method is used when it becomes necessary to adjust the electric circuit as a result of replacement of worn mechanism parts or the video head. When adjusting the electric circuit, check that the mechanism operates properly (the mechanism is adjusted completely). If a failure occurs in the electric circuit, be sure to locate the fault using a measuring instrument and then perform repairing, replacement and adjustment, as described in this adjusting method. Avoid performing undue adjustments etc. without using proper measuring instruments.

- The electric circuit components in the circuit board unit of this product are densely-packed into packages. Most of them are surface-mounted for downsizing.

When replacing components in servicing the product, perform replacement work swiftly with a soldering iron.

In general, surface-mounted components are inferior in heat resistance to large-sized discrete components used in TV sets, stationary decks, etc. Heating the electrode of a surface-mounted component with a soldering iron for a long time needlessly will therefore lead to a failure. Take great care not to do so.

Take special care in this respect when replacing chip multilayer capacitors in particular.

We recommend you to use a ceramic soldering iron (Tip temperature: 250°C, Contact time: 5 seconds or less).

### 9-1. Adjustment of liquid crystal video section

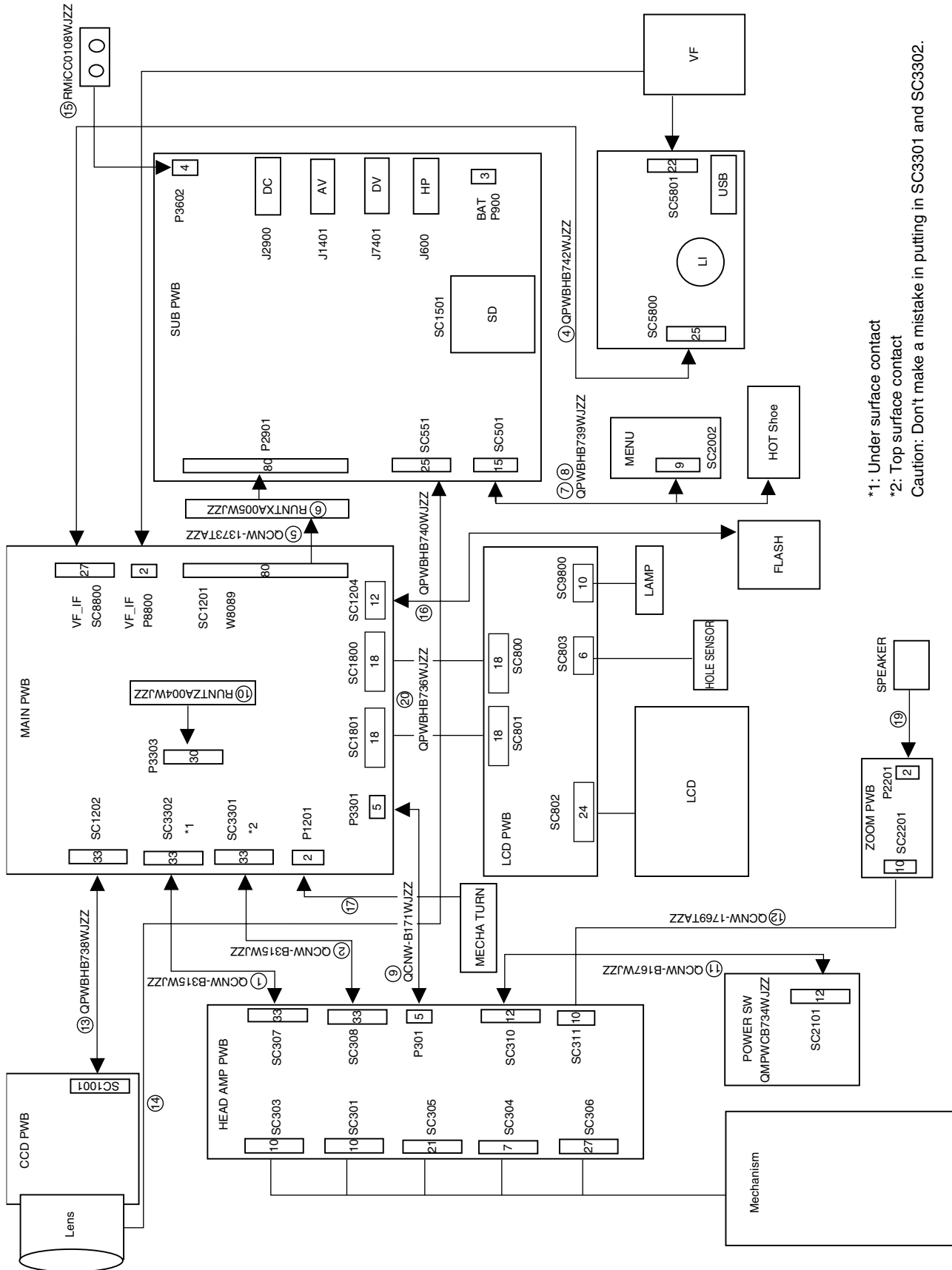
#### List of measuring jigs

<ul style="list-style-type: none"> <li>· Color monitor TV</li> <li>· Digital voltmeter</li> <li>· DC power source</li> <li>· Audio generator (CR oscillator)</li> <li>· Frequency counter</li> <li>· AC adapter</li> </ul>	<ul style="list-style-type: none"> <li>· Stereo AV output cable (supplied)</li> <li>· Adjustment remote control (RRMCG0033TASA)</li> <li>· Signal generator (NTSC pattern generator LCG-401/401YC: Manufactured by Leader)</li> <li>· Oscilloscope</li> </ul>	<ul style="list-style-type: none"> <li>· Vector scope</li> <li>· Tape for recording</li> <li>· DC cable (supplied with AC adapter)</li> <li>· Extension wire of video section</li> <li>· Alignment tape 90ADDVC-TAPE (color bar)</li> <li>· Error rate adjustment tape (reference tape) RTPEVA001WJZZ</li> </ul>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

#### VL-Z7S/E/Z7E-A/Z7E-W/Z8H Specifications of service jigs

No.	Connection section	Connector REF. No.	No. of pins	New/Cont.	Parts cord	Price code
1	H/A PWB — MAIN PWB①	SC307—SC3302	33P	N	QCNW-B315WJZZ	AN
2	H/A PWB — MAIN PWB②	SC308—SC3301	33P	N	QCNW-B315WJZZ	AN
4	MAIN — LITHIUM PWB	SC8800—SC5800	27P-25P		QPWBHB742WJZZ Product FPC used	AE
5	MAIN — RUNTA005WJZZ	SC1201	80P	C	QCNW-1373TAZZ	BQ
6	RUNTA005WJZZ — SUB	P2901	80P	N	RUNTZA005WJZZ	AX
7	Hot shoe — SUB	—SC501	15P		QPWBHB739WJZZ Product FPC used	AH
8	Menu key — SUB	SC2002—SC501	9P-15P		QPWBHB739WJZZ Product FPC used	AH
9	H/A PWB — MAIN PWB	P301—P3301	5P		QCNW-B171WJZZ Product wire used	AF
10	TP jig for envelope checking	P3303	30B-B	N	RUNTZA004WJZZ	AW
11	Power supply	SC310—SC2101	12P		QCNW-B167WJZZ Product FFC used	AC
12	ZOOM	SC311—SC2201	10P	C	QCNW-1769TAZZ	BF
13	CCD PWB — MAIN	SC1001—SC1202	33P		QPWBHB738WJZZ Product FPC used	AD
14	Lens unit — SUB	SC551	25P		CLNS-A005RMA5 Product unit used	BQ
15	MIC — SUB	P3602	4P		RMiCC0108TAZZ Product unit used	AP
16	FLASH — MAIN	—SC1204	12P		QPWBHB740WJZZ Product FFC used	AD
17	MECHA TURN — MAIN	P1201	2P		DUNTKB732PM00 Product unit used	AG
19	SPEAKER — ZOOM	P2201	2P		VSP0020P-B2WN Product unit used	AK
20	LCD UNIT — MAIN	SC1800/SC1801	18Px2		QPWBHB736WJZZ Product FPC used	AR

VL-Z7S/E/Z7E-A/Z7E-W/Z8H Service jig configuration



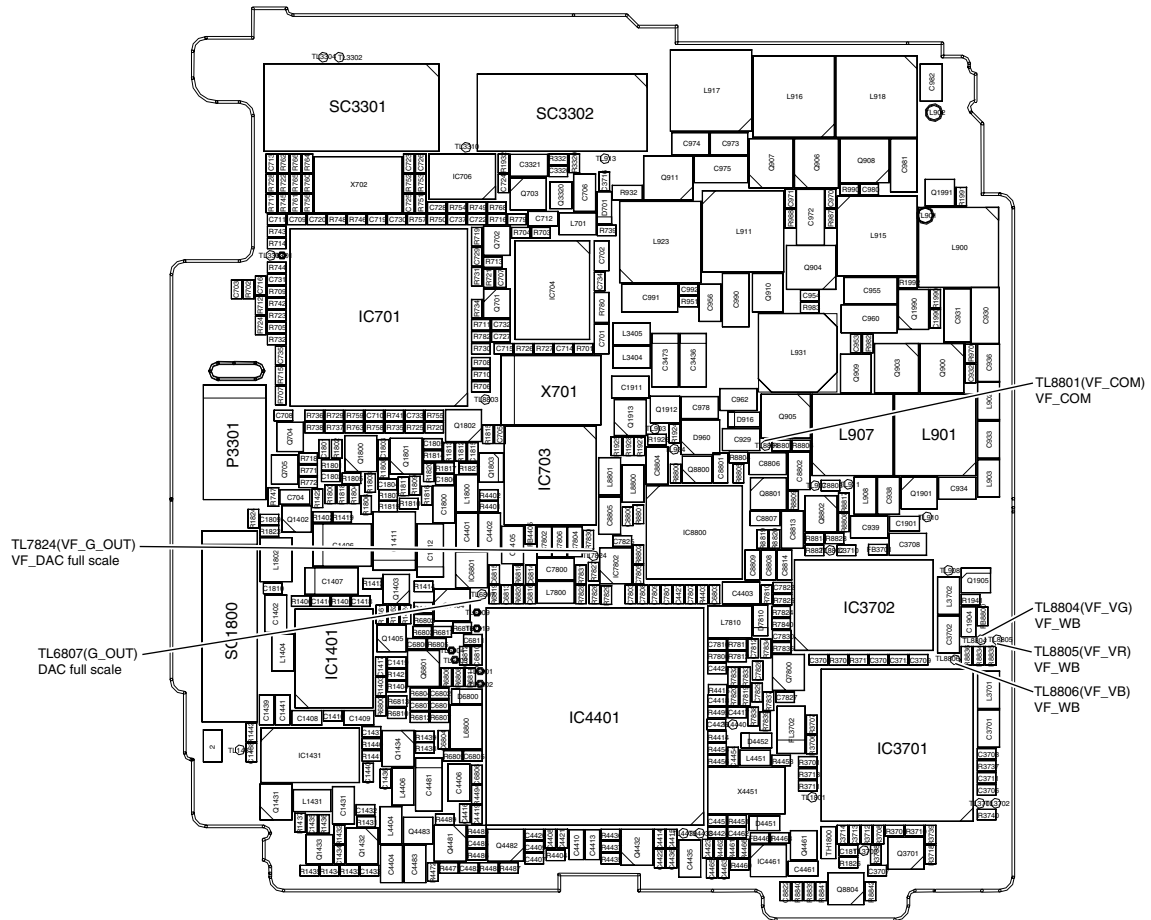
\*1: Under surface contact

\*2: Top surface contact

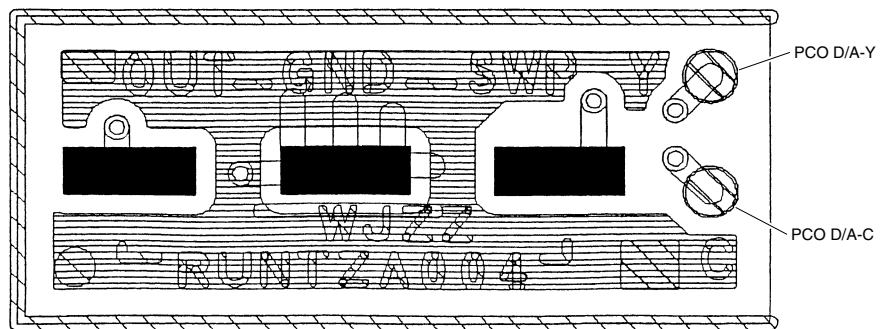
Caution: Don't make a mistake in putting in SC3301 and SC3302.

[TEST POINT]

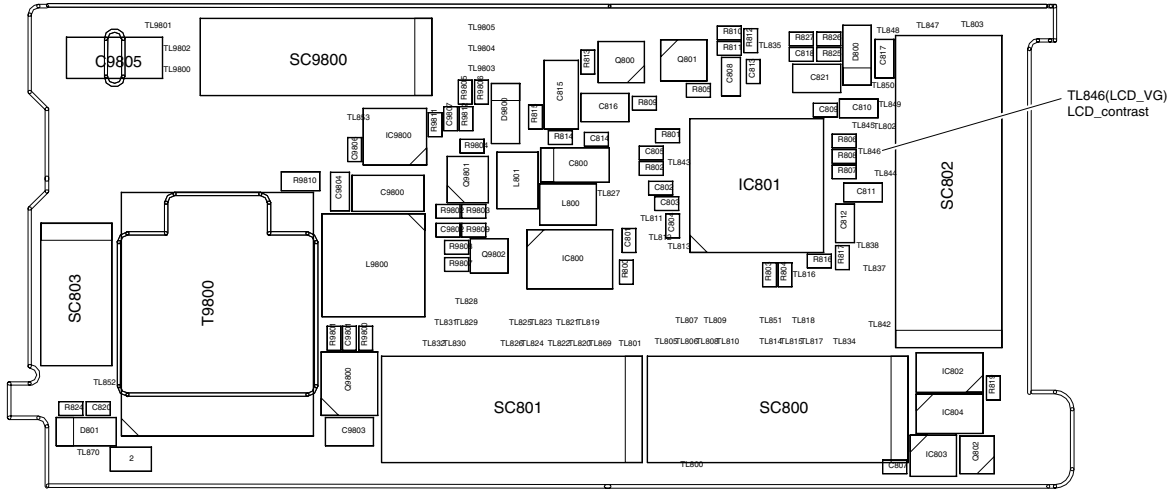
(Wiring board diagram: Main Side A)



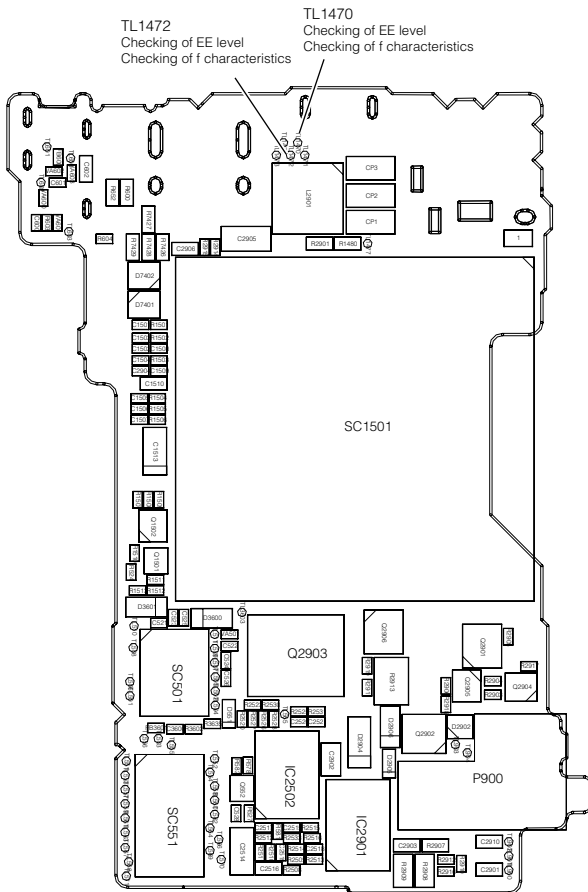
(Envelope checkup TP jig)



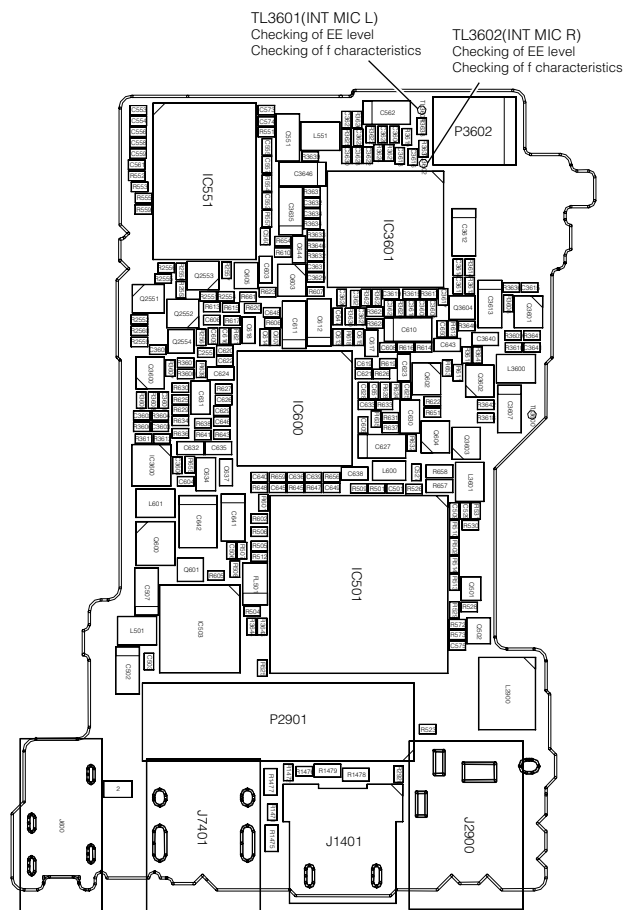
(Wiring board diagram: LCD Side A)



(Wiring board diagram: Sub Side A)



(Wiring board diagram: Sub Side B)



## [Execution of adjustment]

### Adjustment of servo and system controller

#### 1. System code setting

It is necessary to set the following data items after replacing IC705 (E<sup>2</sup>PROM).

<Adjusting method>

Select the VCR adjustment mode and set the data value at each address.

Code	Specifications		Destination		Specifications		Menu setting		Software switching		Calendar	
Address	01	09	02	0A	03	0B	04	0C	05	0D	07	0F
Z7S	00	FF	0A	F5	04	FB	00	FF	00	FF	03	FC
Z7E	00	FF	0B	F4	0C	F3	00	FF	00	FF	03	FC
Z8H	02	FD	0D	F2	0C	F3	00	FF	00	FF	03	FC

Code	1394/exif model name											
Address	1A1	1A2	1A3	1A4	1A5	1A6	1A7	1A8	1A9	1BD	1BE	1BF
Z7S	56	4C	2D	5A	37	53	00	00	00	00	00	00
Z7E	56	4C	2D	5A	37	45	00	00	00	00	00	00
Z8H	56	4C	2D	5A	38	48	00	00	00	00	00	00

\* After replacing IC705 (E<sup>2</sup>PROM), make the following settings and then make adjustments.

(E<sup>2</sup>PROM) data table

(1) Magnetic parametric system

Address	27	28	2B	25	26
Data	70	90	A0	70	A0

#### • Automatic adjustment

Mode	VCR adjustment mode
Adjusting method	<ol style="list-style-type: none"> <li>Using command 12, select the VCR adjustment mode.</li> <li>Using command 20, enable writing to the E<sup>2</sup>PROM.</li> <li>Using command 22, set the above-shown system codes according to the model.</li> <li>Using the command, inhibit writing to the E<sup>2</sup>PROM.</li> <li>Using the command, exit the VCR adjustment mode.</li> </ol>
Examples	• Replacement of E <sup>2</sup> PROM (IC705)

#### • Manual adjustment

Mode	VCR ADJ mode
Adjusting method	<ol style="list-style-type: none"> <li>Set the CAM/OFF/VCR selector switch to VCR.</li> <li>Press "CONTINUE" → "VCR adjustment" on the remote control to enter the VCR mode. (At this time, "VCR ADJ" is displayed in the lower left part.) Enter the specified value at each address. · Shown below is the procedure for setting.</li> <li>Select an address by increasing or decreasing the flashing numeric value with the FF or REW key and press the PB key to confirm it.</li> <li>Set the flashing numeric value to the specified value by increasing or decreasing it with the FF or REW key and press the PB key to confirm it.</li> <li>Press the STOP key to make it possible to select an address.</li> <li>Repeat steps (3), (4) and (5) above until all the data items are set. Then press "CONTINUE" to exit the VCR mode.</li> <li>Set the CAM/OFF/VCR selector switch to OFF.</li> </ol>
Examples	· Replacement of E <sup>2</sup> PROM (IC705)

#### 2. Adjustment of HSWP

Mode	VCR ADJ mode
Adjusting method	<ol style="list-style-type: none"> <li>Select the video mode and play back the alignment tape.</li> <li>Press "CONTINUE" → "HSWP ADJ" keys on the remote control. → <u>HSWP adjustment execution</u> (When the adjustment is completed, "GOOD" is displayed on the LCD and ejecting is performed automatically.) If adjustment cannot be made, "NG" is displayed on the LCD.</li> </ol>
Examples	· Replacement of mechanism · Replacement of E <sup>2</sup> PROM

### 3. Adjustment of shutdown

Mode	VCR adjustment mode
Adjusting method	<ol style="list-style-type: none"> <li>1) Set a recordable tape and select the camera mode.</li> <li>2) Press "CONTINUE" → "TEST SEL" on the adjustment remote control to enter the TEST mode (T-01 flashing).</li> <li>3) Select T-03 with the FF and REW keys and press "PB" key.</li> <li>4) Adjust the power supply voltage so that TL904(+) becomes 6.00V ± 50mV as viewed from TL900(-).</li> <li>5) Press the "Display change" button on the main unit. Turn OFF the power.</li> </ol>
Examples	· Replacement of microcomputer (IC701), Regulator (IC704) and E <sup>2</sup> PROM (IC705)

## ADJUSTMENT OF MAGNETIC PARAMETRIC CIRCUIT SYSTEM

### 1. Adjustment of PLL VCO

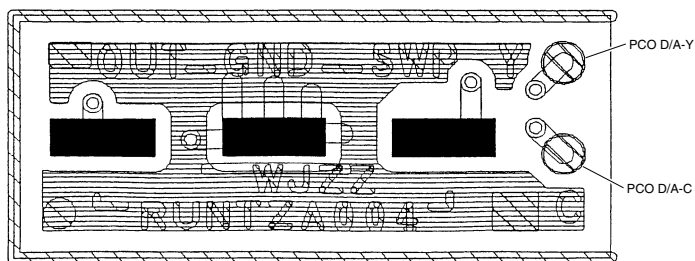
Mode	VCR ADJ mode
Adjusting method	<ol style="list-style-type: none"> <li>1) Play back the alignment tape. (A tape recorded on this unit may be used instead of the alignment tape.)</li> <li>2) Select the adjustment mode (V-ADJ).</li> <li>3) Select address "2A" to call up the data.</li> <li>4) Using the FF and REW keys, adjust the data value so that reproduced pictures are shown. (Even if block noise occurs at this time, it is allowable.)</li> </ol> <p>Note: After the address "2A" data has been adjusted, be sure to make the error rate adjustment.</p>
Examples	· Replacement of circuit board (main) · Replacement of E <sup>2</sup> PROM

### 2. Adjustment of phase and equalizer → (To be performed in the VCR mode)

Mode	VCR ADJ mode															
Adjusting method	<ol style="list-style-type: none"> <li>1) Set a error rate adjustment tape (RTPEVA001WJZZ).</li> <li>2) Select test mode 0F using the adjustment remote control. Automatic adjustment will be started (the following sequence will be performed automatically).</li> </ol> <div style="text-align: center;"> <pre> graph LR     A[Recording of built-in VI/O color bar] --&gt; B[VS REW]     B --&gt; C[PB]     C --&gt; D[Automatic adjustment of phase and equalizer]     D --&gt; E[Judgment]     E --&gt; F[OK: Blue indication on LCD]     E --&gt; G[NG: Red indication on LCD]     F --&gt; H[Tape EJECT]             </pre> </div> <ol style="list-style-type: none"> <li>3) Turn ON and OFF the power.</li> <li>4) Checking of error rate Select test mode 0B using the adjustment remote control.</li> <li>5) Manual adjusting method (video adjustment mode)</li> </ol> <p>* In this adjustment, play back a tape recorded on this unit in the LP mode. Change the data values at addresses 26 and 2B for the phase and the data values at addresses 25 and 27 for the equalizer so that the error rate is minimized.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>Phase</th> <th>Equalizer</th> </tr> </thead> <tbody> <tr> <td>H ch side</td> <td>2B</td> <td>27</td> </tr> <tr> <td>L ch side</td> <td>26</td> <td>25</td> </tr> </tbody> </table> <div style="text-align: center; margin-top: 10px;"> </div> <table style="margin-left: auto; margin-right: auto; margin-top: 10px;"> <tr> <td>Sync error</td> <td>20 or less</td> </tr> <tr> <td>Error rate</td> <td>200 or less (SP Mode)</td> </tr> <tr> <td></td> <td>330 or less (LP Mode)</td> </tr> </table>		Phase	Equalizer	H ch side	2B	27	L ch side	26	25	Sync error	20 or less	Error rate	200 or less (SP Mode)		330 or less (LP Mode)
	Phase	Equalizer														
H ch side	2B	27														
L ch side	26	25														
Sync error	20 or less															
Error rate	200 or less (SP Mode)															
	330 or less (LP Mode)															
Examples	· Replacement of mechanism · Replacement of circuit board (main) · Replacement of E <sup>2</sup> PROM															

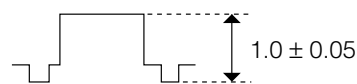
# ADJUSTMENT OF VIDEO I/O CIRCUIT SYSTEM

(Envelope checkup TP jig)



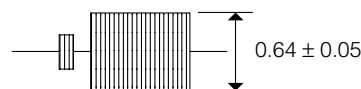
## 1. Adjustment of PCO D/A-Y

Measurement point	(On envelope checkup TP jig)		
Address	VCR ADJ 566	Mode	EE mode
Adjusting method	<p>① Disconnect the DC cable or battery from the unit.</p> <p>② Connect the envelope checkup TP jig to P3303.</p> <p>③ Reconnect the DC cable or battery to the unit, and turn on the power. (on the shooting side)</p> <p>1) Connect the AVS cable to the monitor (TO).</p> <p>2) Select the adjustment mode (V-ADJ).</p> <p>3) Select address "566" to call up the data.</p> <p>(A 100% white signal appears.)</p> <p>4) Set the "Y" signal of the envelope checkup TP jig to <math>1.0 \pm 0.05</math>Vp-p by changing the data value with the FF/REW keys.</p>		
Examples	· Replacement of IC705, IC4401, IC1401		



## 2. Adjustment of PCO D/A-C

Measurement point	(On envelope checkup TP jig)		
Address	VCR ADJ 567	Mode	EE mode
Adjusting method	<p>① Disconnect the DC cable or battery from the unit.</p> <p>② Connect the envelope checkup TP jig to P3303.</p> <p>③ Reconnect the DC cable or battery to the unit, and turn on the power. (on the shooting side)</p> <p>1) Connect the AVS cable to the monitor (TO).</p> <p>2) Select the adjustment mode (V-ADJ).</p> <p>3) Select address "567" to call up the data.</p> <p>4) Set the "C" signal of the envelope checkup TP jig to <math>0.64 \pm 0.05</math>Vp-p by changing the data value with the FF/REW keys.</p>		
Examples	· Replacement of IC705, IC4401, IC1401		



# ADJUSTMENT OF VF CIRCUIT

(Wiring board diagram: Main Side A)



## 1. Setting of parameters (Main PWB)

\* Preset the following data.

Address	582	585	597	5B9	5E4	5E5	580	588	589	58D	5A2	5A4	5A7	5A8	5A9	5B5	5B7	5B8	5C9	5D3
NTSC	3D	40	00	—	—	—	00	00	00	28	00	—	F1	—	40	8B	8B	7D	E0	—
PAL	—	—	00	00	18	18	00	00	00	—	00	D0	F1	E7	E7	8B	8B	7D	E0	04

### 2. Adjustment of VF\_COM amplitude (Main PWB)

Measurement point	TL8801(VF_COM)	Address	VCR ADJ 32
Procedure	1) Set the data value at address 5EB (TESTSW2) to 77. 2) Connect the digital voltmeter to TL8801 (VF_COM). At address 32 (VF_DAC_C), adjust the DC voltage to the adjustment rating.		
Adjustment rating	3.75V ± 50mV		
Examples	· Replacement of IC705		

### 3. Adjustment of VF\_DAC full scale (Main PWB)

Measurement point	TL7824(VF_G_OUT)	Address	VCR ADJ 59E
Procedure	1) Set the data values at addresses 587 (GRYLEV)/58C (γ PEAK)/5EB (TESTSW2) and 5E6 (OSDSW) to FF/80/77 and 00, respectively. (The LED shows nothing.) 2) Set the data values at addresses 5A0 (CLAMP)/58D (PEDESTAL) and 5B9 (VCLK3 INV) to 00/80 and 48, respectively. 3) Connect the digital voltmeter to TL7824 (VF_G_OUT) and measure the DC voltage. * The measured voltage is (DA_VF-G). 4) Set the data values at addresses 5A0 (CLAMP) and 58D (PEDESTAL) to 80 and 00, respectively. 5) At address 59E (VF_DAC_G), adjust the DC voltage to the adjustment rating. 6) Preset the data values at addresses 59D (VF_DAC_B) and 59F (VF_DAC_R) so that they are the same as the data value at address 59E (VF_DAC_G). 7) Reset the data at addresses 587 (GRYLEV)/58C (γ PEAK)/58D (PEDESTAL)/5A0 (CLAMP)/5B9 (VCLK3 INV)/5E6 (OSDSW) and 5EB (TESTSW2) to their original values. (Initial values: 40/C5/38/28/42/71 and 7F)		
Adjustment rating	DA_VF-G +0.23V ± 10mV		
Examples	· Replacement of IC705, IC4401		

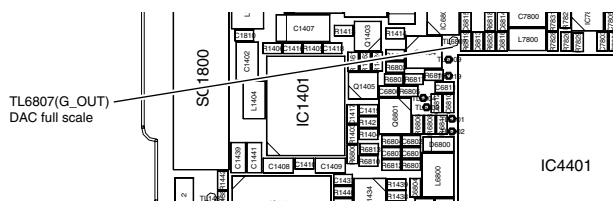
### 4. Adjustment of VF\_WB (Main PWB)

Measurement point	TL8804(VF_VG), TL8805(VF_VR), TL8806(VF_VB)
Address	VCR ADJ 58E, 590
Procedure	1) Set the data values at addresses 587 (GRYLEV) and 5E6 (OSDSW) to 80 and 70, respectively. 2) Connect the oscilloscope to TL8804 (VF_VG) and TL8805 (VF_VR), and at address 58E (VF_WB-R), adjust the amplitude to the adjustment rating. 3) Connect the oscilloscope to TL8804 (VF_VG) and TL8806 (VF_VB), and at address 590 (VF_WB_B), adjust the amplitude to the adjustment rating.
Adjustment rating	0mV ± 40mV, 0.1mV ± 40mV
Examples	· Replacement of IC705, IC4401, IC8801

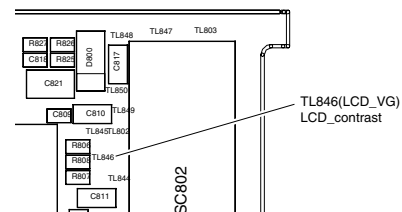
## ADJUSTMENT OF LCD CIRCUIT

When making this adjustment, set the backlight switch to "Normal".

(Wiring board diagram: Main Side A)



(Wiring board diagram: LCD Side A)



### 1. Setting of parameters (Main PWB)

\* Preset the following data.

Address	046	047	048	049	099	0A5	0A6	0A7	0B5	406	407	408	409	427	435	40A	40B	41E
NTSC	1E	54	6B	76	01	40	7E	15	64	7F	7F	20	20	E7	24	70	70	00
PAL	—	—	—	—	—	—	—	—	69	—	—	—	—	E5	—	—	—	—

Address	090	098	09A	0A3	0A4	097	40E	40F	42B	42D	42F
NTSC	7F	—	40	91	96	C2	—	—	—	—	—
PAL	—	00	21	A2	A8	C9	14	14	03	09	06

The same adjusting procedure and connections as described for the VCR section are used.



## 2. Adjustment of DAC full scale (Main PWB)

Measurement point	TL6807(G_OUT)	Address	VCR ADJ 094(G)
Mode	VCR AV input		
Adjusting method	1) Set the data values at addresses 41E/086/41C and 410 to FF/80/77 and 00, respectively. (The LED shows nothing.) 2) Set the data values at addresses 096/411 and 0A8 to 00/80 and 48, respectively. 3) Connect the digital voltmeter to TL6807 (G_OUT) and measure the DC voltage. * The measured voltage is (DA_VG). 4) Set the data values at addresses 096 and 411 to 80 and 00, respectively. 5) At address 094, adjust the DC voltage to the adjustment rating. 6) Preset the data values at addresses 093 and 095 so that they are the same as the data value at address 094. 7) Reset the data at addresses 41E/086/096/41C/411/0A8 and 410. (Initial value: 00/C5/28/7F/28/42 and 7D)		
Adjustment rating	DA_VG + 0.35V ± 10mV		
Examples	· Replacement of IC705, IC4401		

## 3. Setting of parameters (LCD PWB)


\* Preset the following data.

Address	7C0	7C6	7C7	7CB
NTSC	49	00	40	40
PAL	49	00	40	40

## 4. Adjustment of LCD contrast (LCD PWB)

Measurement point	TL846(LCD_VG)	Address	VCR ADJ 7C3
Test signal	0.900V		
Procedure	1) Set the data value at address 41E (GRYLEV) to BE. (100% white display) 2) Set the data value at address 41C (TESTSW2) to 77. (1H inverted STOP) 3) Connect the digital voltmeter to TL846 (LCD_VG), and at address 7C3 (CONTRAST), adjust the DC voltage to the adjustment rating.		
Adjustment rating	± 50mV		
Examples	· Replacement of IC801, IC800		

## 5. Adjustment of COM-Bias (with the unit settings complete)

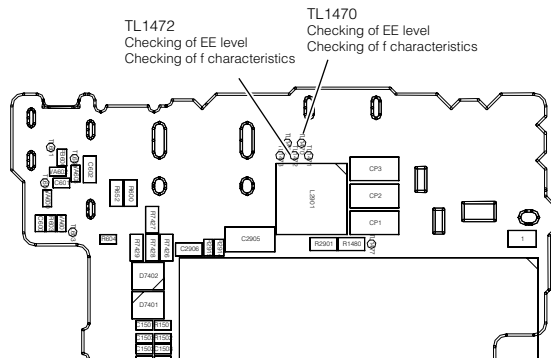
Measurement point	LCD panel display surface	Address	VCR ADJ 7C9
Mode	VCR AV input		
Adjusting method	1) Apply a 40% white signal to the AV input. 2) Set the illuminometer (TOPCON IM-3) on the LCD panel surface. (Cut off outside light.) 3) Minimize the ripple of the output waveform of the illuminometer.		
Adjustment rating	Minimum value  Response time: 0.6 sec		
Remarks	Make adjustment after five minutes or more of aging.		
Examples	· Replacement of LCD panel · Replacement of IC800		

## 6. Adjustment of W/B (with the unit settings complete)

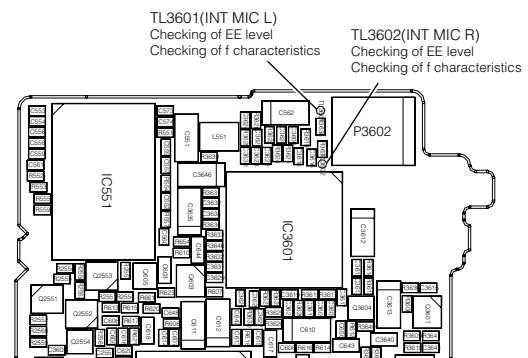
Measurement point	LCD panel display surface	Address	VCR ADJ 41F, VCR ADJ 421
Mode	VCR AV input		
Adjusting method	1) Apply a 40% white signal to the AV input. 2) Apply a 40% white signal to the standard monitor. Make adjustment so that the image on the LCD becomes equivalent to the image on the standard monitor.		
Remark	Standard monitor		
Examples	· Replacement of LCD panel · Replacement of IC4401, IC705		

# ADJUSTMENT OF MIC AMP CIRCUIT

(Wiring board diagram: Sub Side A)



(Wiring board diagram: Sub Side B)



## 1. Checking of EE level (Sub PWB)

Measuring instrument	Valve voltmeter	Measurement point	TL1472, TL1470
Mode	P-ON (CAM)	Adjustment rating	-8dBs ± 3dB
Test signal	1kHz, -54dBs sine wave		
Adjusting method	1) Apply a 1kHz, -54dBs sine wave to TL3601 (INT MIC L) and TL3602 (INT MIC R). 2) Check that the signal levels of TL1472 Audio-L out and TL1470 Audio-R out satisfy the adjustment rating.		
Examples	_____		

## 2. Checking of f characteristics (Sub PWB)

Measuring instrument	Valve voltmeter	Test point	TL1472, TL1470
Mode	P-ON (CAM)	Adjustment rating	(On a base of 1kHz) 100Hz : -6dBs ± 3dB 10kHz : -3dBs ± 3dB
Test signal	100Hz and 10kHz, -54dBs sine wave		
Adjusting method	1) Apply a -54dBs, 100Hz sine wave and then a 10kHz, -54dBs sine wave to TL3601 (INT MIC L) and TL3602 (INT MIC R). 2) Check that the signal levels of TL1472 Audio-L out and TL1470 Audio-R out satisfy the adjustment rating on a base of 1kHz in each case.		
Examples	_____		

## Setting of MODEL ID

Address	VCR ADJ FD, FE, FF																		
Mode	VCR mode	Setting rating	10, 20																
Setting method	1) Using command 12, select the VCR adjustment mode. 2) Using command 20, enable writing to the E <sup>2</sup> PROM. 3) Set MODEL ID at each address.																		
	<table border="1" style="float: right;"> <tr> <td>Address</td> <td>FDh</td> <td>FEh</td> <td>FFh</td> </tr> <tr> <td>Date</td> <td>10h</td> <td>20h</td> <td>Z7S 44</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Z7E 46</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Z8H 5F</td> </tr> </table>			Address	FDh	FEh	FFh	Date	10h	20h	Z7S 44				Z7E 46				Z8H 5F
Address	FDh	FEh	FFh																
Date	10h	20h	Z7S 44																
			Z7E 46																
			Z8H 5F																
Examples	Replacement of E <sup>2</sup> PROM (IC705)																		

## DV INTERFACE (IEEE1394) ID SETTING

This unit has a DV interface function conforming to IEEE1394. Each unit therefore must have its own ID number. Because this ID is written into the E<sup>2</sup>PROM (IC705) in the main PWB, it is necessary to newly write the ID newly when this IC is replaced.

Address	180, 17F, 17E	Mode	VCR
Setting rating	ID number obtained from the URL below		
Setting method	1) Refer to the ID code application below. 2) Place the data acquired in step (1) at the corresponding address in the VCR mode. * Download an ID number and write it on the main unit according to the notice from the AV System Group "Issue No.S8-001".		
Examples	• Replacement of E <sup>2</sup> PROM (IC705 in main PWB)		

### ■ ID code application

1. Connect with the EU148/64 ID code control system.

(1) Start the Internet Explorer or Netscape Navigator.

(2) Access the following address.(URL: <http://www.rcg.kami.sharp.co.jp/quics/index.html>)

Select "EU148/64 ID code control system" among the "Service" items.

**Note:** If you want to establish a connection by directly inputting the URL, please input the following.

URL:[http://www1.rcg.kami.sharp.co.jp:7000/adrs\\_agt/adrs\\_dba/ide00010.main](http://www1.rcg.kami.sharp.co.jp:7000/adrs_agt/adrs_dba/ide00010.main)

The login screen will appear.

(3) Input the [User ID] and [Password]. Click on [Login].

(4) Click on [EUI 64 (IEEE1394)] from [1. Application of acquisition of application for ID].

Click

(5) Click on [Repair use].

EUI 64 (IEEE1394) Application for acquisition of ID

Click the button.

Trial production use

Repair use

Click →

Back to menu

(6) Input the necessary information for the application.  
Be sure to input the necessary input items.  
Select the [Group/company] and [Kind name] from the list.  
Input the [Model name] in half-size characters.  
Input the [Serial number] in half-size characters.  
Input the [Site/department] of repair in full-size characters.

EUI 64 (IEEE1394) Application for acquisition of ID / Repair use

Input the following items.

Input date	00-Feb-03	
User ID code	00 00 00	
Name	TaroYamada	Input of half-sized characters.
Group/company	Audio-Visual Systems Group	Select from the list.
Kind name	ViewCam with LCD	Select from the list.
Model name	VL-○○○○	Input of half-sized characters. (Compulsory input items. Do not input "-" (hyphens).
Serial number	○○○○○○○	Input of half-sized characters. (Compulsory input items.
site/department of repair	SHARP	Input of half-sized characters. (Compulsory input items.

motion

back to select menu    Back to menu

(7) Click on [Motion].  
The confirmation screen will appear.

EUI 64 (IEEE1394) Application for acquisition of ID / Repair use

Input the following items.

Input date	00-Feb-03	
User ID code	00 00 00	
Name	TaroYamada	Input of half-sized characters.
Group/company	Audio-Visual Systems Group	Select from the list.
Kind name	ViewCam with LCD	Select from the list.
Model name	VL-○○○○	Input of half-sized characters. (Compulsory input items. Do not input "-" (hyphens).
Serial number	○○○○○○○	Input of half-sized characters. (Compulsory input items.
site/department of repair	SHARP	Input of half-sized characters. (Compulsory input items.

motion

back to select menu    Back to menu

(8) Click on [Yes].

EUI 64 (IEEE1394) Application for acquisition of ID/Repair use

Input date	00-Feb-03
User ID code	00 00 00
Name	TaroYamada
Group/company	Audio-Visual Systems Group
Kind name	ViewCam with LCD
Model name	VL-○○○○
serial number	○○○○○○○
site/department of repair	SHARP

EUI 64 (IEEE1394) Application for acquisition of ID/Repair use  
You will acquire an ID code based on the above information. Are you sure?

Yes    No

2. Print the application result.

- (1) Print out the application result screen.  
Control the application result as evidence.  
To print it out, select "Print (P)" under "File (F)" on the menu bar or click on the print button on the tool bar.
- (2) Click on [Menu] to complete the application.  
If you make application in succession, repeat steps (1) to (8).  
To end it, click on [End] on the menu screen.

## 9.2. Adjustment of camera section

### 9-2-1. Servicing of camera section

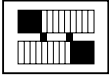


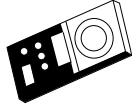
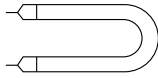
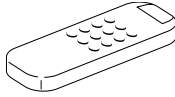
- (1) Camera adjustment should be performed with the set completed.
- (2) Subjects, measuring instruments and jigs necessary for servicing and adjustment of the camera section

<ul style="list-style-type: none"> <li>• Gray scale chart</li> <li>• Color bar chart</li> <li>• Oscilloscope</li> <li>• Digital voltmeter</li> <li>• Halogen lamp: 2 pcs.</li> <li>• Vector scope</li> </ul>	<ul style="list-style-type: none"> <li>• Frequency counter</li> <li>• Illumination meter</li> <li>• Color temperature meter</li> <li>• Color temperature conversion filter HOYA "LB-165"</li> <li>• Color video monitor</li> </ul>	<ul style="list-style-type: none"> <li>• Video output cable</li> <li>• AC adapter</li> <li>• Extension cables</li> <li>• Adjustment remote control</li> </ul>
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------

### 9-2-2. List of camera jigs

Sketch

<Note: Order of descriptions> 1. Jig name 2. Part code 3. Code

 <ol style="list-style-type: none"> <li>1. Gray scale chart (390 x 520 mm)</li> <li>2. JIGCHART-1</li> <li>3. CP</li> </ol>	 <ol style="list-style-type: none"> <li>1. Color bar chart (240 x 320 mm)</li> <li>2. JIGCHART-4</li> <li>3. DA</li> </ol>	 <ol style="list-style-type: none"> <li>1. Illuminometer (0 to 3000 lx)</li> <li>2. JIGMETER-1</li> <li>3. CT</li> </ol>	 <ol style="list-style-type: none"> <li>1. Color temperature meter (1600 to 40000 degrees K)</li> <li>2. JIGMETER-2</li> <li>3. EL</li> </ol>
<ol style="list-style-type: none"> <li>1. Color temperature conversion filter (3200 degrees K ⇒ 6800 degrees K)</li> <li>2. JIGHOYA-LB165</li> <li>3. BN</li> </ol>	 <ol style="list-style-type: none"> <li>1. PC plate connector drawer</li> <li>2. JIGTH-SS10</li> <li>3. AW</li> </ol>	 <ol style="list-style-type: none"> <li>1. Adjustment remote control</li> <li>2. RRMCG0033TASA</li> <li>3. BT</li> </ol>	

### 9-2-3. Adjustment of camera section

- (1) Preparations and checking before adjustment
  - 1) Adjust the lighting so that the illumination intensity is about 3000 lx and that uniform illumination is provided on the whole pattern.  
(It is desirable that two or more lamps be used as light sources.)  
Set the color temperature at 3200K.
  - 2) The test pattern used should be free from stains and color deterioration.
  - 3) If a failure occurs in the electric circuit, be sure to locate the fault using a measuring instrument and perform repairing or replacement before making adjustment of camera section.

#### (2) Adjustment remote control RRMCG0033TASA

The adjustment remote control (RRMCG0033TASA) is used to adjust the camera section of this unit. Adjustment is made by writing data into the E<sup>2</sup>PROM(IC705) at particular addresses using the remote control via the microcomputer.

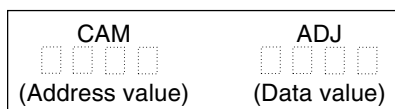
##### 1) To adjust the camera

Press the "CONTINUE" key and then press the "CAM ADJ" key.

The following display will appear on the LCD screen, allowing you to make adjustment.



##### 2) Description of display



(It means camera adjustment.)

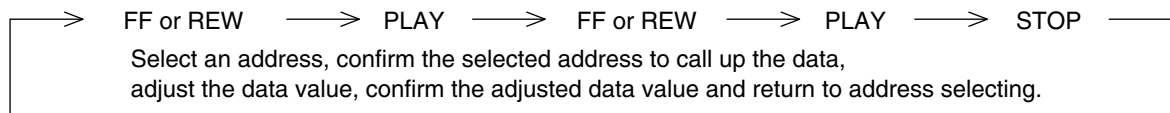
\* This unit has addresses 0000 to 07FF.

\* Byte data (last two digits valid) and 2-byte data (last three digits valid) are available.

3) Description of remote control keys

- "FF" key: It is used to increase the address value and data value.
- "REW" key: It is used to decrease the address value and data value.
- "PLAY" key: It is used to confirm the selected address to call up the data. It is also used to confirm the data value.
- "STOP" key: It is used to clear the data and make it possible to select an address.

4) Operation flow



5) After completion of adjustment

Press the "CONTINUE" key to make the display "CAM ADJ" disappear.

**Note:** Before pressing the "CONTINUE" key, check that the unit is not in the auto focus adjustment mode or the camera signal system adjustment mode (described later).

● Camera section adjustment mode

The auto focus adjustment mode and the camera signal system adjustment mode are used for adjustment of the camera section.

**Note:** The adjustment data are stored in the E<sup>2</sup>PROM as shown below. When making changes, it is therefore necessary to perform rewriting of data and checking of the latest data.

1) E<sup>2</sup>PROM (IC705) on main unit

Lens-related data and signal system adjustment data

(3) Auto focus adjustment mode

The camera of this unit features automatic focussing by means of a microcomputer.

The auto focus circuit of this unit performs focusing operation based on the principle that the high frequency component in the video signal increases as focus is achieved. In addition, in order to achieve a large magnification with a small-size lens, the inner focus system is employed in which a master lens (rear lens) is moved forward and backward for focusing. This inner focus system enables full range focussing with a focal length range of 10 mm to infinite distance. However, because the maximum allowable distance from the closest subject to the tele end is 1.5 m, a subject less than 1.5 m away from the tele end cannot be focused on if it is shot at the tele end. In such cases, zooming-out is performed automatically for focusing.

The major factors of the auto focus system are as follows:

- Detection of master lens position
- Detection of iris position
- Detection of zoom lens reference position

These detection data are stored in the E<sup>2</sup>PROM.

Therefore (3) auto focus adjustment should be performed in the following cases.

- When the lens is replaced
- When the CCD is replaced
- When the E<sup>2</sup>PROM is replaced
- When the CCD circuit board and CAMHEAD circuit board are replaced

1) How to enter the auto focus adjustment mode

Set the data value at address "13FE" to "00 01".



The screen will be white-faded temporarily and the auto focus adjustment mode will be established.

\* When the auto focus adjustment mode is established, make adjustment according to "(5) Camera adjusting procedure".

\* In the auto focus adjustment mode, lens operation cannot be performed.

2) How to enter the normal mode

Set the data value at address "13FE" to "00 FF".



The screen will be white-faded temporarily and the normal mode will be established.



Pressing the "CONTINUE" key will make the display "CAM ADJ" disappear and make it possible to perform normal operation.

(4) Camera signal system adjustment mode

In the camera signal system adjustment mode, the auto white balance function is stopped in order to adjust the camera. In this mode, the white balance is set to the indoor mode and focussing is performed manually.

1) How to enter the camera signal system adjustment mode

Set the data value at address "0000" to "□□ 00".



The camera signal system adjustment mode will be established.

\*When the camera signal system adjustment mode is established, make adjustment according to "(5) Camera adjusting procedure".

2) How to enter the normal mode

Set the data value at address "0000" to "□□ FF".

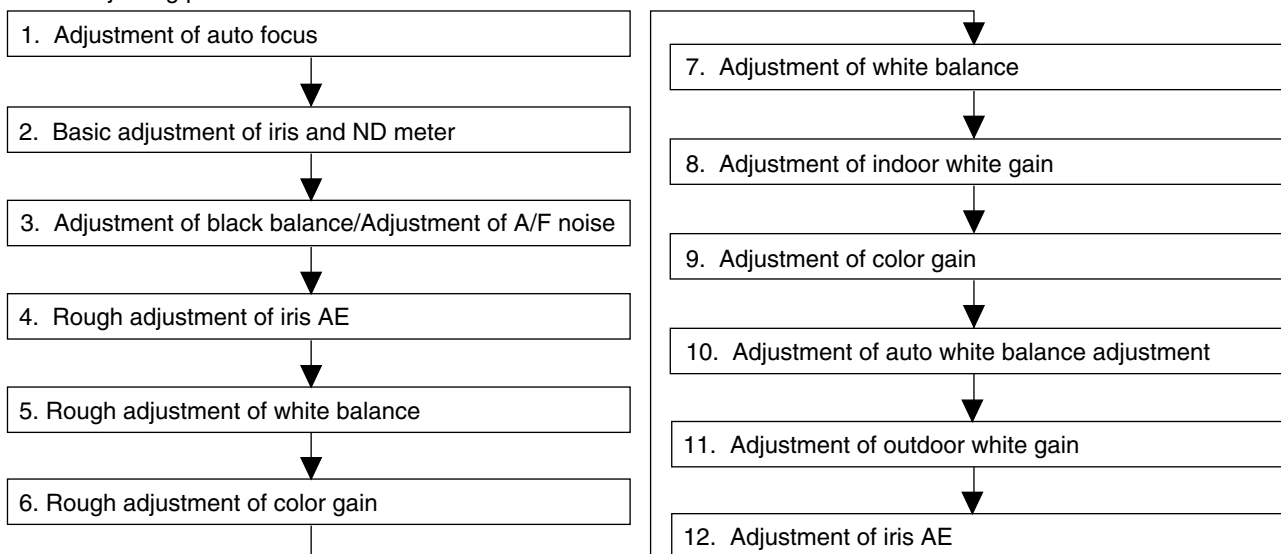


The normal mode will be established.



Pressing "CONTINUE" key will make the display "CAM ADJ" disappear and make it possible to perform normal operation.

(5) Camera adjusting procedure



\* "1. Adjustment of auto focus" is performed in the auto focus adjustment mode. The other adjustments are performed in the camera signal system adjustment mode.

(6) How to replace the gyro unit

1) When replacing the E<sup>2</sup>PROM on the main unit with the gyro unit kept unchanged

Because the gyro adjustment data is stored in the E<sup>2</sup>PROM, read the data at address "1064" and write it into the new E<sup>2</sup>PROM after replacement.

2) When replacing the gyro sensor (RMC1001)

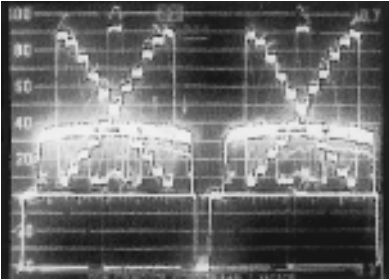
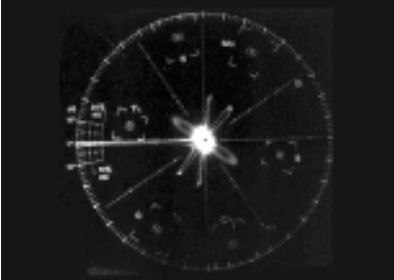
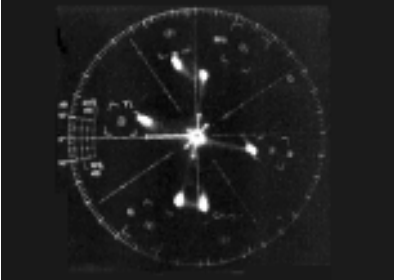
After replacing the gyro sensor with the specified one, write the following data at address "1064".

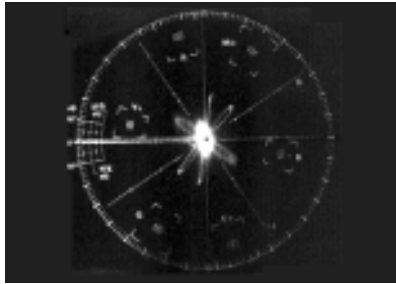
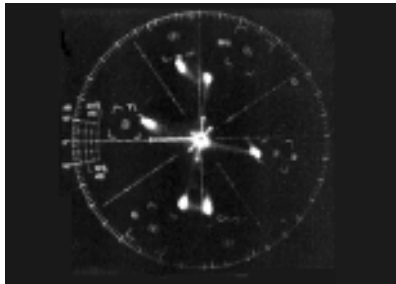
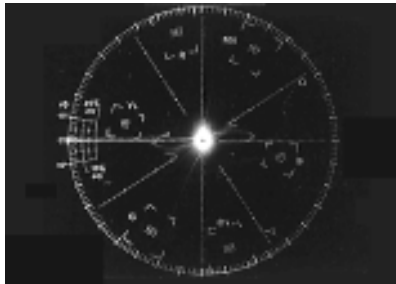
Ref No.	Part code	Address	Data
RMC1001	Changed to RSNSGA005WJPZY	1064	01D0

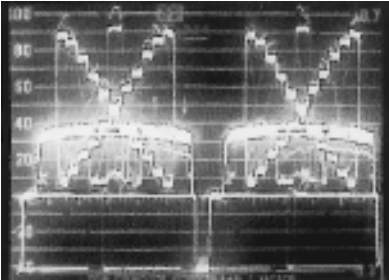
## 9-2-4. Adjusting procedure

Item	Adjustment method																
<p>(1) Adjustment of auto focus</p> <p>The following adjustments are performed automatically by establishing the auto focus adjustment mode and writing the following data at address "13FD" sequentially. The adjustment items are as shown in the table below. When an adjustment is completed normally, data "FF" is written, which should be confirmed before proceeding to the next adjustment.</p> <table border="1" data-bbox="110 331 938 485"> <thead> <tr> <th>Address</th> <th>Data</th> <th>Adjustment item</th> </tr> </thead> <tbody> <tr> <td>13FD</td> <td>0012</td> <td>Adjustment of wide end</td> </tr> <tr> <td></td> <td>0008</td> <td>Adjustment of tele end focus ∞ position</td> </tr> <tr> <td></td> <td>0006</td> <td>Adjustment of wide end focus ∞ position</td> </tr> <tr> <td></td> <td>000D</td> <td>Adjustment of zoom tracking</td> </tr> </tbody> </table> <p>Note 1: During the adjustment of ∞ position, a subject should be shot actually. Make this adjustment while shooting a subject with a clear-cut outline. In the case of the adjustment of tele end focus ∞ position in particular, if it is performed without shooting a distant subject actually, the ∞ position will not be adjusted properly.</p> <p>Adjustment of wide end focus ∞ position: 3 m or more Adjustment of tele end focus ∞ position: 50 m or more</p> <p>Note 2: In the case of the adjustment of ∞ position, the depth of field is important in insuring accuracy. If the depth of field is deep, the ∞ position may be adjusted improperly the subject hardly falls out of focus. Make this adjustment with the depth of field being shallow (the iris opened).</p> <p>It is possible to open the iris using the high-speed shutter.</p> <ol style="list-style-type: none"> <li>1. Establish the normal mode.</li> <li>2. Call the V-V adjust sports mode in normal operation. (Refer to the instruction manual.)</li> <li>3. Display "CAM ADJ" by using the remote control for servicing.</li> <li>4. Establish the auto focus adjustment mode.</li> <li>5. Perform the adjustment of ∞ position.</li> <li>6. After the completion of the adjustment of ∞ position, set the V-V adjust back to the off position.</li> </ol>	Address	Data	Adjustment item	13FD	0012	Adjustment of wide end		0008	Adjustment of tele end focus ∞ position		0006	Adjustment of wide end focus ∞ position		000D	Adjustment of zoom tracking		
Address	Data	Adjustment item															
13FD	0012	Adjustment of wide end															
	0008	Adjustment of tele end focus ∞ position															
	0006	Adjustment of wide end focus ∞ position															
	000D	Adjustment of zoom tracking															
<p>(2) Basic adjustment of iris</p> <p>It is performed to adjust the operating point of the hall element installed in the iris meter.</p> <p>The following adjustments are performed automatically by writing the following data at address "13FD" sequentially in the camera signal system adjustment mode. The adjustment items are as shown in the table below. When an adjustment is completed normally, data "00FF" is written automatically.</p> <table border="1" data-bbox="110 1213 938 1331"> <thead> <tr> <th>Address</th> <th>Data</th> <th>Adjustment item</th> </tr> </thead> <tbody> <tr> <td>13FD</td> <td>0009</td> <td>Adjustment of hall offset</td> </tr> <tr> <td></td> <td>000A</td> <td>Adjustment of iris offset</td> </tr> <tr> <td></td> <td>000B</td> <td>Adjustment of iris close</td> </tr> </tbody> </table> <p>After exiting the auto focus adjustment mode (writing data "□□ FF" at address "13FE"), establish the camera signal system adjustment mode (writing data "□□ 00" at address "0000").</p>	Address	Data	Adjustment item	13FD	0009	Adjustment of hall offset		000A	Adjustment of iris offset		000B	Adjustment of iris close					
Address	Data	Adjustment item															
13FD	0009	Adjustment of hall offset															
	000A	Adjustment of iris offset															
	000B	Adjustment of iris close															
<p>(3) Adjustment of black balance/Adjustment of A/F noise</p> <p>This adjustment is performed automatically by writing data "□□ 01" at address "0001". When the adjustment is completed normally, data "00FF" is written automatically.</p>																	

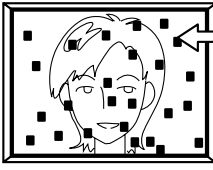
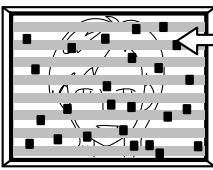
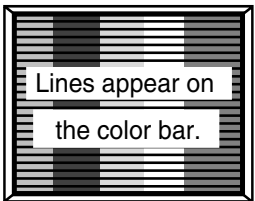
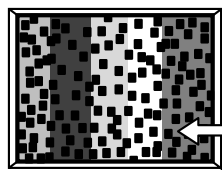
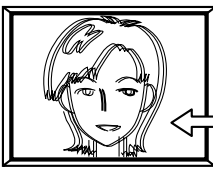


Item	Adjustment method																					
<p>(4) Rough adjustment of iris AE</p> <ul style="list-style-type: none"> <li>Measurement terminal: S terminal luminance signal output (75 Ω termination)</li> <li>Address: "0002" AE_CVT</li> <li>Measuring instrument: Oscilloscope (horizontal cycle)</li> <li>Object: Grey scale</li> <li>Data changing range: "0000" to "00FE"</li> </ul>	<p>1) While shooting the gray scale normally, observe the video output using the oscilloscope. By rewriting the data at address "0002", adjust the white luminance signal level to <math>680 \pm 10 \text{mVp-p}</math> and the gray luminance signal level (on the gray scale background) to <math>330 \pm 10 \text{mVp-p}</math>.</p>  <p style="text-align: right;">100mV/div</p>																					
<p>(5) Rough adjustment of white balance</p> <ul style="list-style-type: none"> <li>Measurement terminal: EE output</li> <li>Address: "0128" CGAIN_KR_W "012A" CGAIN_KB_W</li> <li>Measuring instrument: Vector scope</li> <li>Object: Grey scale</li> <li>Data changing range: "0000" to "03FF"</li> </ul>	<p>1) While shooting the gray scale normally, observe the monitoring screen of the vector scope. By rewriting the data at addresses "0128" and "012A", position the luminescent spot so that the following burst ratio is obtained.</p> <p>R-Y <math>0 \pm 5\%</math> B-Y <math>0 \pm 5\%</math></p> 																					
<p>(6) Rough adjustment of color gain</p> <ul style="list-style-type: none"> <li>Measurement terminal: EE output</li> <li>Address: "013A" CGIN RYG "013C" CGIN BYG "0138" CMAT RYG "0136" CMAT BYG "07DE" Yellow amplitude "07DD" Yellow phase</li> <li>Measuring instrument: Vector scope</li> <li>Object: Color bar chart</li> <li>Data changing range: "0000" to "00FF"</li> </ul>	<p>1) Shoot the color bar chart and adjust the field angle so that the white level becomes 600mV. While observing the monitoring screen of the vector scope, rewrite the data at addresses "013A", "013C", "0138", "0136", "07DE" and "07DD" so that the red, blue and yellow luminescent spots are positioned as shown below. (As for the burst gain, gain setting of the vector scope should be made at the 75% Amplitude point on the B-Y axis.)</p>  <table style="width: 100%; margin-top: 20px;"> <thead> <tr> <th colspan="2"></th> <th style="text-align: right;">Adjustment address</th> </tr> </thead> <tbody> <tr> <td>Red amplitude</td> <td><math>1.75 \pm 0.1</math> time (burst ratio)</td> <td style="text-align: right;">: "013A"</td> </tr> <tr> <td>Blue amplitude</td> <td><math>1.35 \pm 0.1</math> time (burst ratio)</td> <td style="text-align: right;">: "013C"</td> </tr> <tr> <td>Yellow amplitude</td> <td><math>1.25 \pm 0.1</math> time (burst ratio)</td> <td style="text-align: right;">: "07DE"</td> </tr> <tr> <td>Red phase</td> <td><math>106^\circ \pm 2^\circ</math></td> <td style="text-align: right;">: "0138"</td> </tr> <tr> <td>Blue phase</td> <td><math>358^\circ \pm 2^\circ</math></td> <td style="text-align: right;">: "0136"</td> </tr> <tr> <td>Yellow phase</td> <td><math>168^\circ \pm 2^\circ</math></td> <td style="text-align: right;">: "07DD"</td> </tr> </tbody> </table>			Adjustment address	Red amplitude	$1.75 \pm 0.1$ time (burst ratio)	: "013A"	Blue amplitude	$1.35 \pm 0.1$ time (burst ratio)	: "013C"	Yellow amplitude	$1.25 \pm 0.1$ time (burst ratio)	: "07DE"	Red phase	$106^\circ \pm 2^\circ$	: "0138"	Blue phase	$358^\circ \pm 2^\circ$	: "0136"	Yellow phase	$168^\circ \pm 2^\circ$	: "07DD"
		Adjustment address																				
Red amplitude	$1.75 \pm 0.1$ time (burst ratio)	: "013A"																				
Blue amplitude	$1.35 \pm 0.1$ time (burst ratio)	: "013C"																				
Yellow amplitude	$1.25 \pm 0.1$ time (burst ratio)	: "07DE"																				
Red phase	$106^\circ \pm 2^\circ$	: "0138"																				
Blue phase	$358^\circ \pm 2^\circ$	: "0136"																				
Yellow phase	$168^\circ \pm 2^\circ$	: "07DD"																				

Item	Adjustment method																					
<p>(7) Adjustment of white balance</p> <ul style="list-style-type: none"> <li>Measurement terminal: EE output</li> <li>Address: "0128" INDOOR_W/B R "012A" INDOOR_W/B R</li> <li>Measuring instrument: Vector scope</li> <li>Object: Grey scale</li> <li>Data changing range: "0000" to "03FF"</li> </ul>	<p>1) Perform the adjustment of white balance repeatedly.</p> 																					
<p>(8) Adjustment of indoor white gain</p> <ul style="list-style-type: none"> <li>Measurement terminal:–</li> <li>Address: 0001</li> <li>Measuring instrument:–</li> <li>Object: White pattern</li> <li>Data changing range:–</li> </ul>	<p>1) This adjustment is performed automatically by writing data "05" at address "001" in the signal system adjustment mode. When the adjustment is completed normally, data "FF" is returned to address "001". If data other than "FF" is returned, the adjustment has not been performed properly.</p>																					
<p>(9) Adjustment of color gain</p> <ul style="list-style-type: none"> <li>Measurement terminal: EE output</li> <li>Address: "013A" CGIN RYG "013C" CGIN BYG "0138" CMAT RYG "0136" CMAT BYG "07DE" Yellow amplitude "07DD" Yellow phase</li> <li>Measuring instrument: Vector scope</li> <li>Object: Waveform monitor color bar chart</li> <li>Data changing range: "0000" to "00FF"</li> </ul>	<p>1) Perform the color gain adjustment repeatedly.</p>  <table border="0" data-bbox="621 1066 1388 1270"> <tr> <td></td> <td></td> <td style="text-align: right;">Adjustment address</td> </tr> <tr> <td>Red amplitude</td> <td>1.75 ± 0.05 time (burst ratio)</td> <td>: "013A"</td> </tr> <tr> <td>Blue amplitude</td> <td>1.35 ± 0.05 time (burst ratio)</td> <td>: "013C"</td> </tr> <tr> <td>Yellow amplitude</td> <td>1.25 ± 0.05 time (burst ratio)</td> <td>: "07DE"</td> </tr> <tr> <td>Red phase</td> <td>106° ± 1°</td> <td>: "0138"</td> </tr> <tr> <td>Blue phase</td> <td>358° ± 2°</td> <td>: "0136"</td> </tr> <tr> <td>Yellow phase</td> <td>168° ± 2°</td> <td>: "07DD"</td> </tr> </table>			Adjustment address	Red amplitude	1.75 ± 0.05 time (burst ratio)	: "013A"	Blue amplitude	1.35 ± 0.05 time (burst ratio)	: "013C"	Yellow amplitude	1.25 ± 0.05 time (burst ratio)	: "07DE"	Red phase	106° ± 1°	: "0138"	Blue phase	358° ± 2°	: "0136"	Yellow phase	168° ± 2°	: "07DD"
		Adjustment address																				
Red amplitude	1.75 ± 0.05 time (burst ratio)	: "013A"																				
Blue amplitude	1.35 ± 0.05 time (burst ratio)	: "013C"																				
Yellow amplitude	1.25 ± 0.05 time (burst ratio)	: "07DE"																				
Red phase	106° ± 1°	: "0138"																				
Blue phase	358° ± 2°	: "0136"																				
Yellow phase	168° ± 2°	: "07DD"																				
<p>(10) Adjustment of auto white balance adjustment</p> <ul style="list-style-type: none"> <li>Measurement terminal: EE output</li> <li>Address: "000C" OUTDOOR R "000E" OUTDOOR B</li> <li>Measuring instrument: Vector scope</li> <li>Object: Grey scale</li> <li>Data changing range: "0000" to "03FF"</li> </ul>	<p>1) Set the color temperature conversion filter (LB165) on the lens. 2) While shooting the gray scale normally, observe the monitoring screen of the vector scope. By rewriting the data, position the luminescent spot so that the following burst ratio is obtained.</p> <table border="1" data-bbox="609 1434 902 1493"> <tr> <td>R-Y</td> <td>0 ± 5% (burst ratio)</td> </tr> <tr> <td>B-Y</td> <td>0 ± 5% (burst ratio)</td> </tr> </table> 	R-Y	0 ± 5% (burst ratio)	B-Y	0 ± 5% (burst ratio)																	
R-Y	0 ± 5% (burst ratio)																					
B-Y	0 ± 5% (burst ratio)																					
<p>(11) Adjustment of outdoor white gain</p> <ul style="list-style-type: none"> <li>Measurement terminal:–</li> <li>Address: 0001</li> <li>Measuring instrument:–</li> <li>Object: White pattern</li> <li>Data changing range:–</li> </ul>	<p>1) Set the color temperature conversion filter (LB165) on the lens. 2) This adjustment is performed automatically by writing data "06" at address "001" in the signal system adjustment mode. When the adjustment is completed normally, data "FF" is returned to address "001". If data other than "FF" is returned, the adjustment has not been performed properly.</p>																					

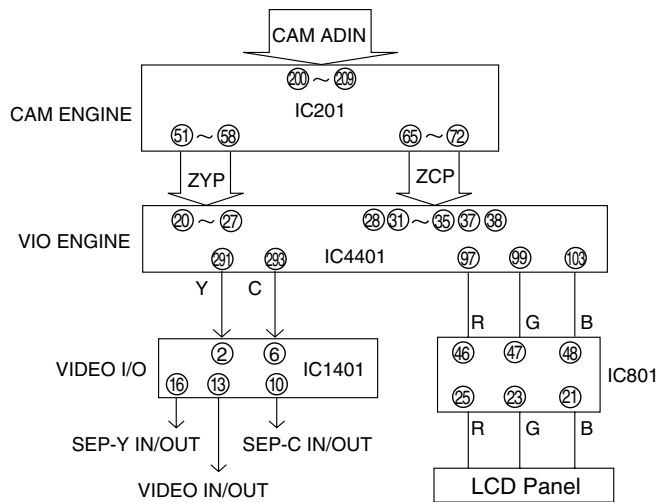
Item	Adjustment method
<p>(12) Adjustment of iris AE</p> <ul style="list-style-type: none"> <li>• Measurement terminal: S terminal luminance signal output (75 Ω termination)</li> <li>• Address: "0002" AE_CVT</li> <li>• Measuring instrument: Oscilloscope (horizontal cycle)</li> <li>• Object: Grey scale</li> <li>• Data changing range: "0000" to "00FE"</li> </ul>	<p>1) Establish the normal mode (by writing data "FF" at address "0000").</p> <p>2) While shooting the gray scale normally, observe the video output using the oscilloscope. Check that the white luminance signal level is <math>640 \pm 10 \text{mVp-p}</math> and that the gray luminance signal level (on the gray scale background) to <math>290 \pm 10 \text{mVp-p}</math>.</p> <div style="text-align: center;">  </div> <p style="text-align: right;">100mV/div</p>

### 10. USEFUL TIPS (PROBLEMS DIFFER FROM THOSE FOUND ON VHS OR 8MM DECKS BECAUSE THE SIGNALS ARE DIGITALLY PROCESSED.)

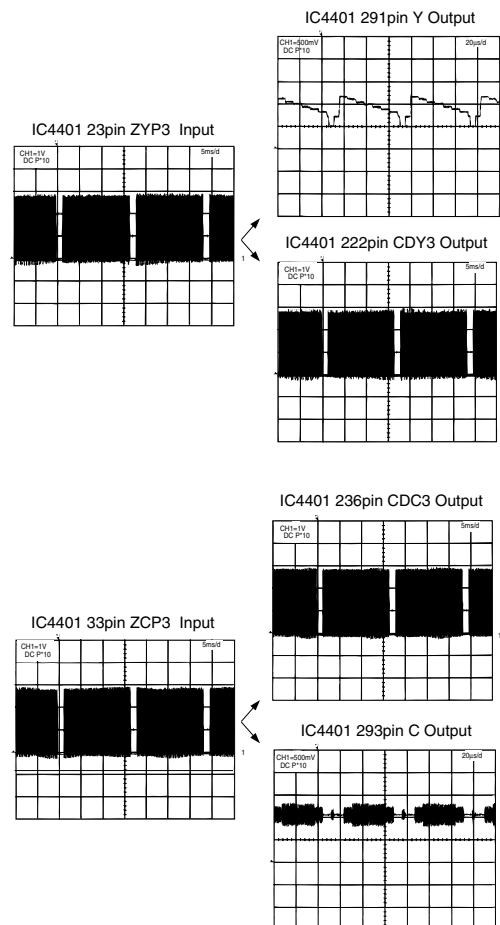
<p>Camera (EE mode)</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Picture fails to appear</p> </div> <p><b>Major circuits to be checked</b></p> <ul style="list-style-type: none"> <li>• CCD</li> <li>• Camera circuits (CDS/ADC, CAM ENGINE)</li> <li>• MECHA/SYSTEM MiCON (IC701)</li> <li>• VIDEO I/O (IC1401)</li> <li>• VIO ENGINE (IC4401)</li> </ul>	<p>VCR (EE mode)</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Blueback fails to appear.</p> </div> <p><b>Major circuits to be checked</b></p> <ul style="list-style-type: none"> <li>• MECHA/SYSTEM MiCON (IC701)</li> <li>• CAM ENGINE (IC201)</li> <li>• REC/PB ENGINE (IC452)</li> </ul>	<p>Camera (REC mode) VCR (PB mode)</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Picture fails to appear when tape recorded on this unit or another unit is played back. (EE OK)</p> </div> <p><b>Major circuits to be checked</b></p> <ul style="list-style-type: none"> <li>• CAM ENGINE (IC201)</li> <li>• REC/PB ENGINE (IC452)</li> </ul>
<p>Camera (REC mode) VCR (PB mode)</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Blueback when tape recorded on this unit or another unit is played back. (EE OK)</p> </div> <p><b>Major circuits to be checked</b></p> <ul style="list-style-type: none"> <li>• EQ/PLL (IC3401)</li> <li>• Head amplifier (IC301)</li> <li>* Dirty or defective video head</li> </ul>	<p>Camera (REC mode) VCR (PB mode)</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px;">  <p>Random block noise when tape recorded on this unit or another unit is played back.</p> </div> <p>or</p> <div style="border: 1px solid black; padding: 5px;">  <p>Noise bar (Green) + random block noise when tape recorded on this unit or another unit is played back.</p> </div> </div> <p><b>Major circuits to be checked</b></p> <ul style="list-style-type: none"> <li>• EQ/PLL (IC3401)</li> <li>• Head amplifier (IC301)</li> <li>* Dirty or defective video head</li> </ul>	
<p>VCR (PB mode) + color bar</p> <div style="border: 1px solid black; padding: 10px; text-align: center;">  <p>Lines appear on the color bar.</p> </div> <p><b>Major circuits to be checked</b></p> <ul style="list-style-type: none"> <li>• CAM ENGINE (IC201)</li> </ul>	<p>VCR (PB mode) + color bar</p> <div style="border: 1px solid black; padding: 10px; text-align: center;">  <p>There is considerable random block noise.</p> </div> <p><b>Major circuits to be checked</b></p> <ul style="list-style-type: none"> <li>• Adjustment of the electromagnetic conversion circuit system.</li> </ul>	<p>Camera (EE mode)</p> <div style="border: 1px solid black; padding: 10px; text-align: center;">  <p>The outline looks like a Moire pattern.</p> </div> <p><b>Major circuits to be checked</b></p> <ul style="list-style-type: none"> <li>• Y data between CAM ENGINE (IC201) and VIO ENGINE (IC4401) is missing.</li> </ul>

# 11. SIGNAL FLOW DIAGRAMS

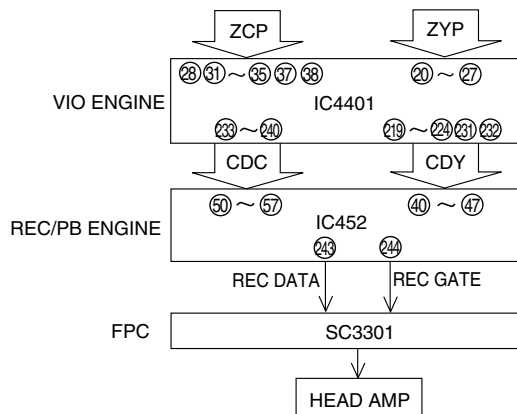
## 11-1. EE MODE FLOW (VIDEO)



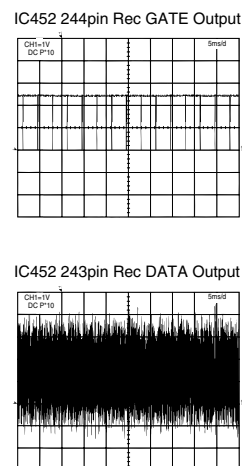
## WAVEFORM DIAGRAM (DURING COLOR BAR RECORDING)



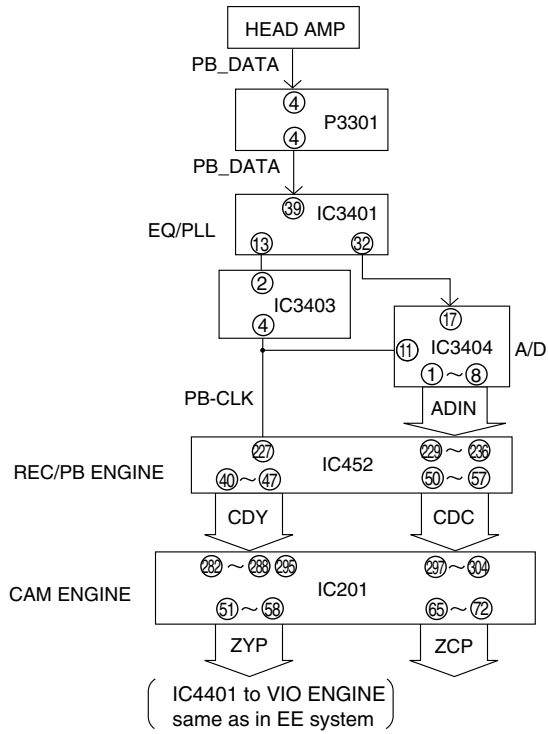
## 11-2. FLOW IN REC MODE (VIDEO)



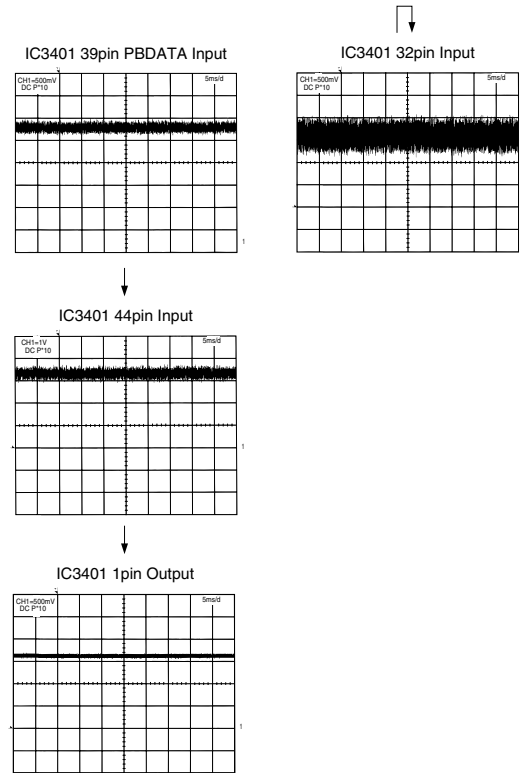
## WAVEFORM DIAGRAM (DURING COLOR BAR RECORDING)



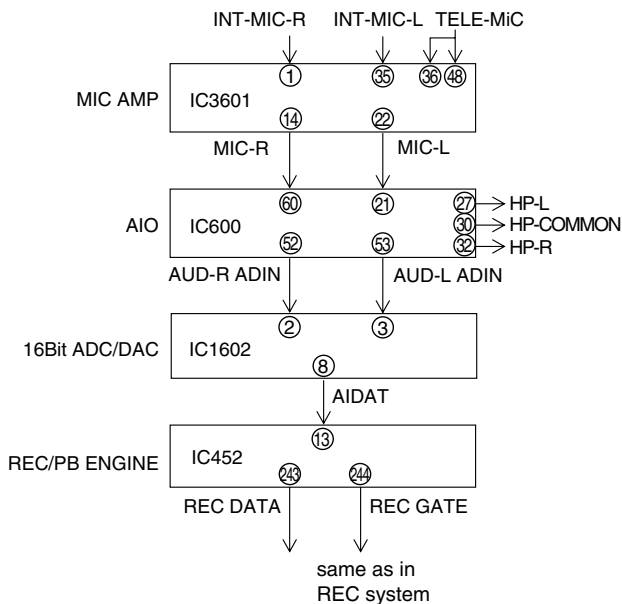
### 11-3. FLOW IN PB MODE (VIDEO)



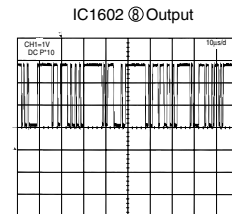
### WAVEFORM DIAGRAM (DURING COLOR BAR PLAYBACK)



### 11-4. FLOW IN REC MODE (AUDIO)

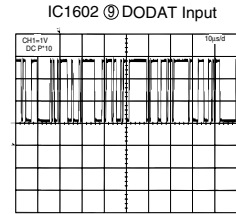
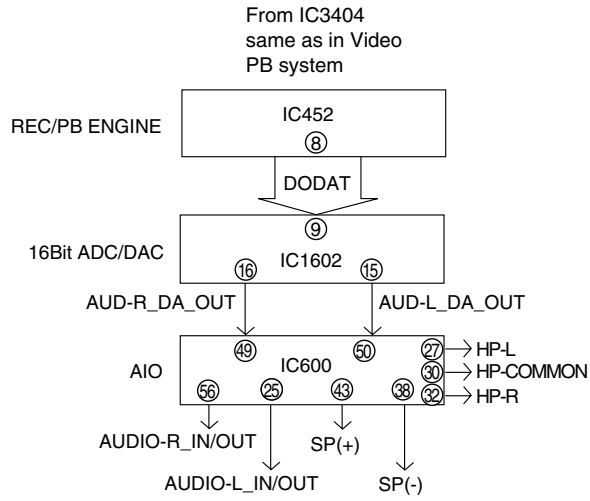


### WAVEFORM DIAGRAM (1.6 kHz SINE WAVE)



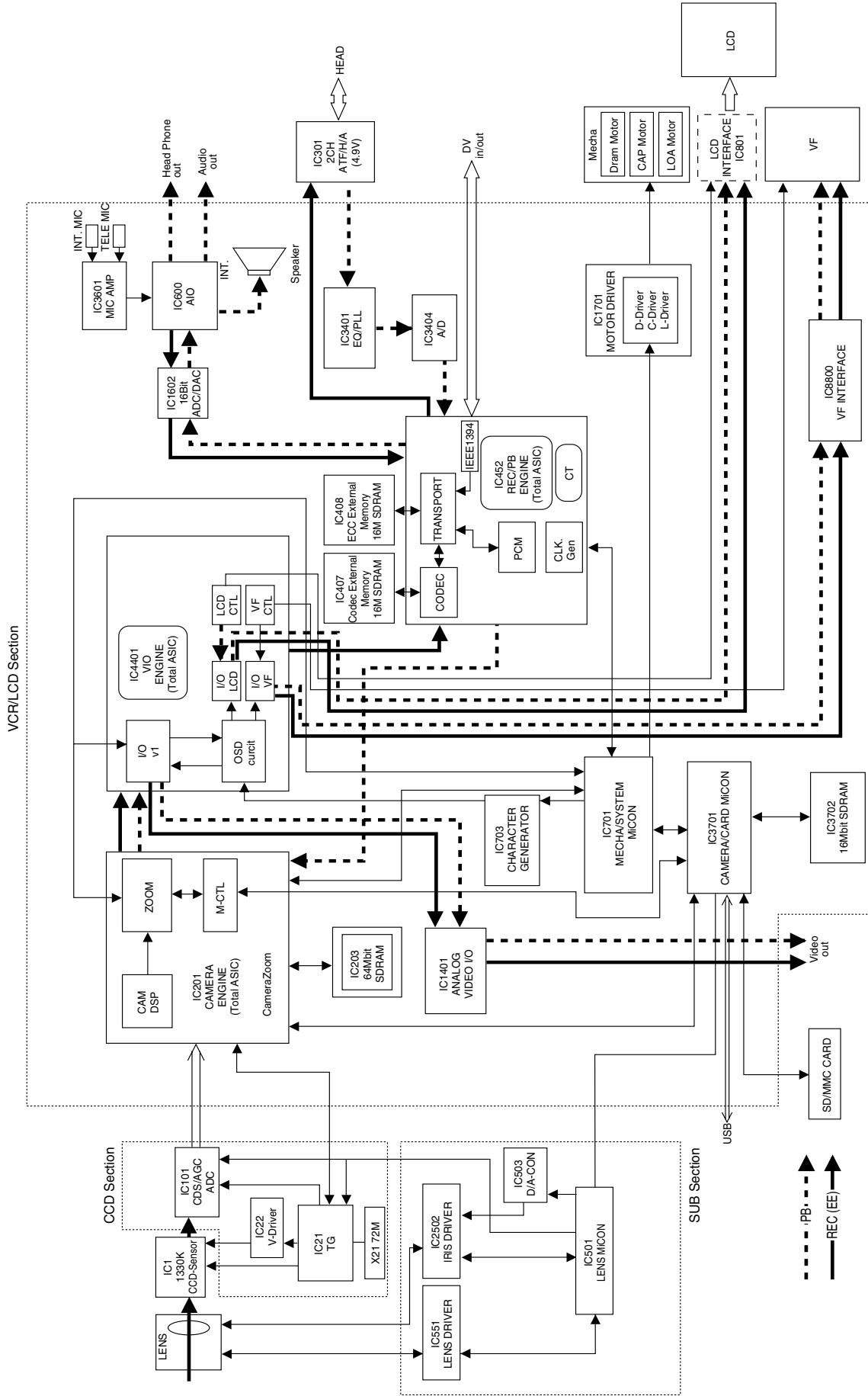
### 11-5. FLOW IN PB MODE (AUDIO)

### WAVEFORM DIAGRAM (1.6 kHz SINE WAVE)



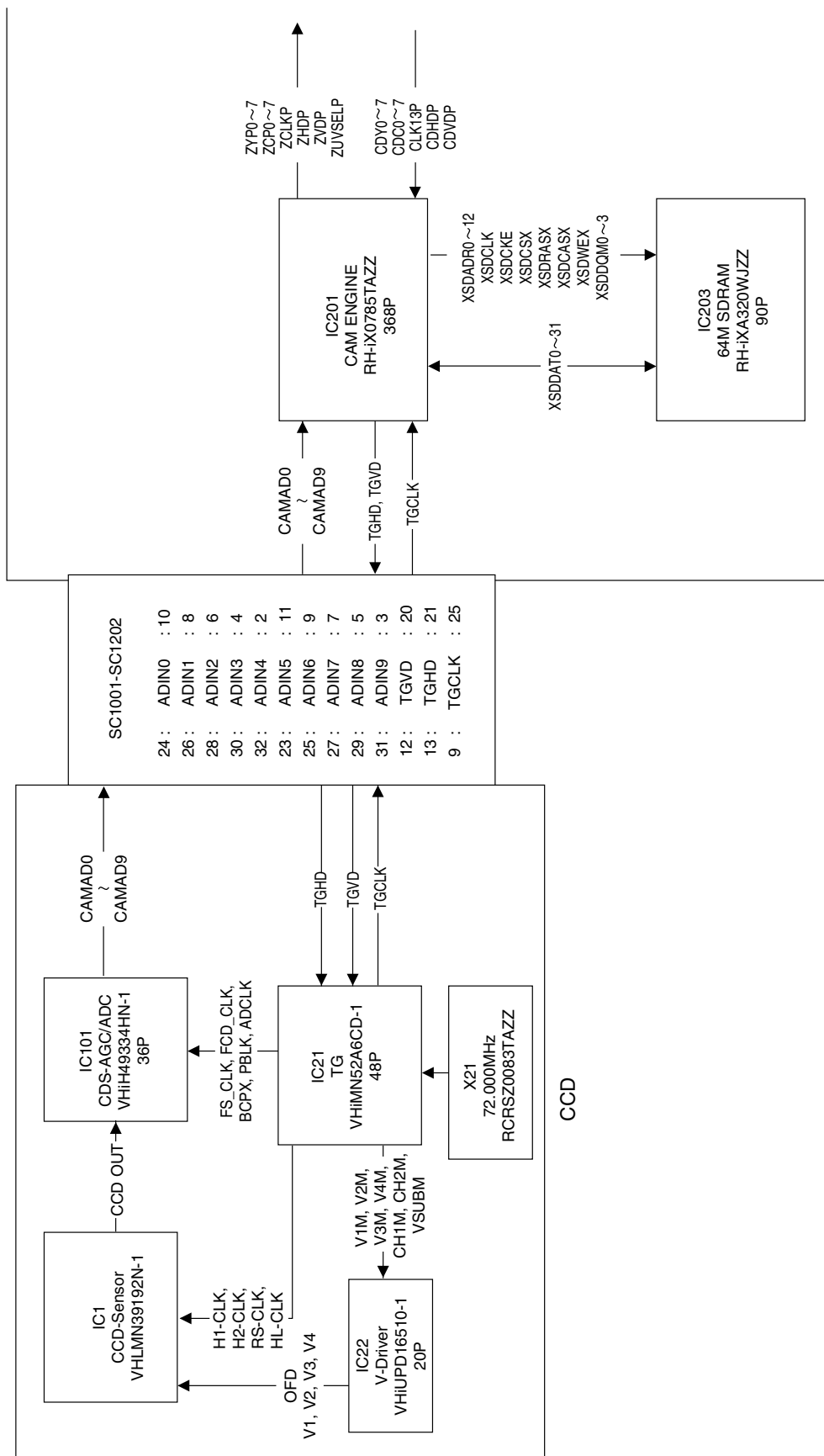
# 12. BLOCK DIAGRAMS

## 12-1. SYSTEM BLOCK DIAGRAM

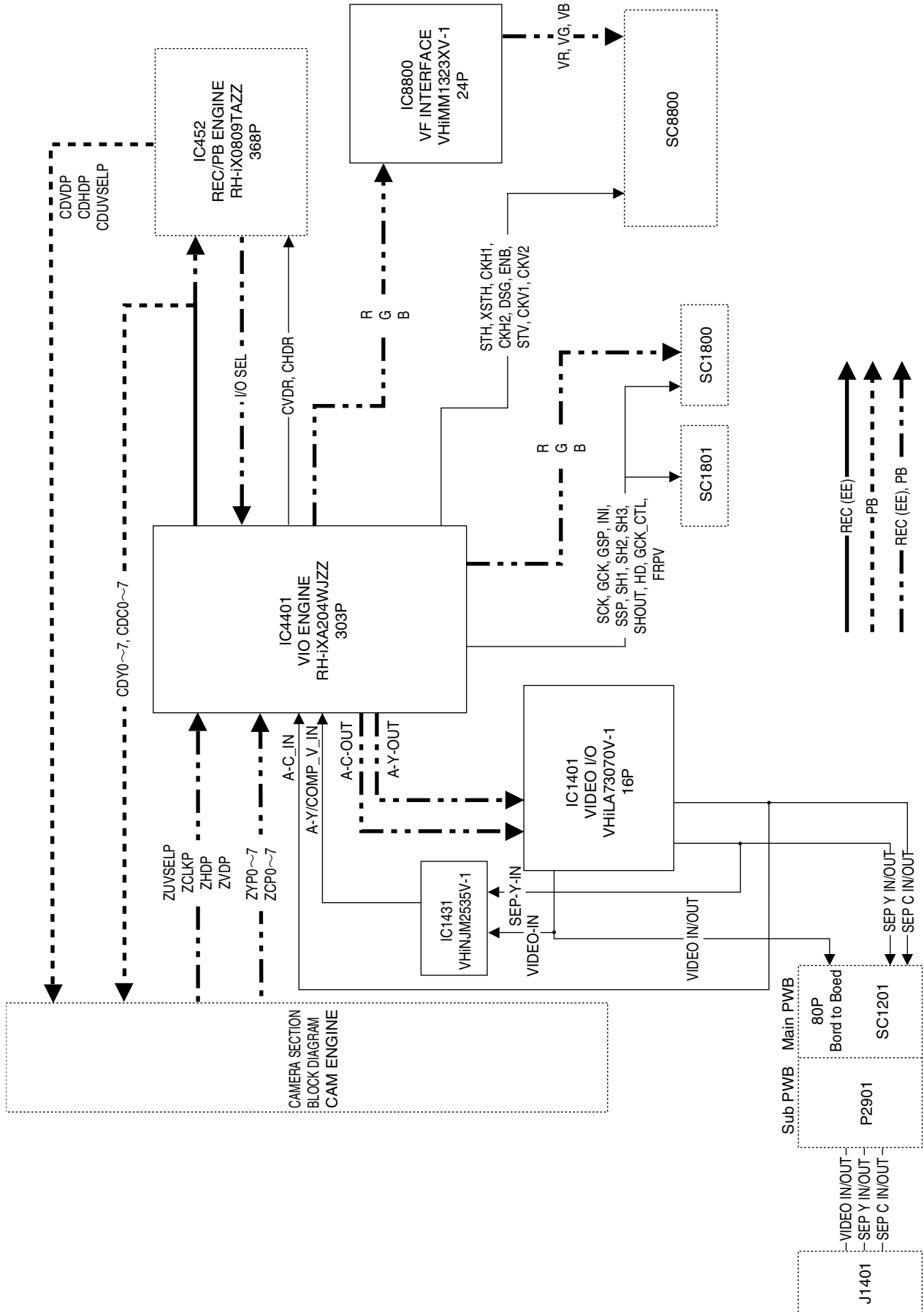




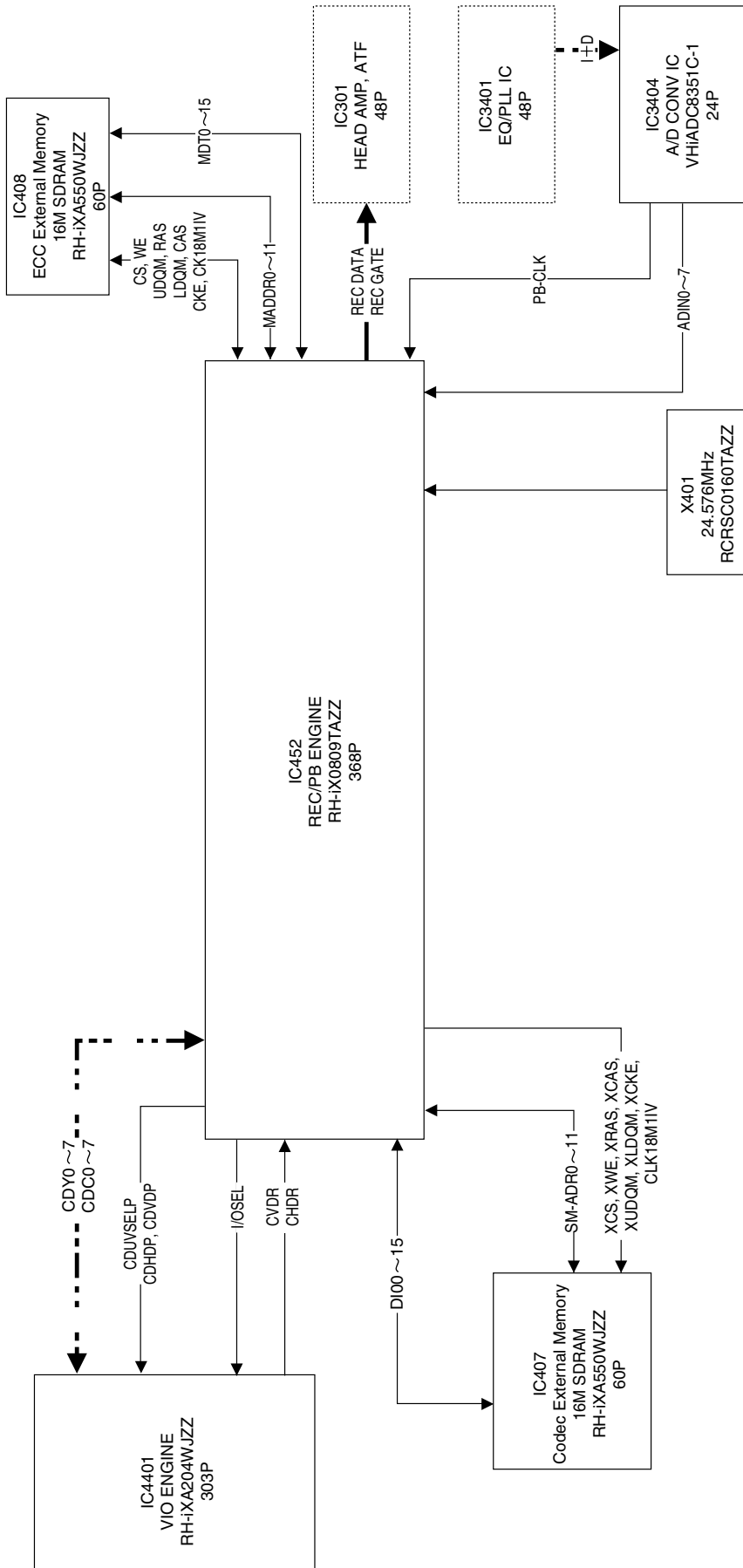
### 12-2. CAMERA SECTION BLOCK DIAGRAM



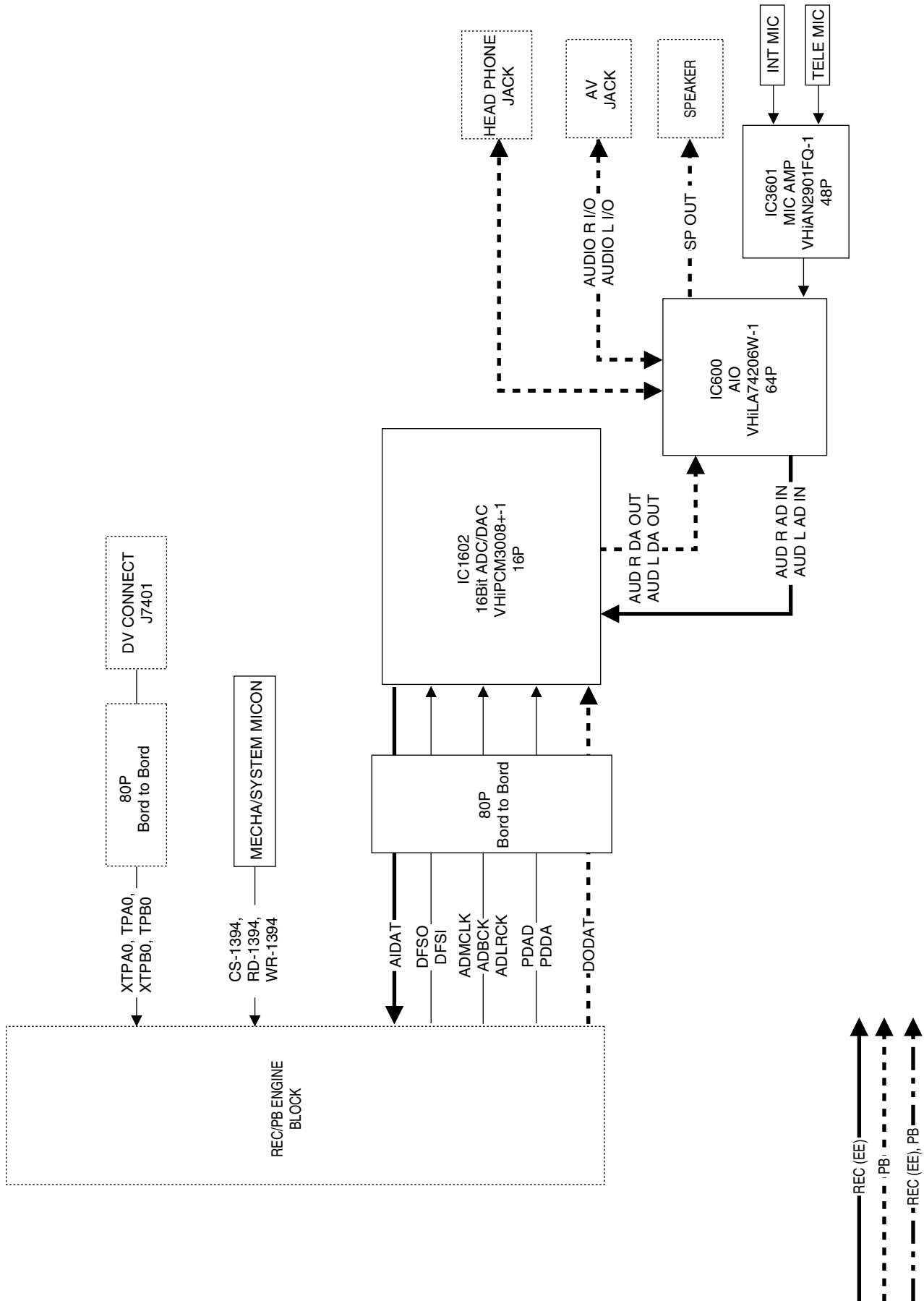
### 12-3. VIO ENGINE SECTION BLOCK DIAGRAM



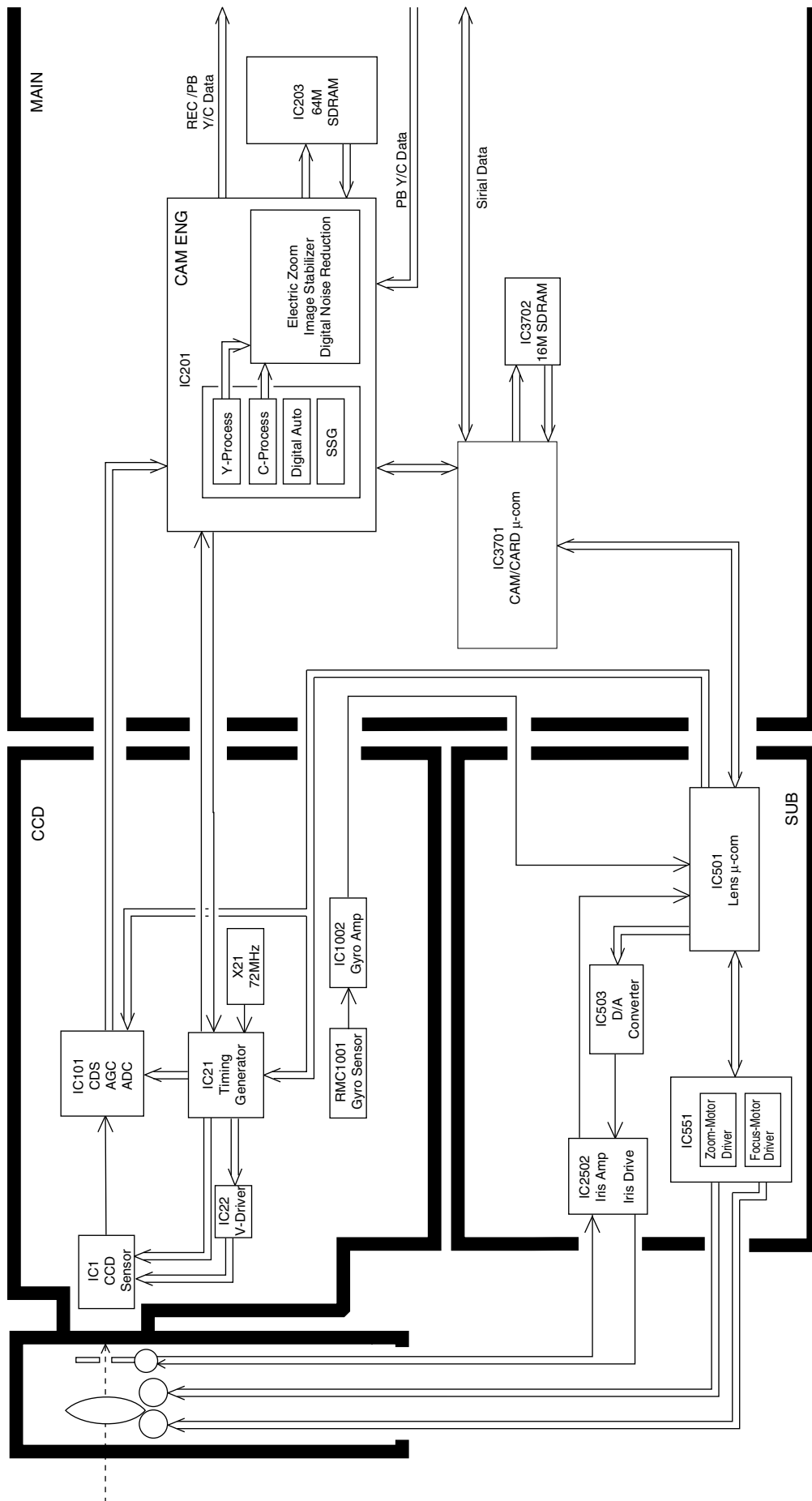
12-4. REC/PB SECTION BLOCK DIAGRAM



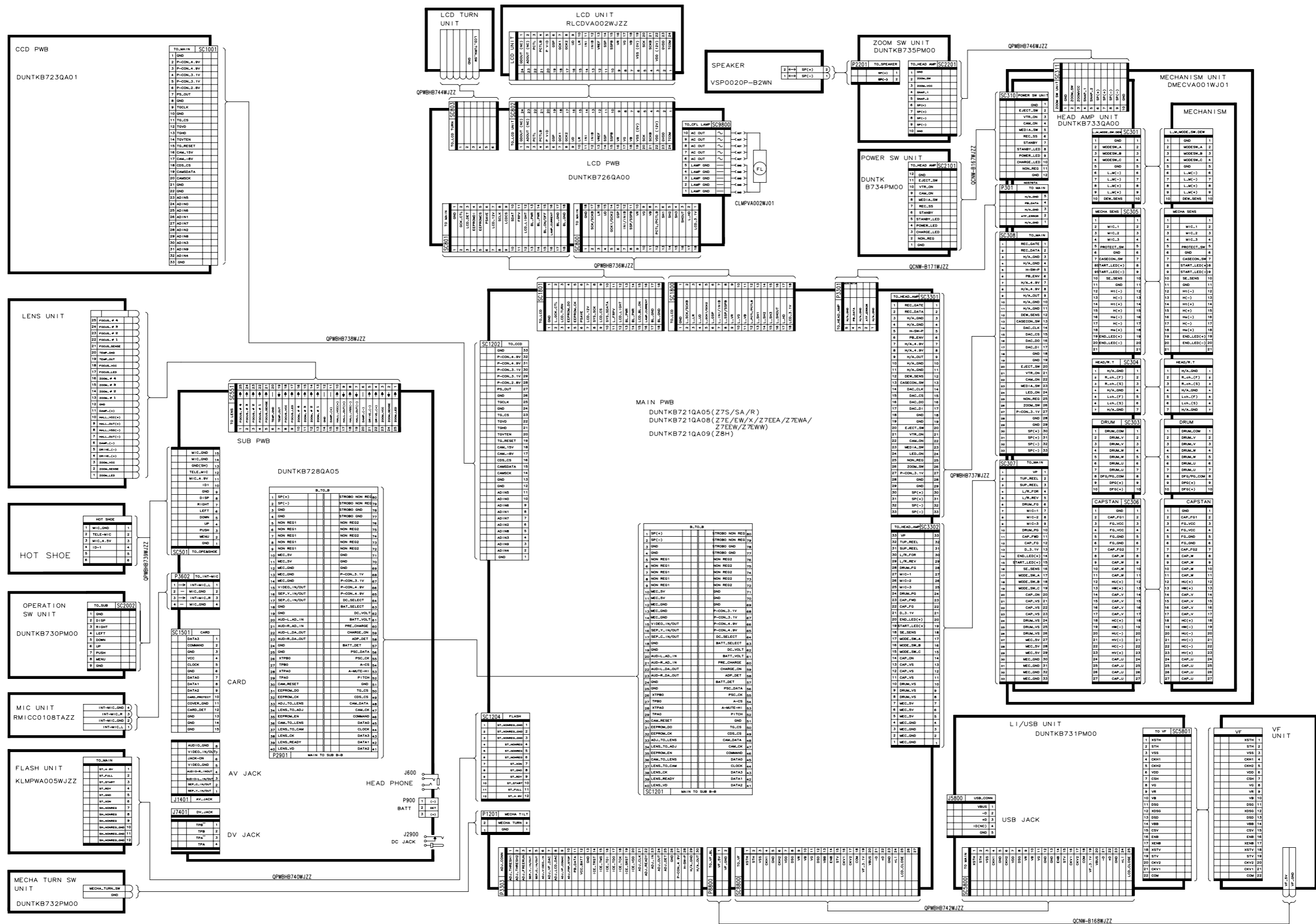
12-5. AUDIO/DIGITAL OUTPUT SECTION BLOCK DIAGRAM



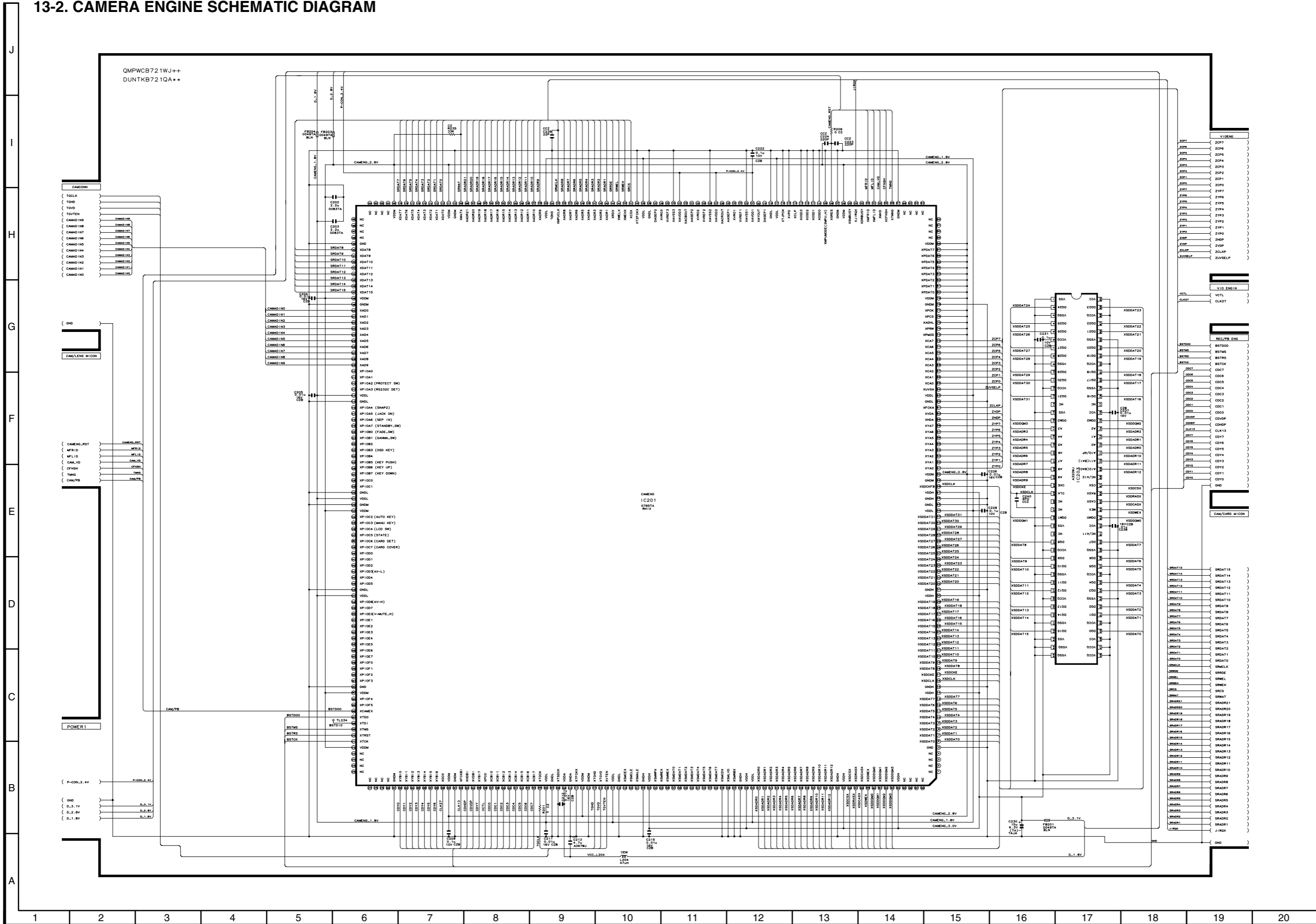
12-6. CAMERA CIRCUIT BLOCK DIAGRAM



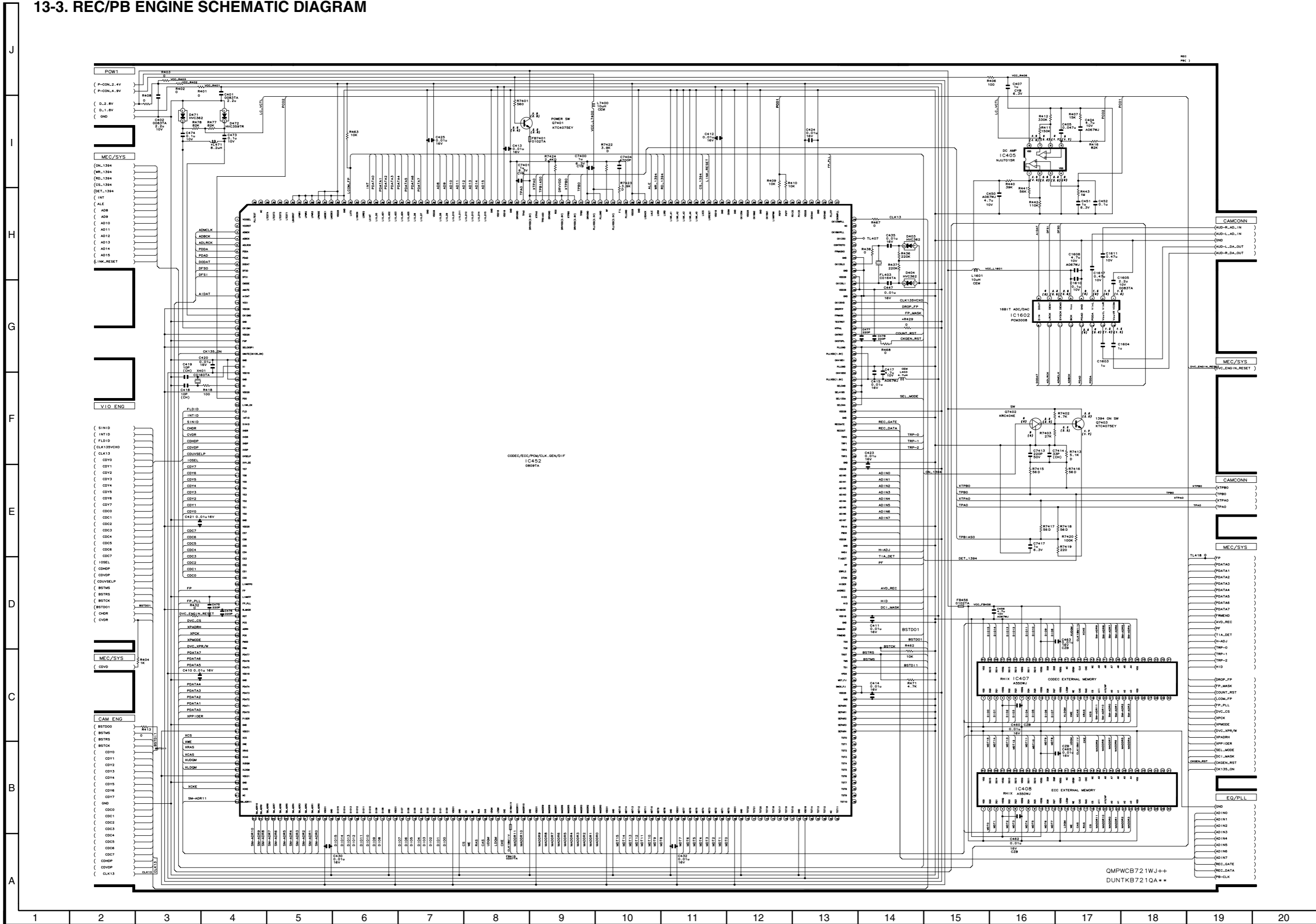
13. SCHEMATIC DIAGRAMS 13-1. OVERALL SCHEMATIC DIAGRAM



### 13-2. CAMERA ENGINE SCHEMATIC DIAGRAM

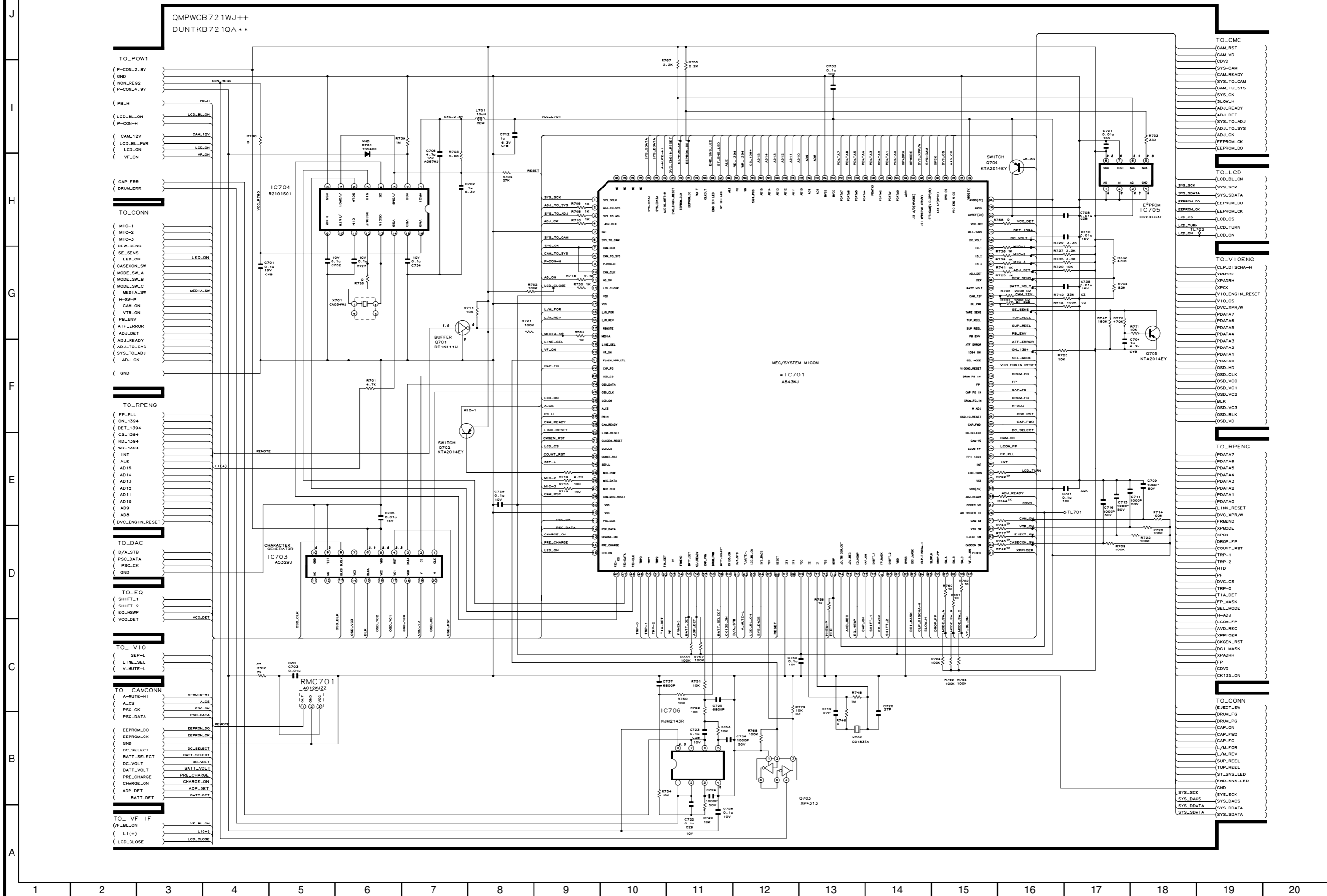


13-3. REC/PB ENGINE SCHEMATIC DIAGRAM

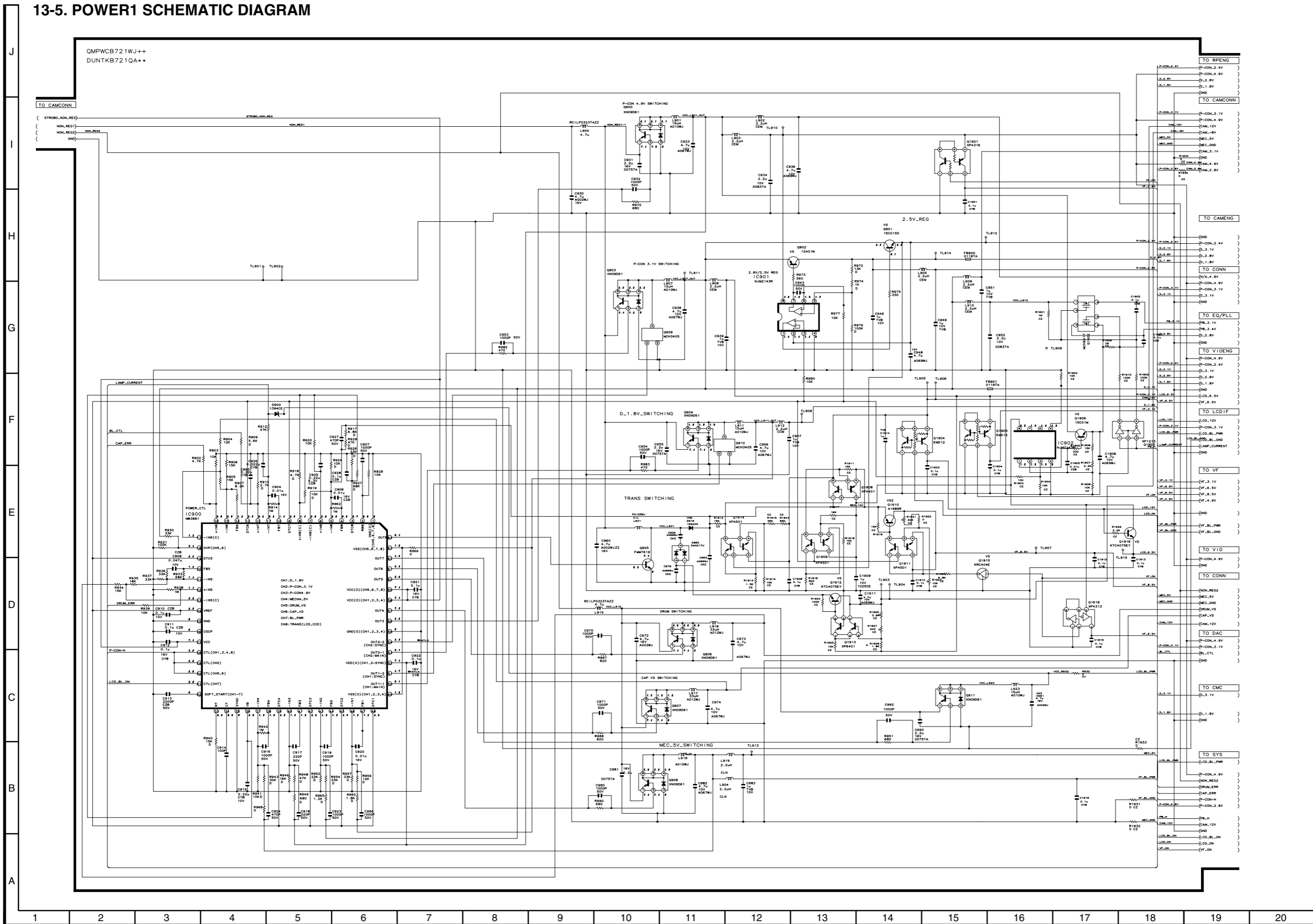




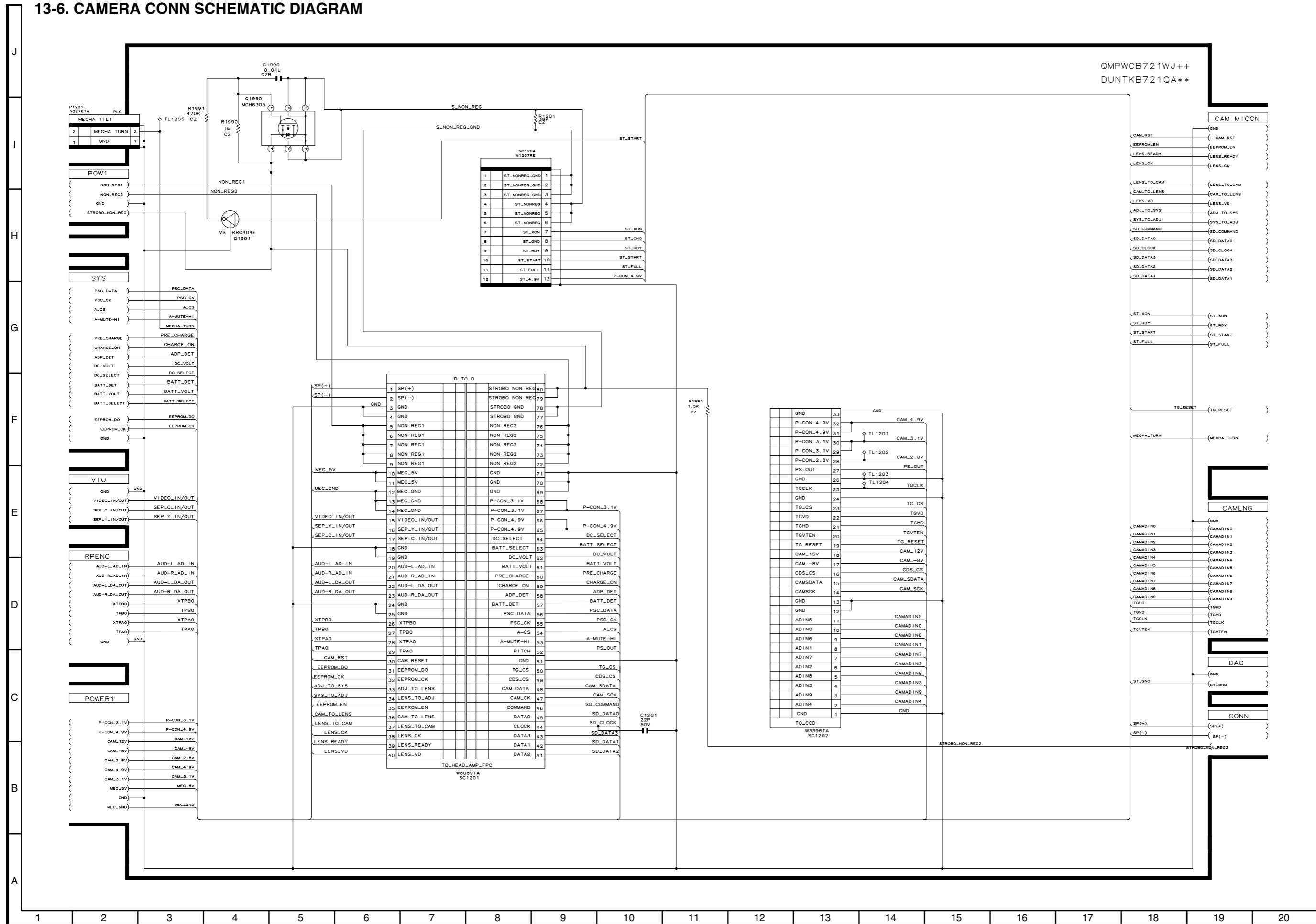
13-4. MEC/SYS MiCON SCHEMATIC DIAGRAM



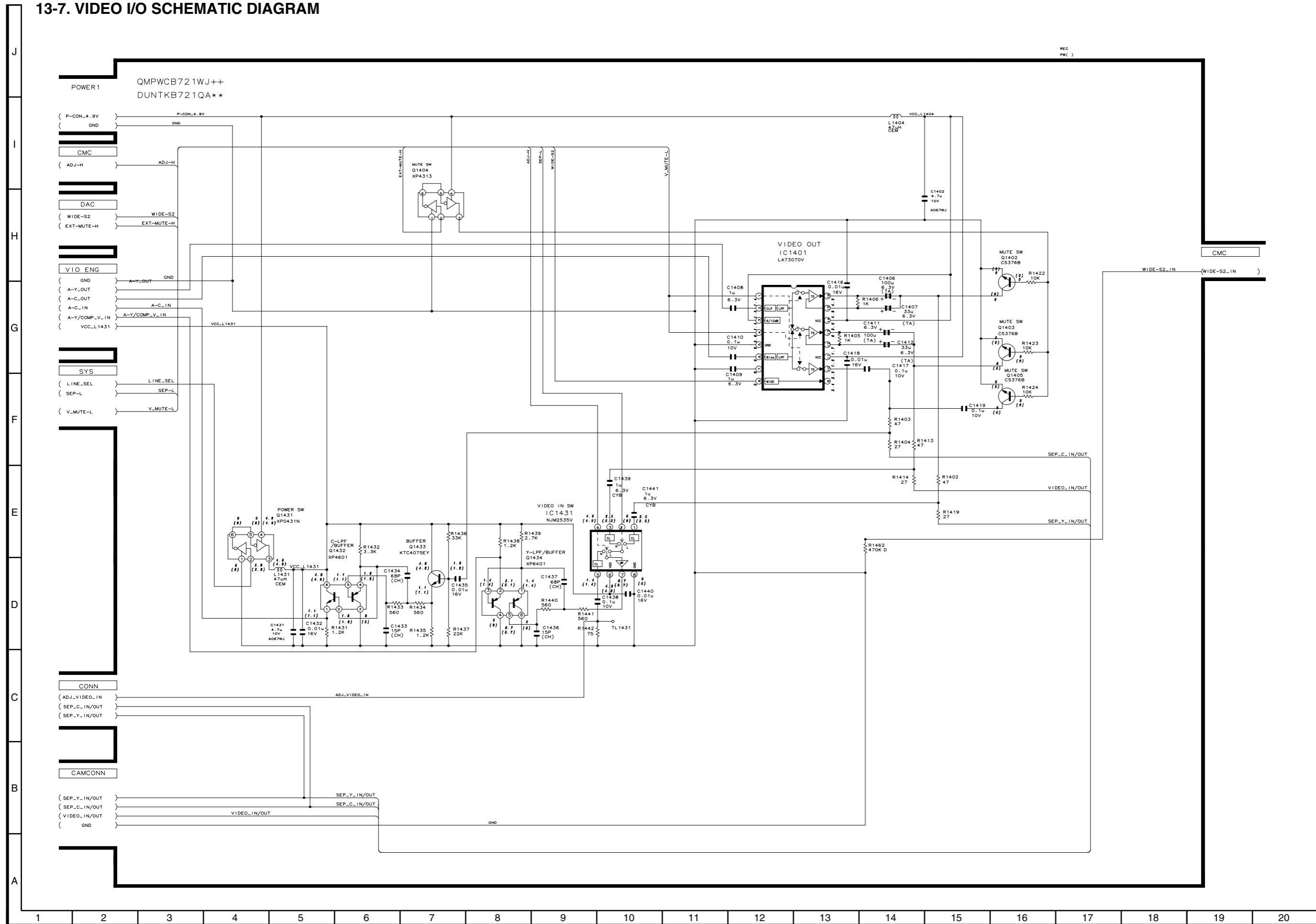
13-5. POWER1 SCHEMATIC DIAGRAM



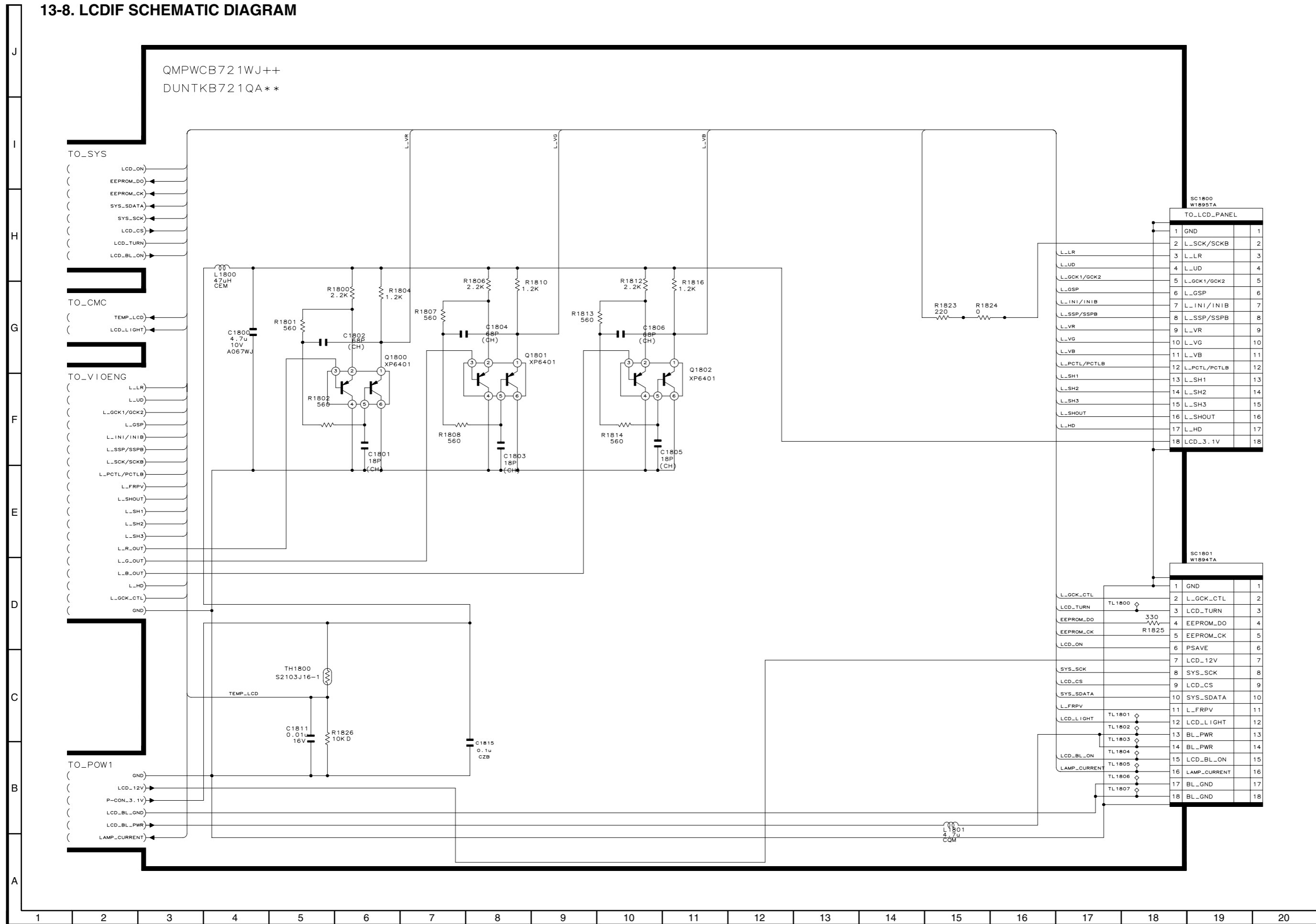
13-6. CAMERA CONN SCHEMATIC DIAGRAM



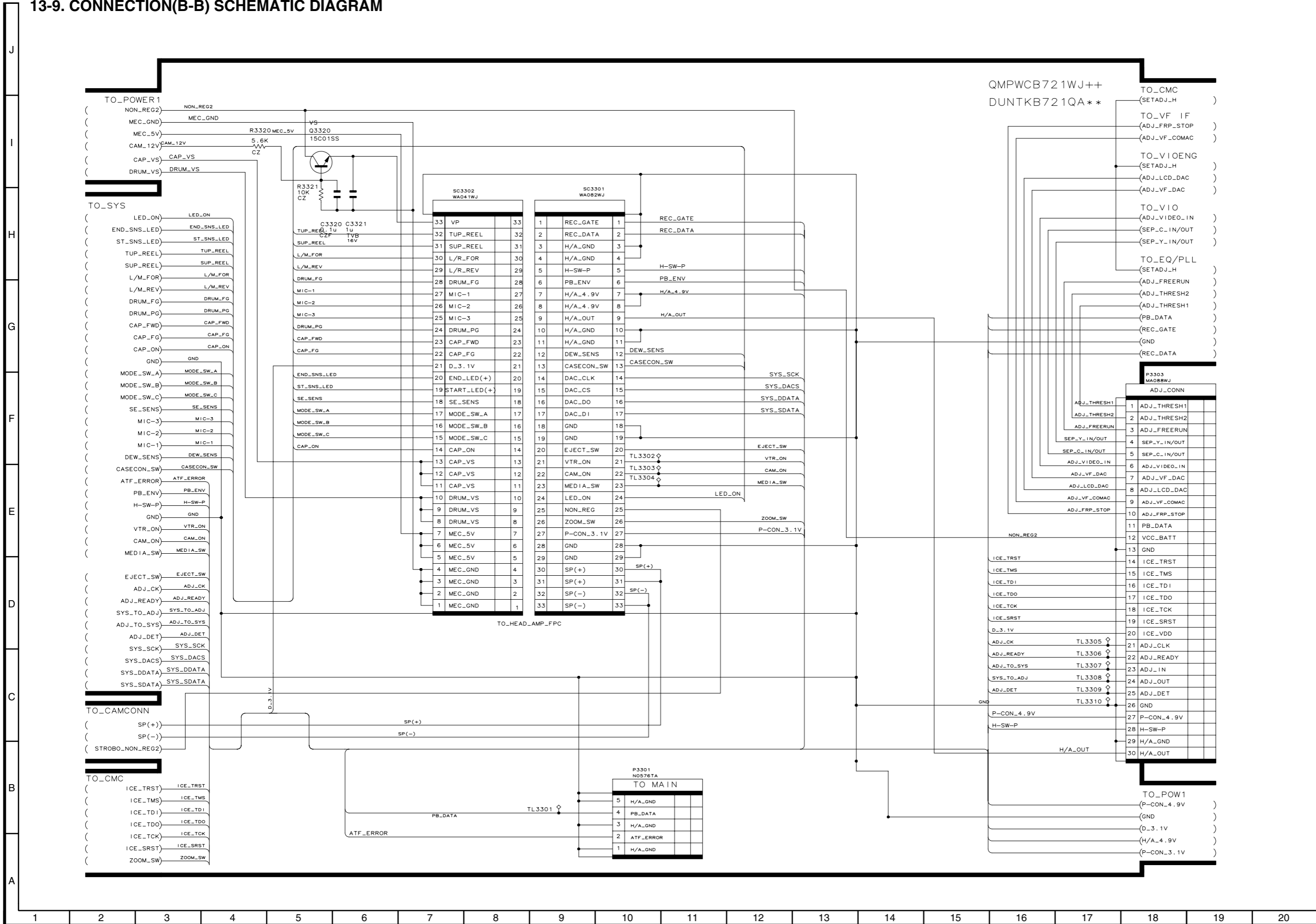
13-7. VIDEO I/O SCHEMATIC DIAGRAM



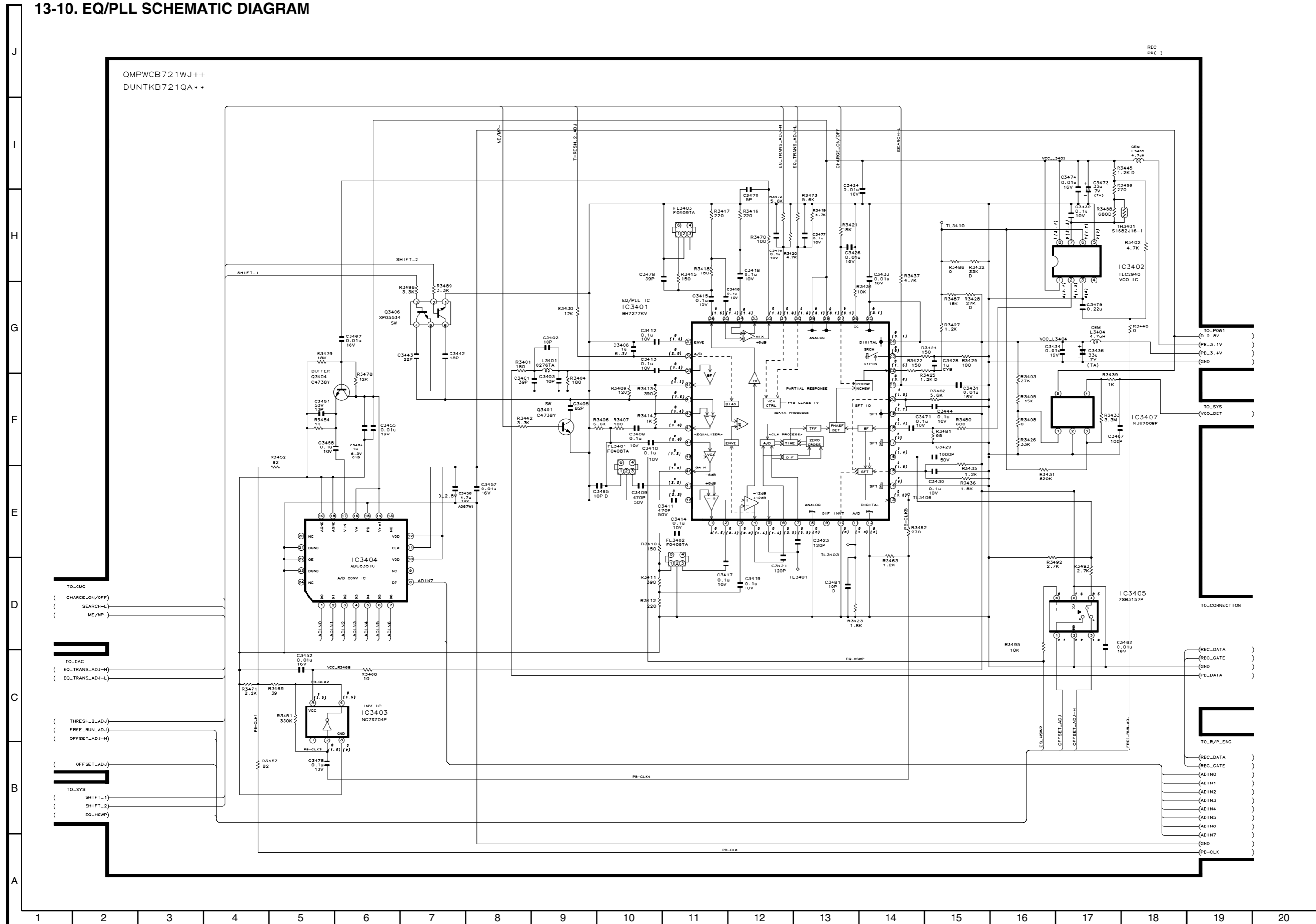
13-8. LCDIF SCHEMATIC DIAGRAM



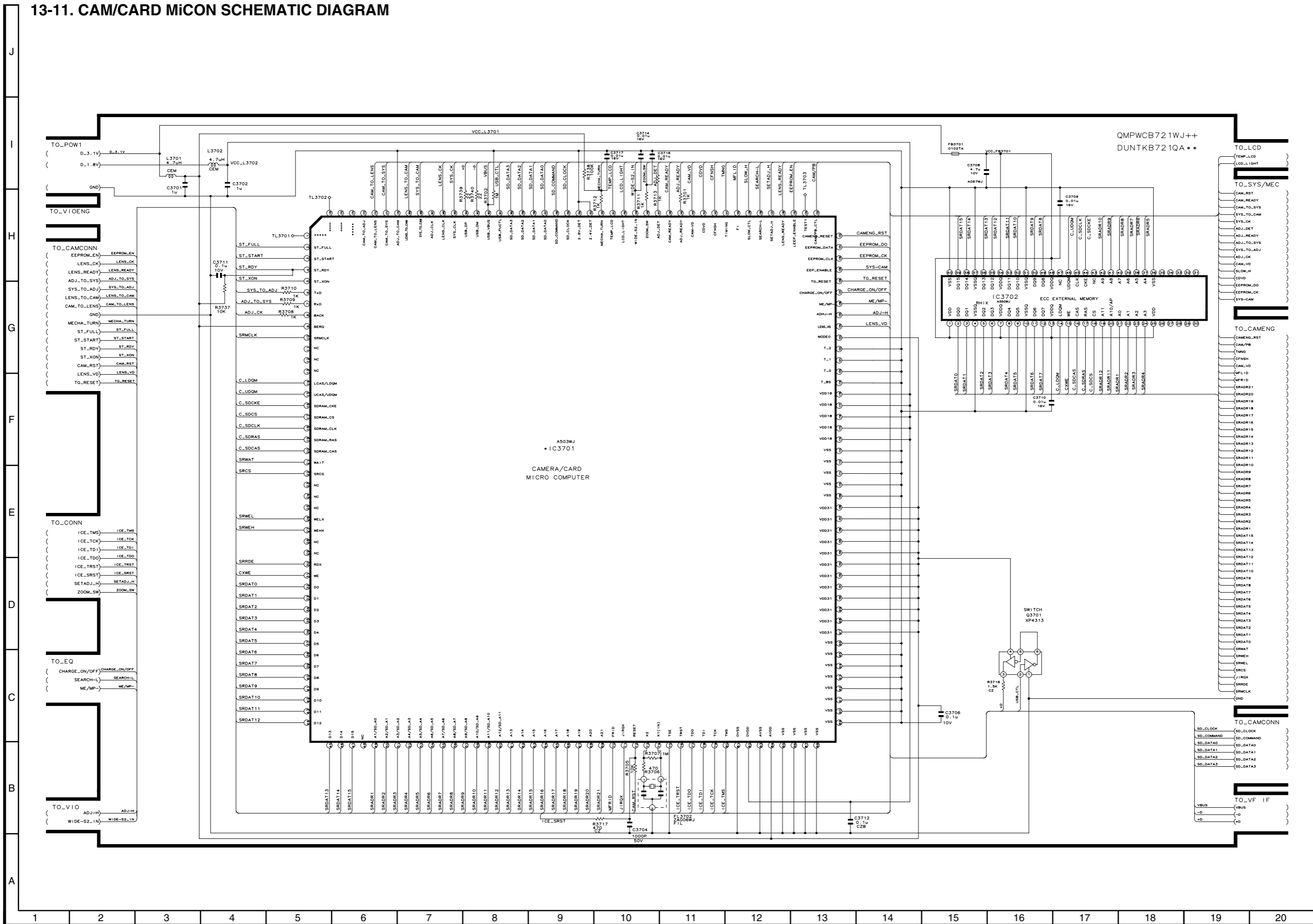
13-9. CONNECTION(B-B) SCHEMATIC DIAGRAM



13-10. EQ/PLL SCHEMATIC DIAGRAM

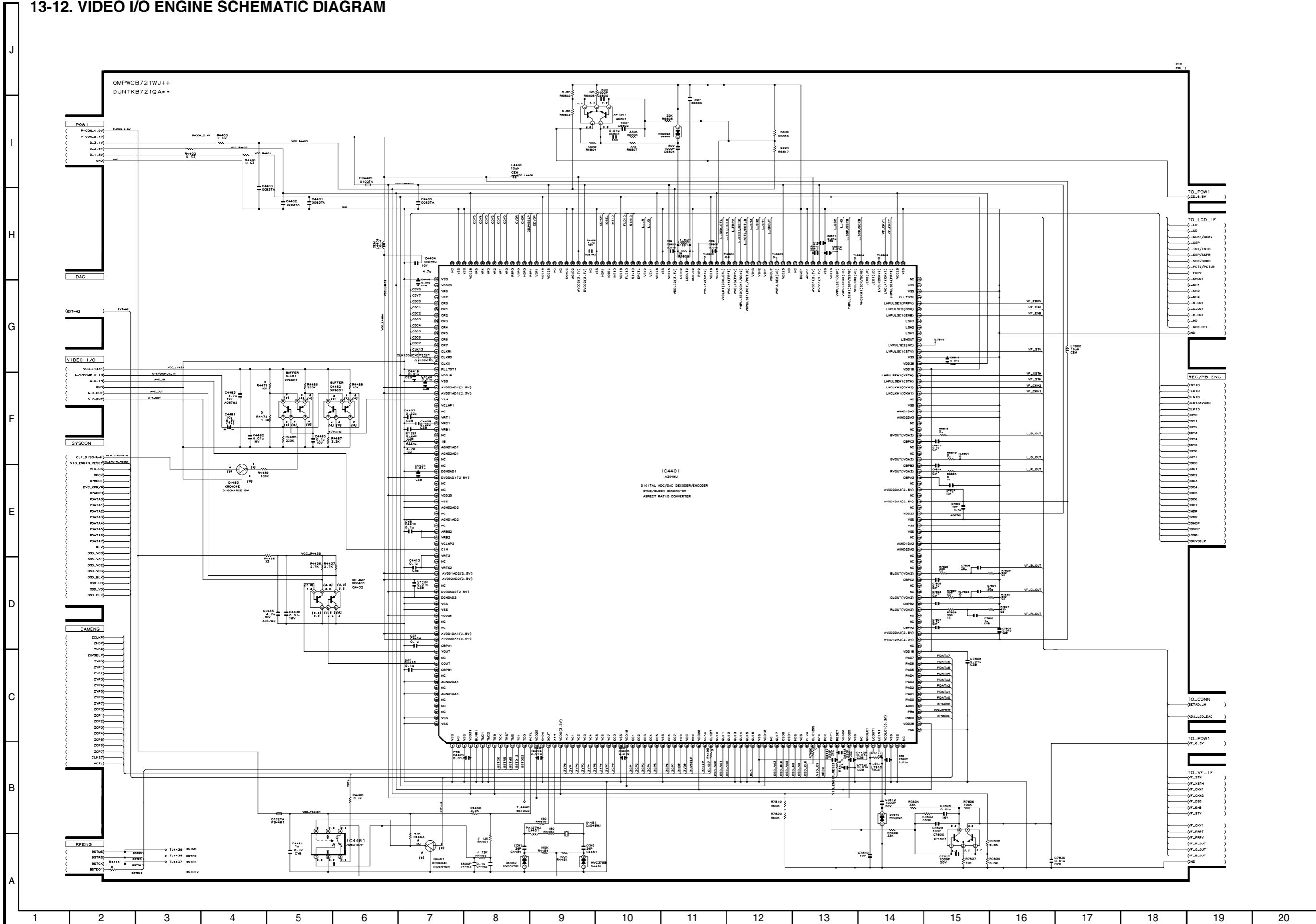


13-11. CAM/CARD MiCON SCHEMATIC DIAGRAM

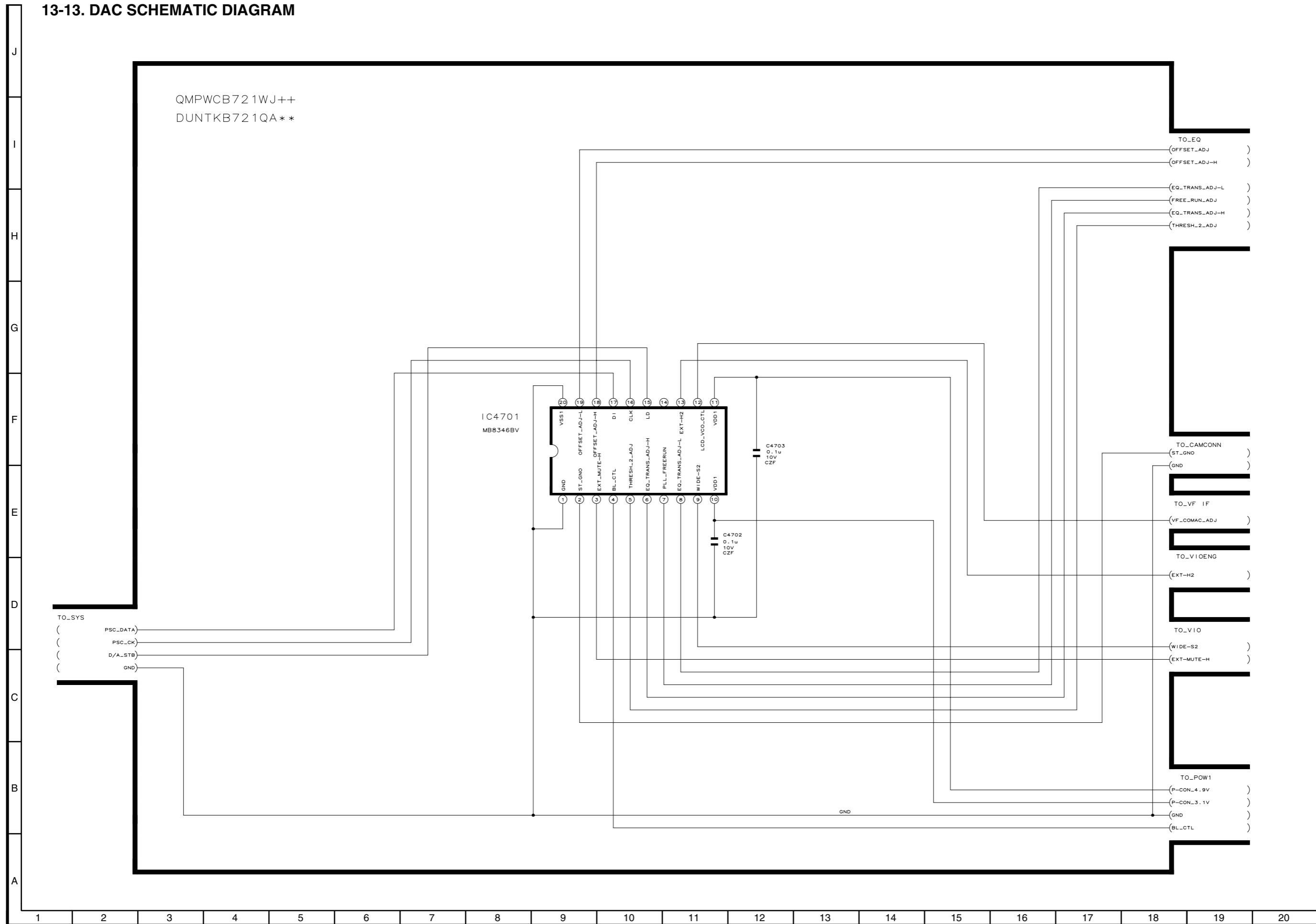




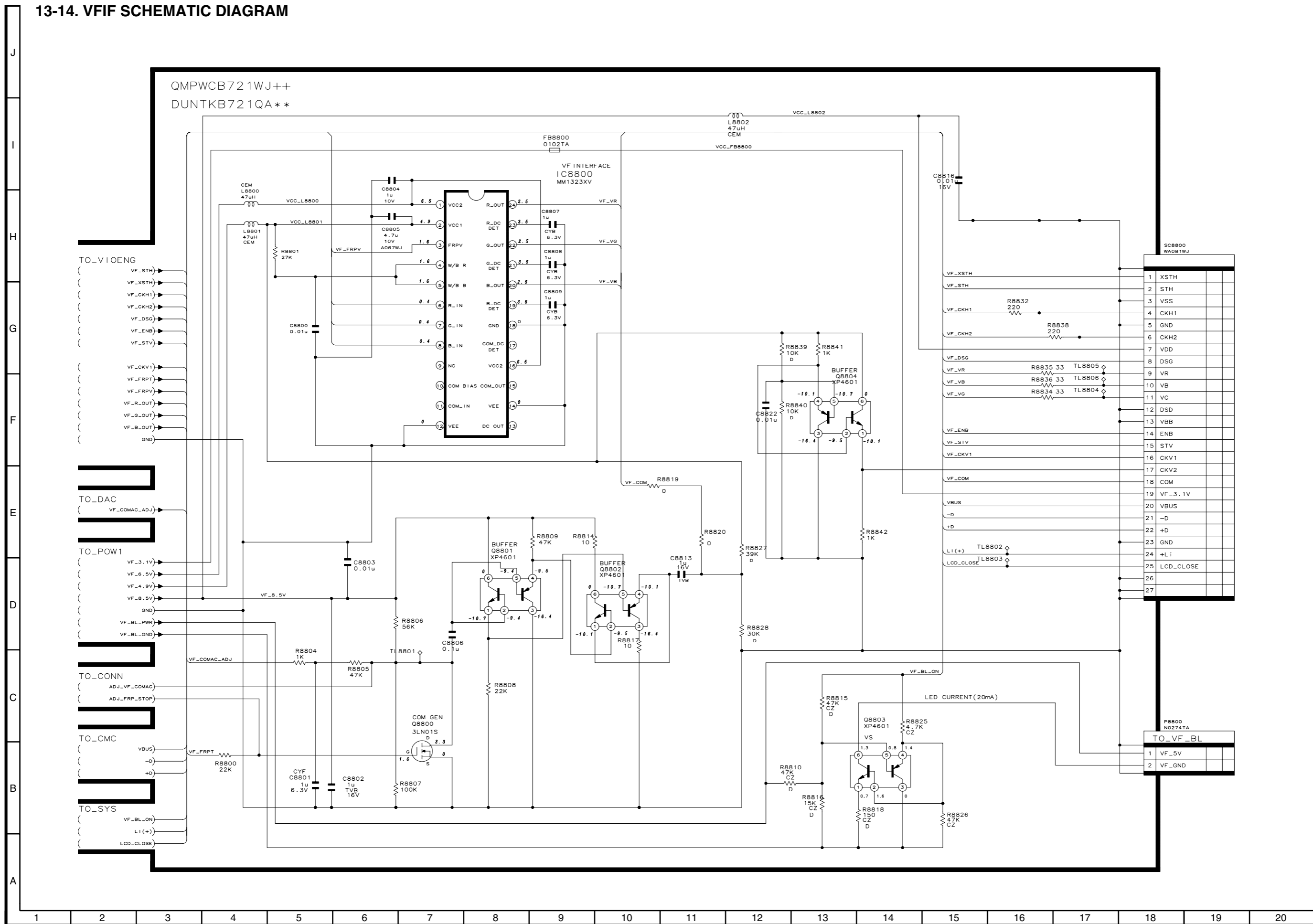
### 13-12. VIDEO I/O ENGINE SCHEMATIC DIAGRAM



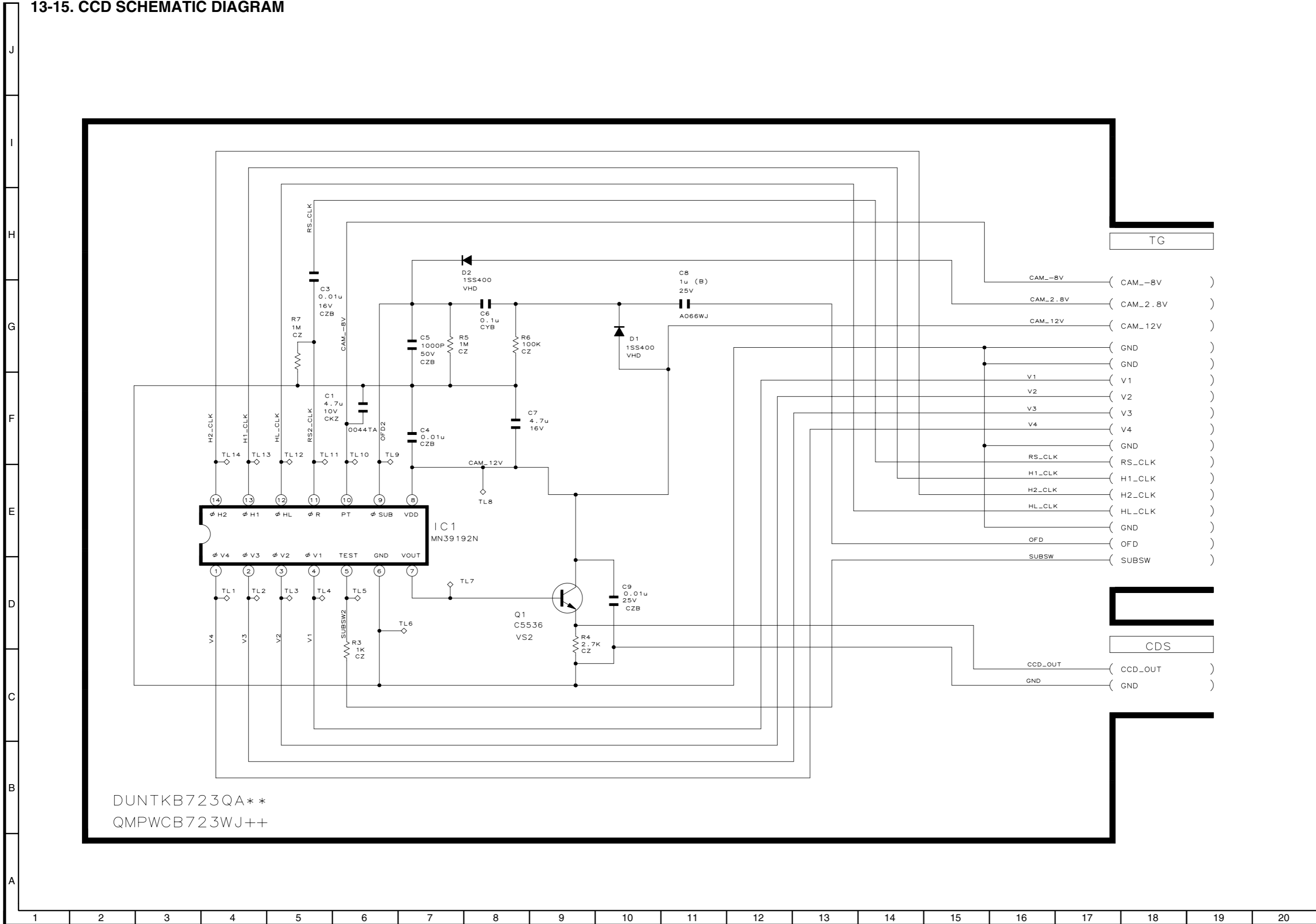
13-13. DAC SCHEMATIC DIAGRAM



13-14. VFIF SCHEMATIC DIAGRAM

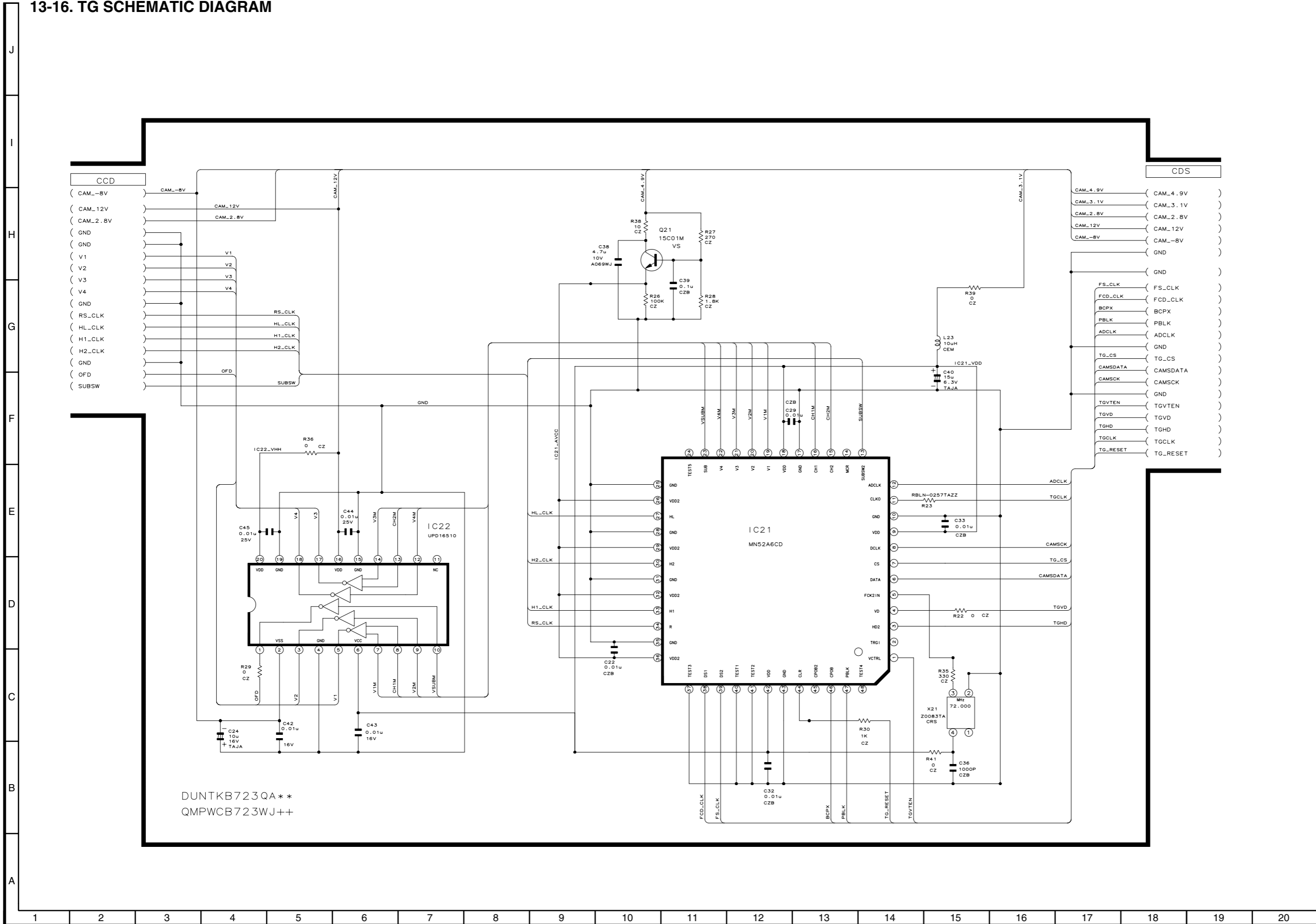


13-15. CCD SCHEMATIC DIAGRAM



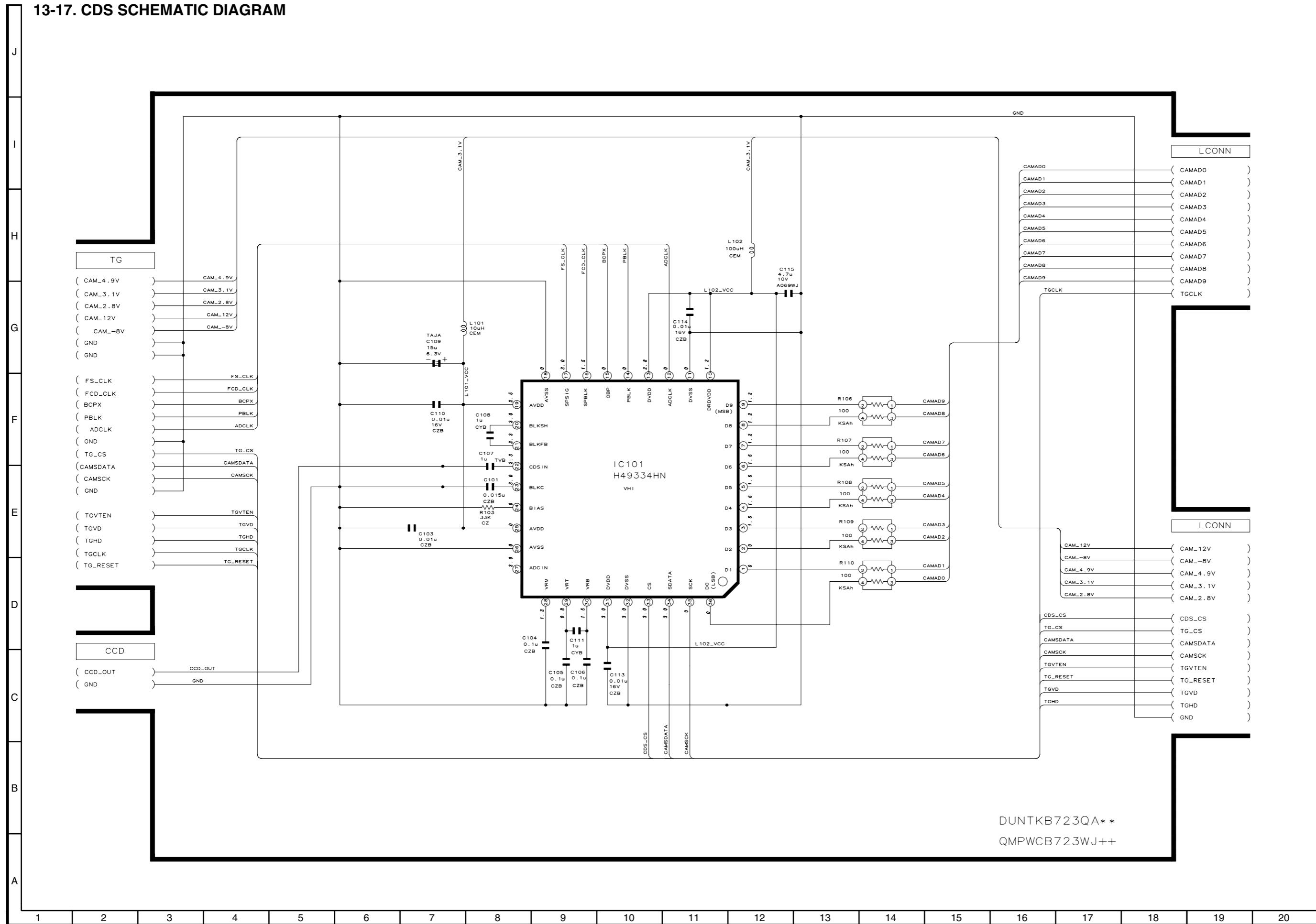
DUNTKB723QA\*\*  
QMPWCB723WJ++

13-16. TG SCHEMATIC DIAGRAM



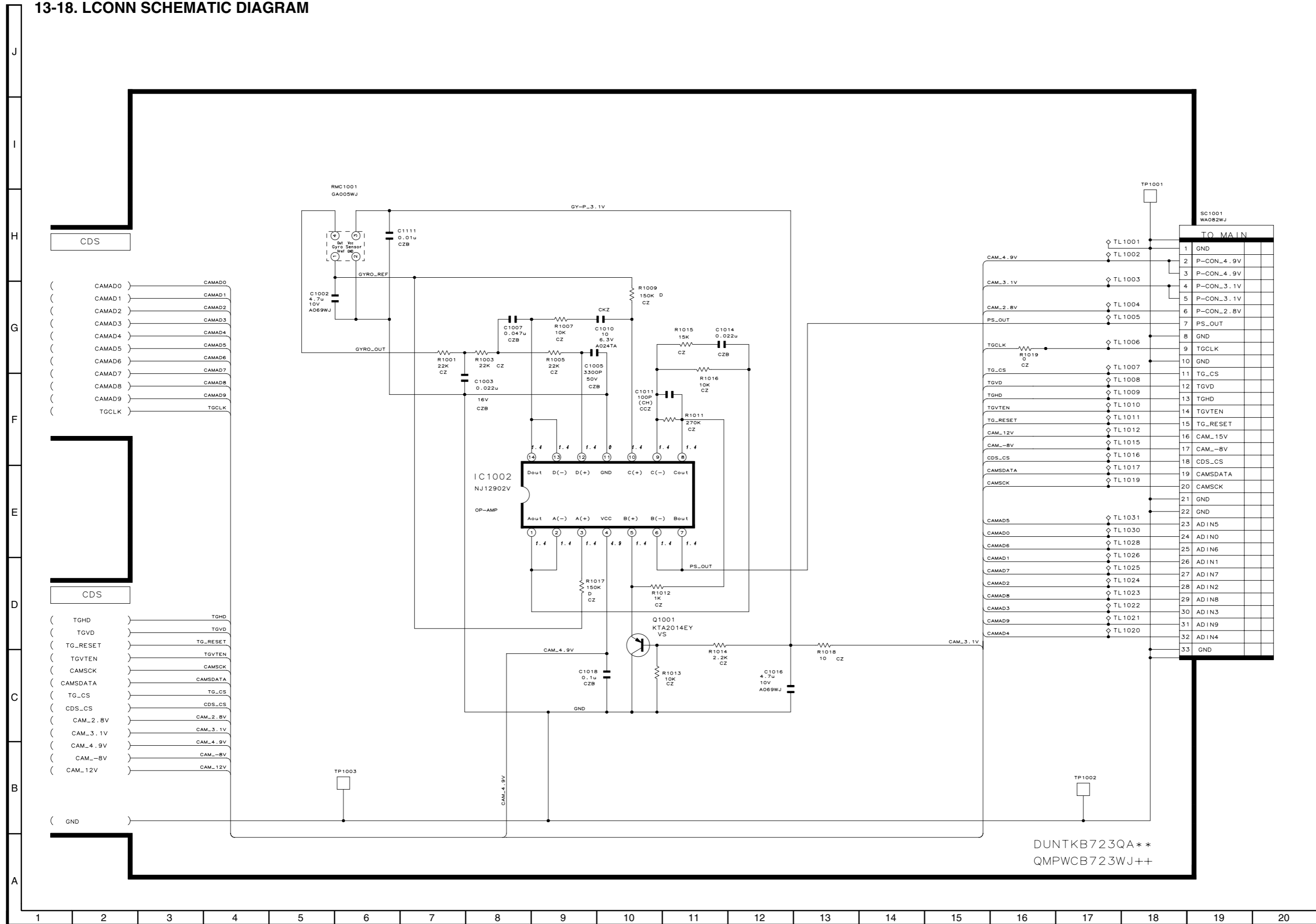
DUNTKB723QA\*\*  
QMPWCB723WJ++

13-17. CDS SCHEMATIC DIAGRAM

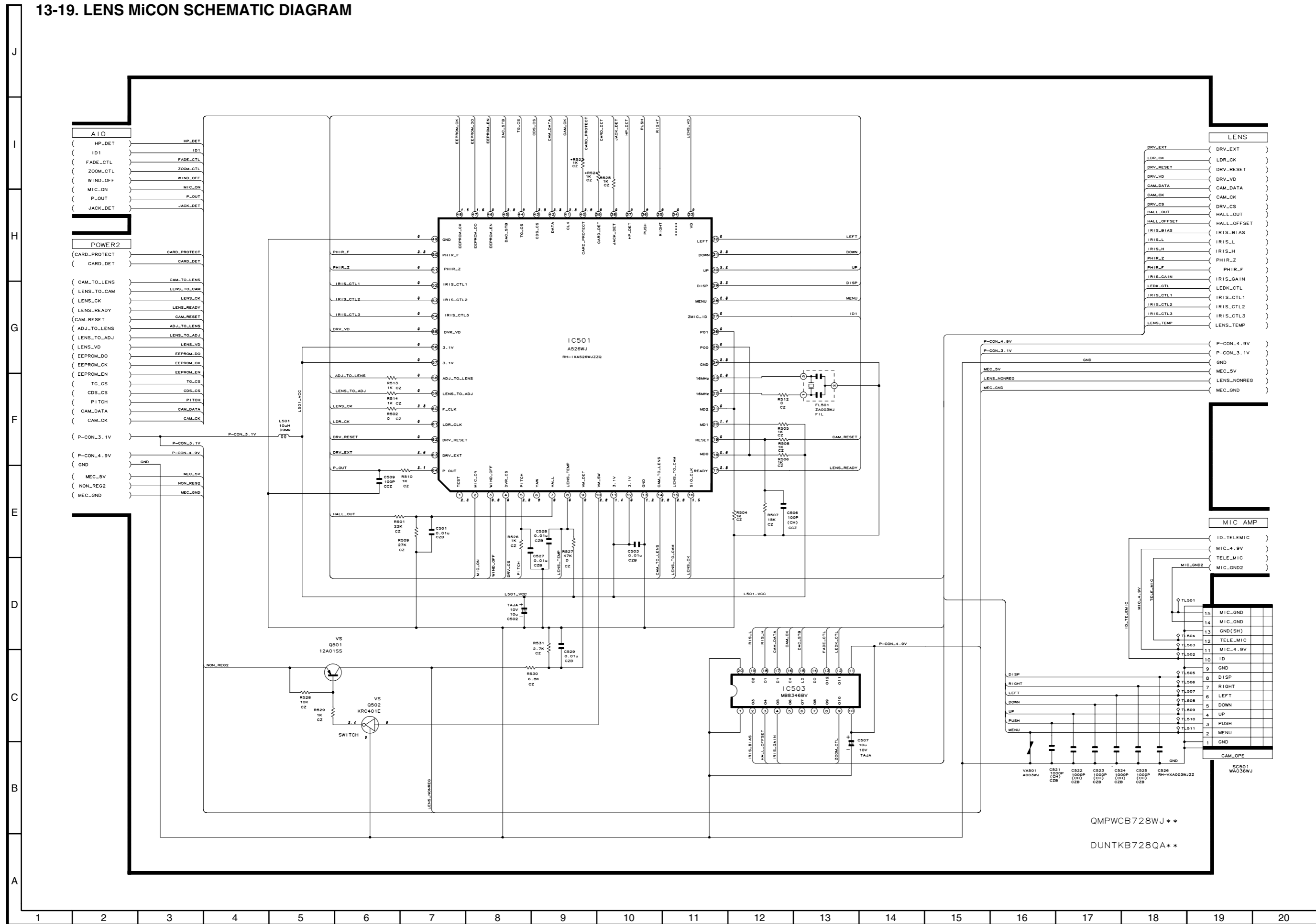


DUNTKB723QA\*\*  
QMPWCB723WJ++

13-18. LCONN SCHEMATIC DIAGRAM

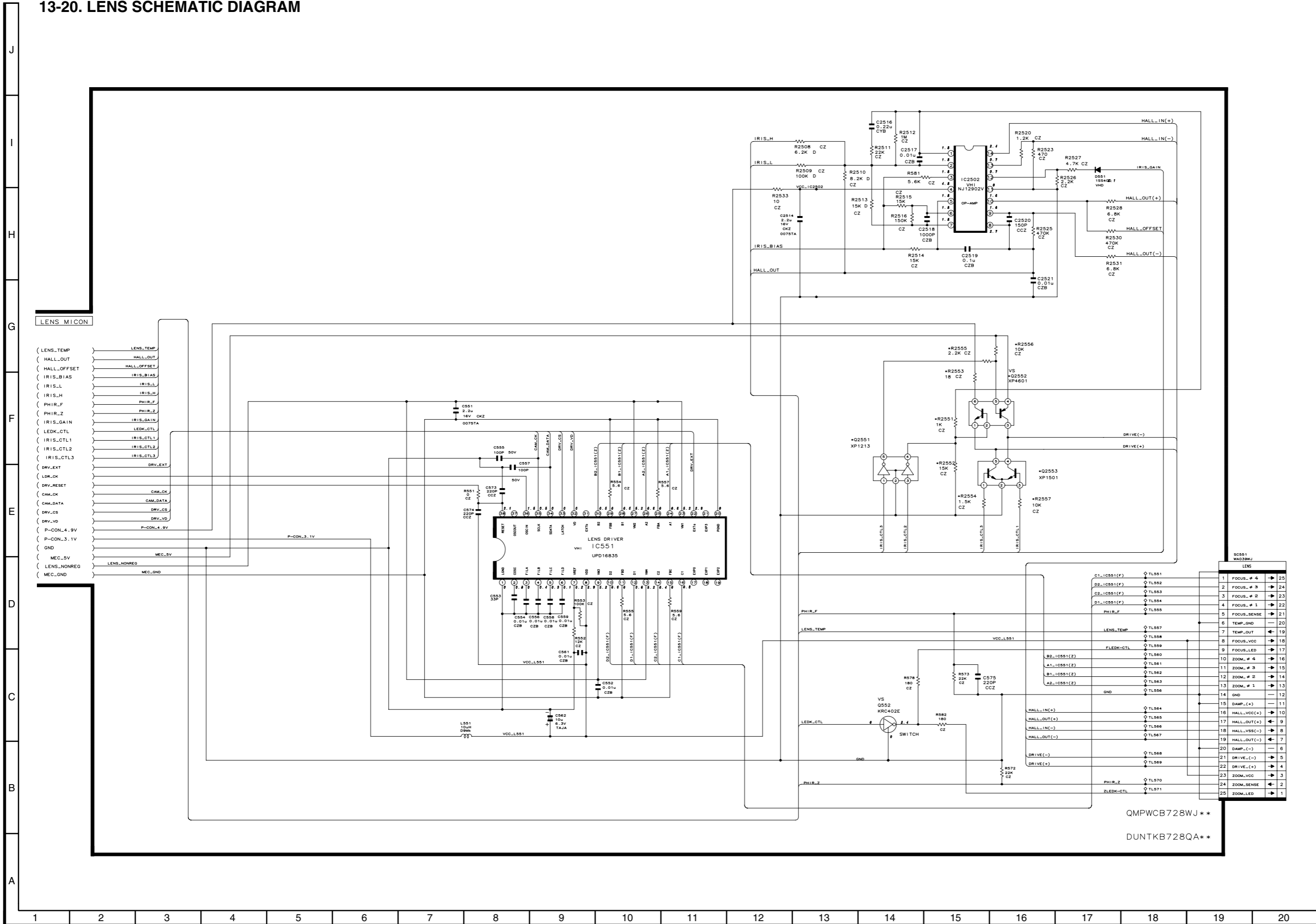


13-19. LENS MiCON SCHEMATIC DIAGRAM

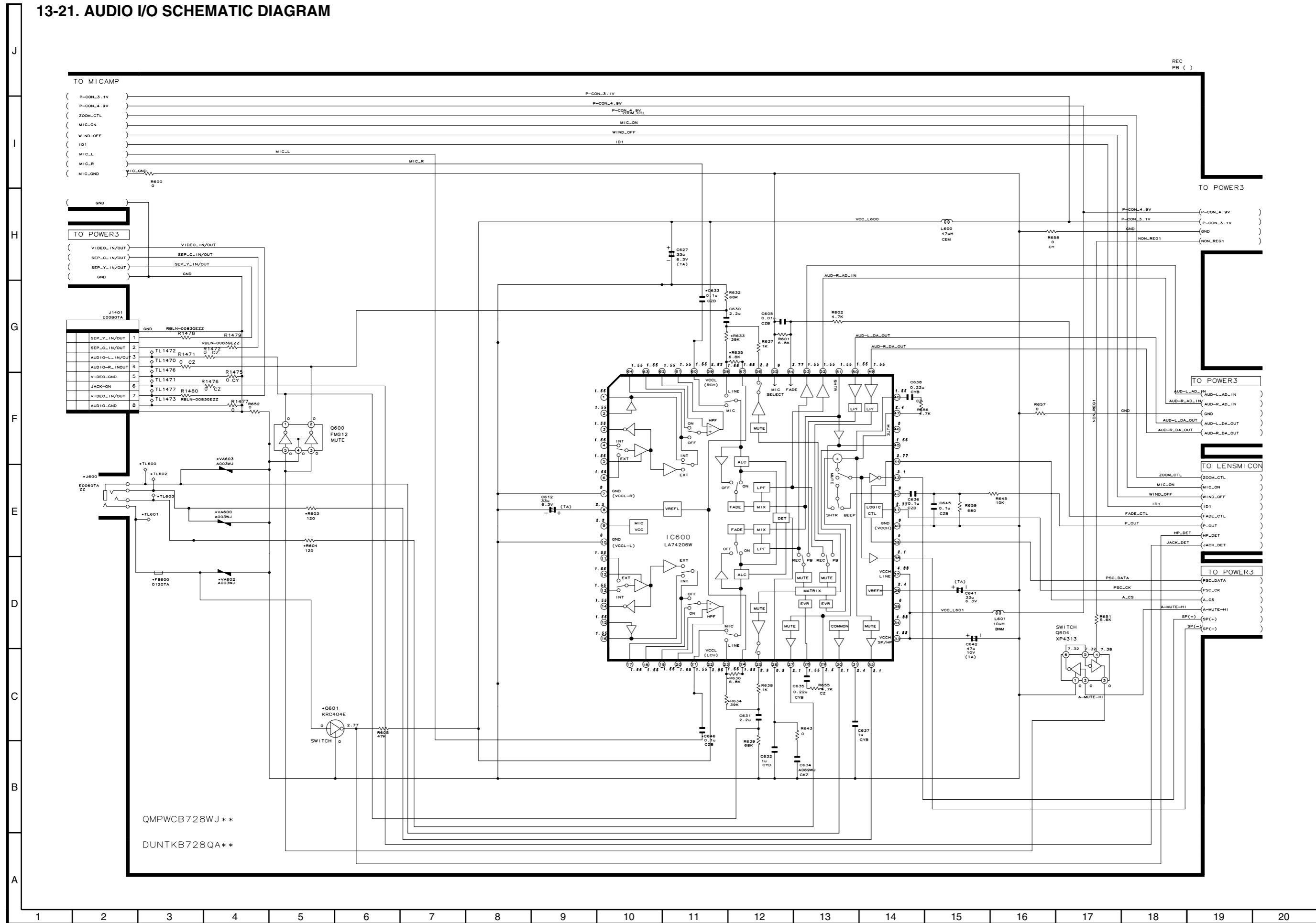




13-20. LENS SCHEMATIC DIAGRAM



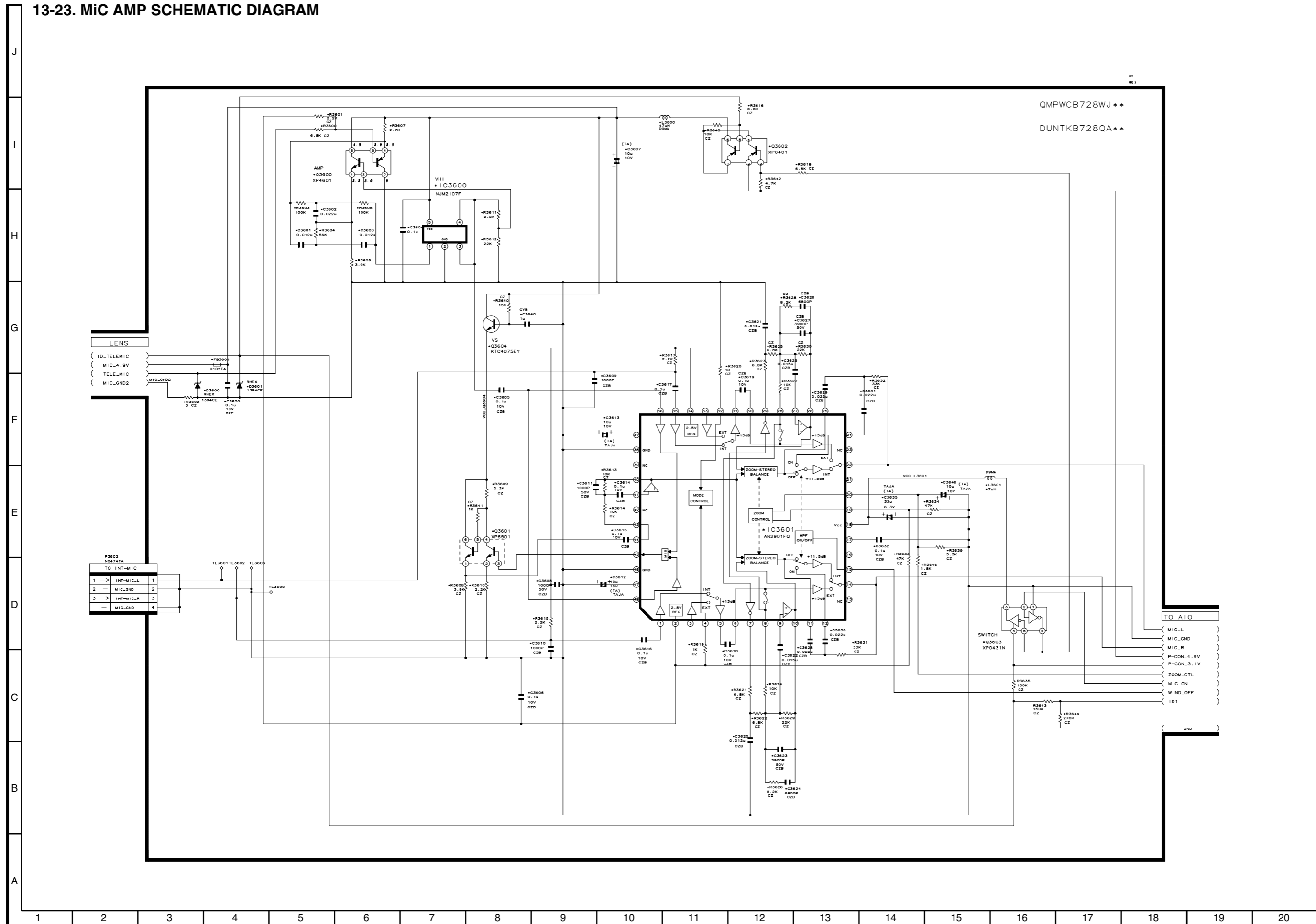
13-21. AUDIO I/O SCHEMATIC DIAGRAM



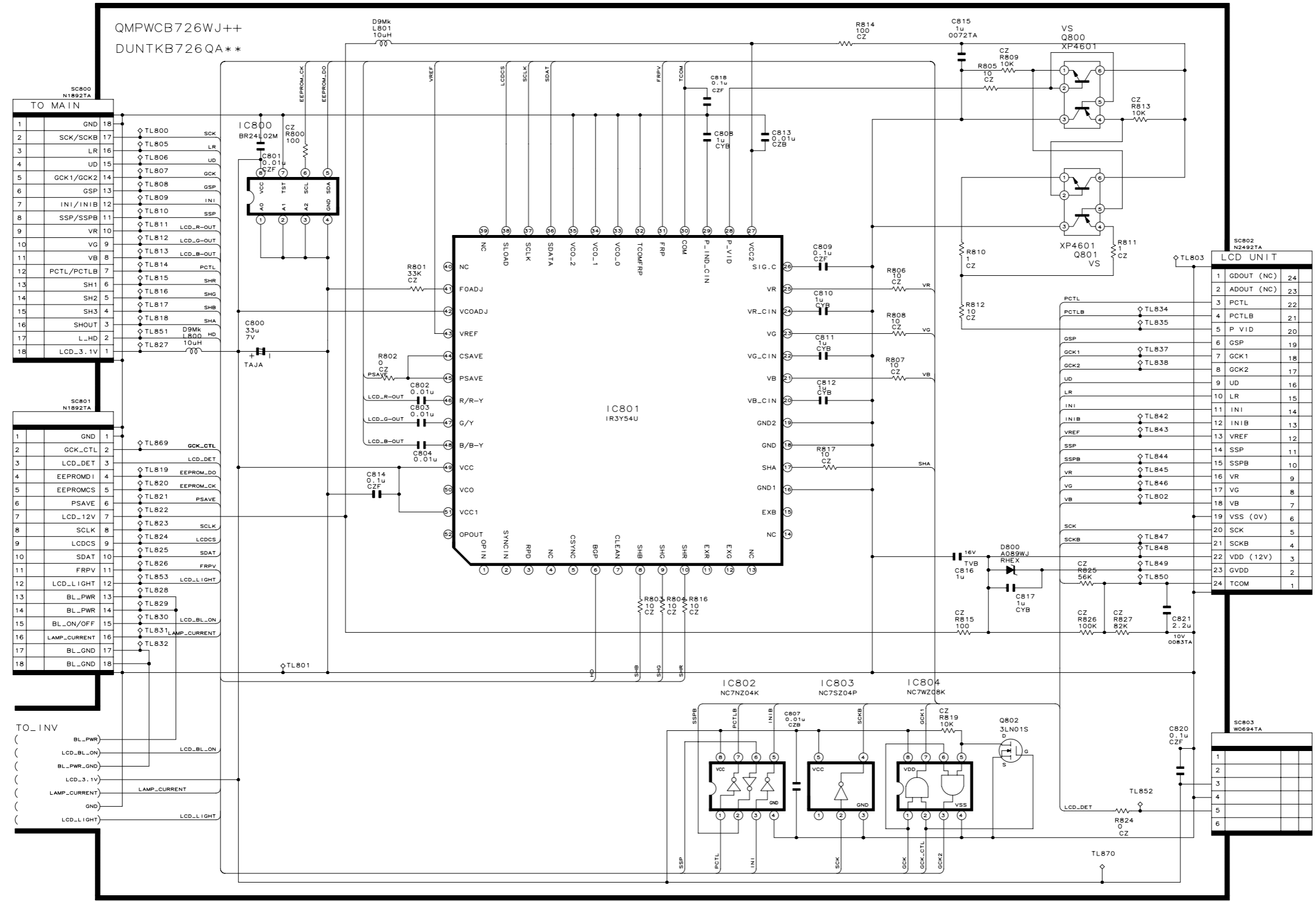
QMPWCB728WJ\*\*  
DUNTKB728QA\*\*



13-23. MiC AMP SCHEMATIC DIAGRAM



13-24. LCD SCHEMATIC DIAGRAM



TO MAIN

1	GND	18	TL800	SCK
2	SCK/SCKB	17	TL805	LR
3	LR	16	TL806	UD
4	UD	15	TL807	GCK
5	GCK1/GCK2	14	TL808	GSP
6	GSP	13	TL809	INI
7	INI/INIB	12	TL810	SSP
8	SSP/SSPB	11	TL811	LCD_R-OUT
9	VR	10	TL812	LCD_G-OUT
10	VG	9	TL813	LCD_B-OUT
11	VB	8	TL814	PCTL
12	PCTL/PCTLB	7	TL815	SHR
13	SH1	6	TL816	SHG
14	SH2	5	TL817	SHB
15	SH3	4	TL818	SHA
16	SHOUT	3	TL851	D9MK L800 HD
17	L_HD	2	TL827	D9MK L800 HD
18	LCD_3.1V	1		

TO MAIN

1	GND	1	TL869	GCK_CTL
2	GCK_CTL	2		LCD_DET
3	LCD_DET	3		EEPROM_DO
4	EEPROM_DO	4	TL819	EEPROM_CK
5	EEPROM_CK	5	TL820	PSAVE
6	PSAVE	6	TL821	LCD_12V
7	LCD_12V	7	TL822	SCLK
8	SCLK	8	TL823	LCDCS
9	LCDCS	9	TL824	SDAT
10	SDAT	10	TL825	FRPV
11	FRPV	11	TL826	LCD_LIGHT
12	LCD_LIGHT	12	TL828	BL_PWR
13	BL_PWR	13	TL829	LCD_BL_ON
14	LCD_BL_ON	14	TL830	LAMP_CURRENT
15	LAMP_CURRENT	15	TL831	BL_GND
16	BL_GND	16	TL832	
17		17		
18		18		

TO\_INV

(	BL_PWR			LCD_LIGHT
(	LCD_BL_ON			
(	BL_PWR_GND			
(	LCD_3.1V			
(	LAMP_CURRENT			
(	GND			
(	LCD_LIGHT			

LCD UNIT

1	GDOUT (NC)	24
2	ADOUT (NC)	23
3	PCTL	22
4	PCTLB	21
5	P_VID	20
6	GSP	19
7	GCK1	18
8	GCK2	17
9	UD	16
10	LR	15
11	INI	14
12	INIB	13
13	VREF	12
14	SSP	11
15	SSPB	10
16	VR	9
17	VG	8
18	VB	7
19	VSS (0V)	6
20	SCK	5
21	SCKB	4
22	VDD (12V)	3
23	GVDD	2
24	TCOM	1

TO\_INV

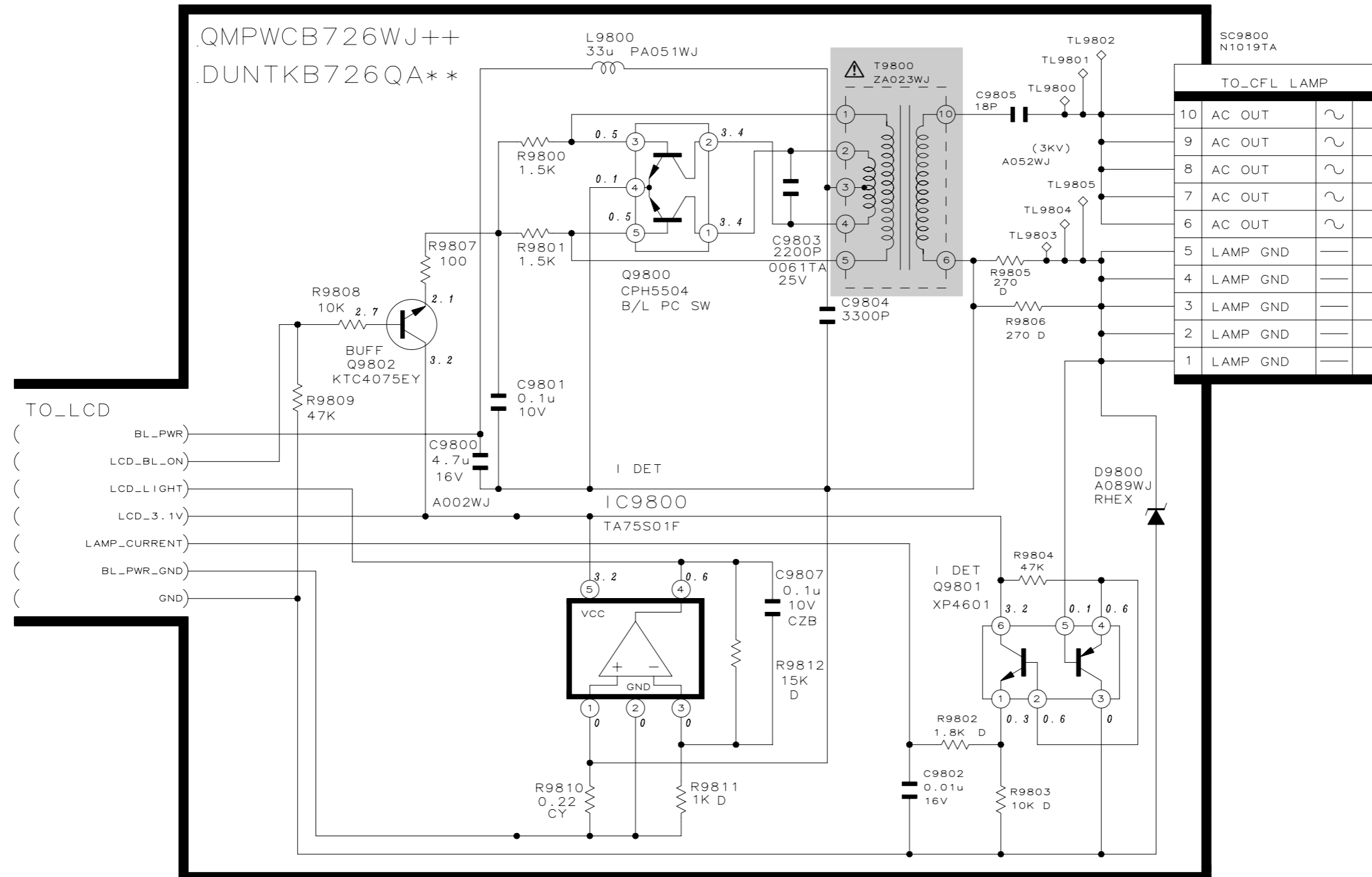
1		
2		
3		
4		
5		
6		

J  
I  
H  
G  
F  
E  
D  
C  
B  
A

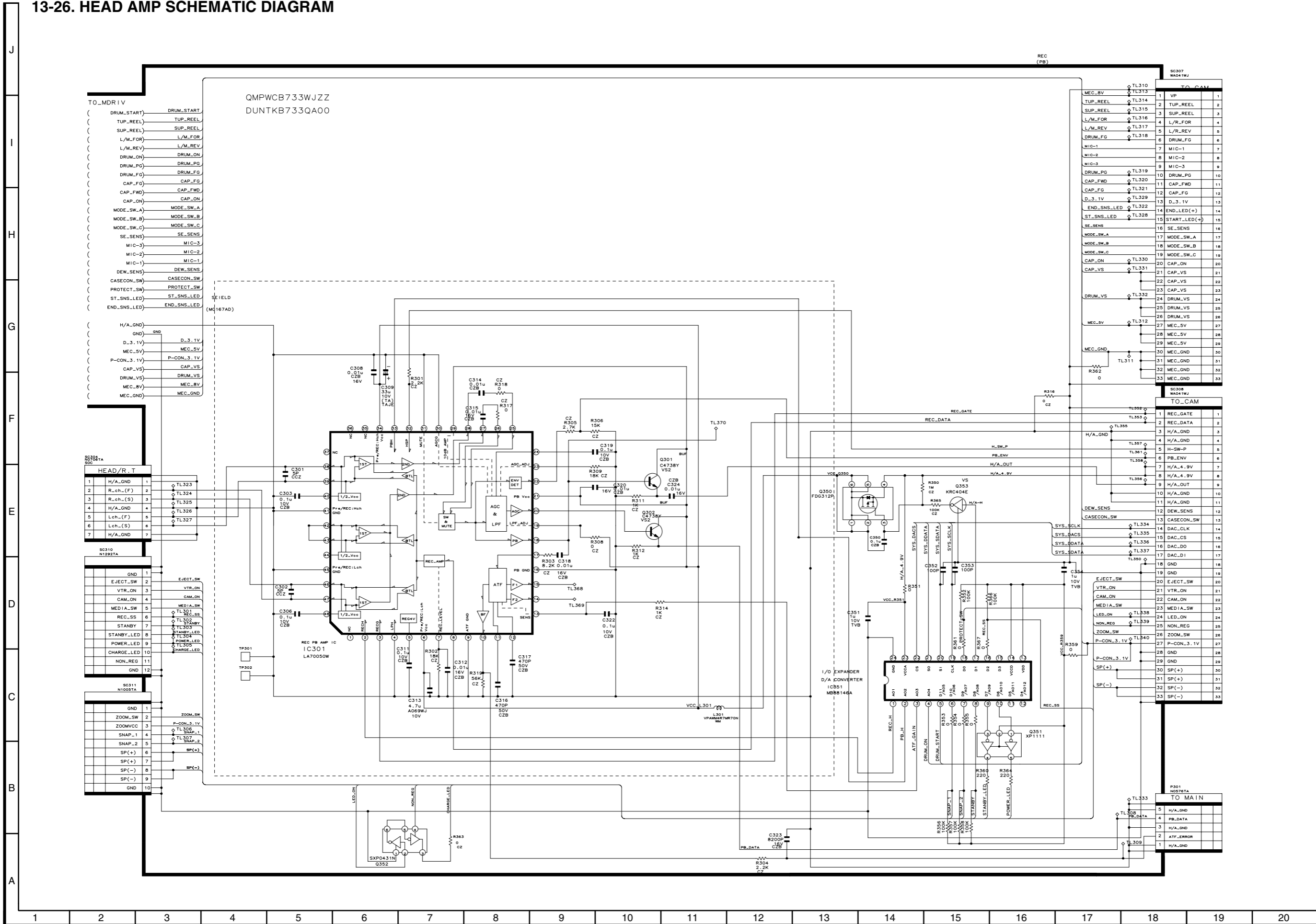
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

13-25. INVERTER SCHEMATIC DIAGRAM

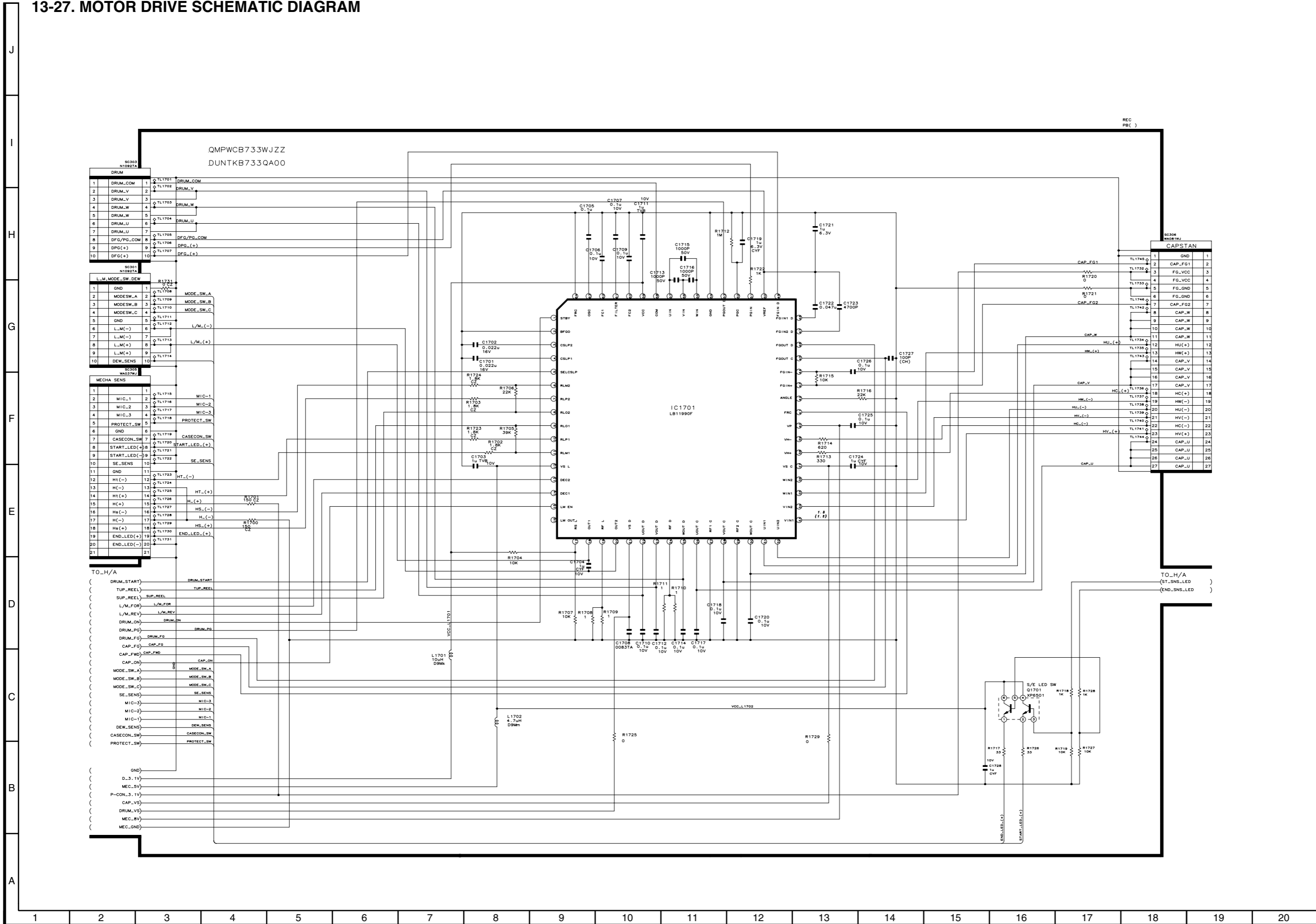
⚠ AND SHADED COMPONENTS=SAFETY RELATED PARTS



13-26. HEAD AMP SCHEMATIC DIAGRAM

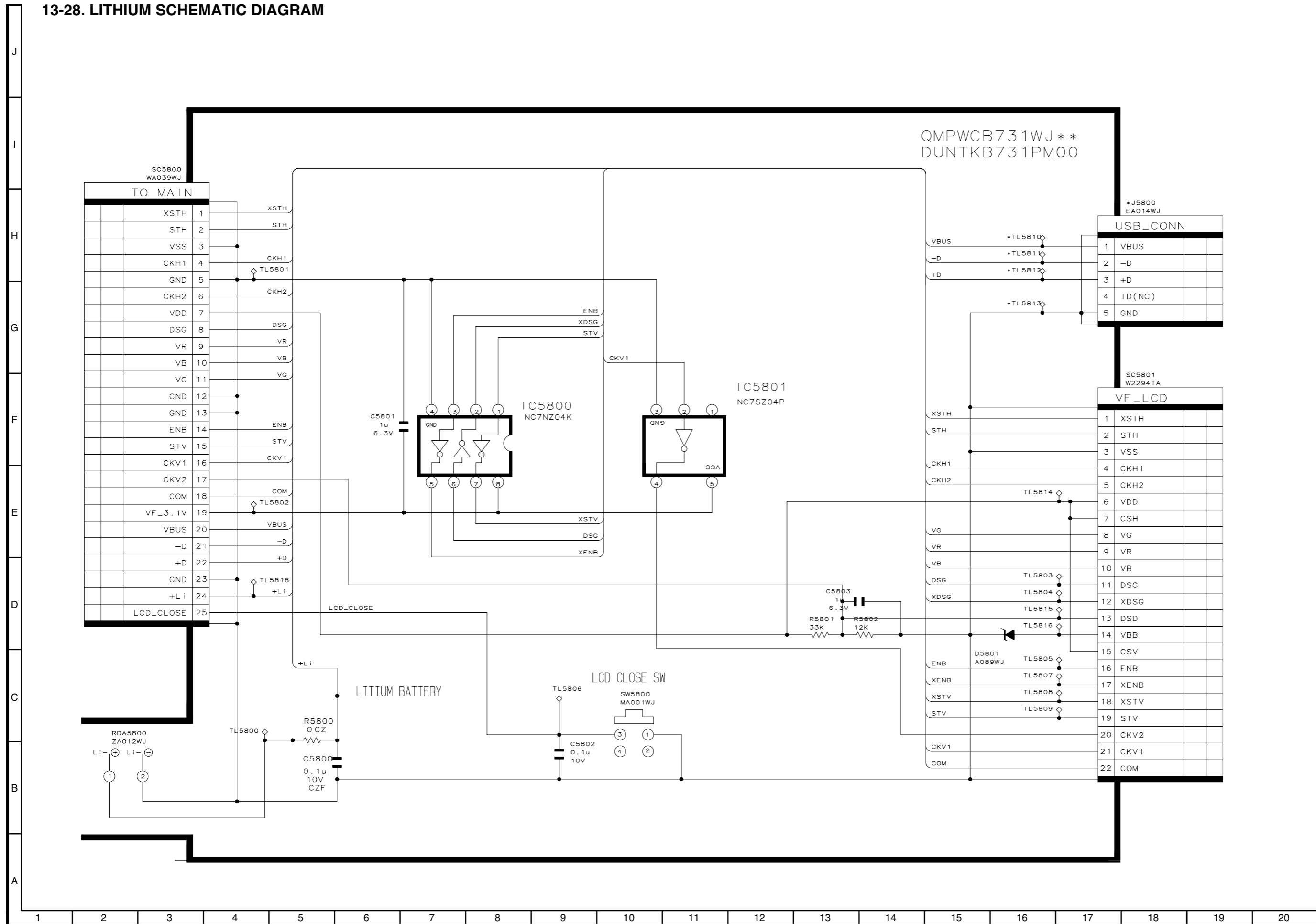


13-27. MOTOR DRIVE SCHEMATIC DIAGRAM

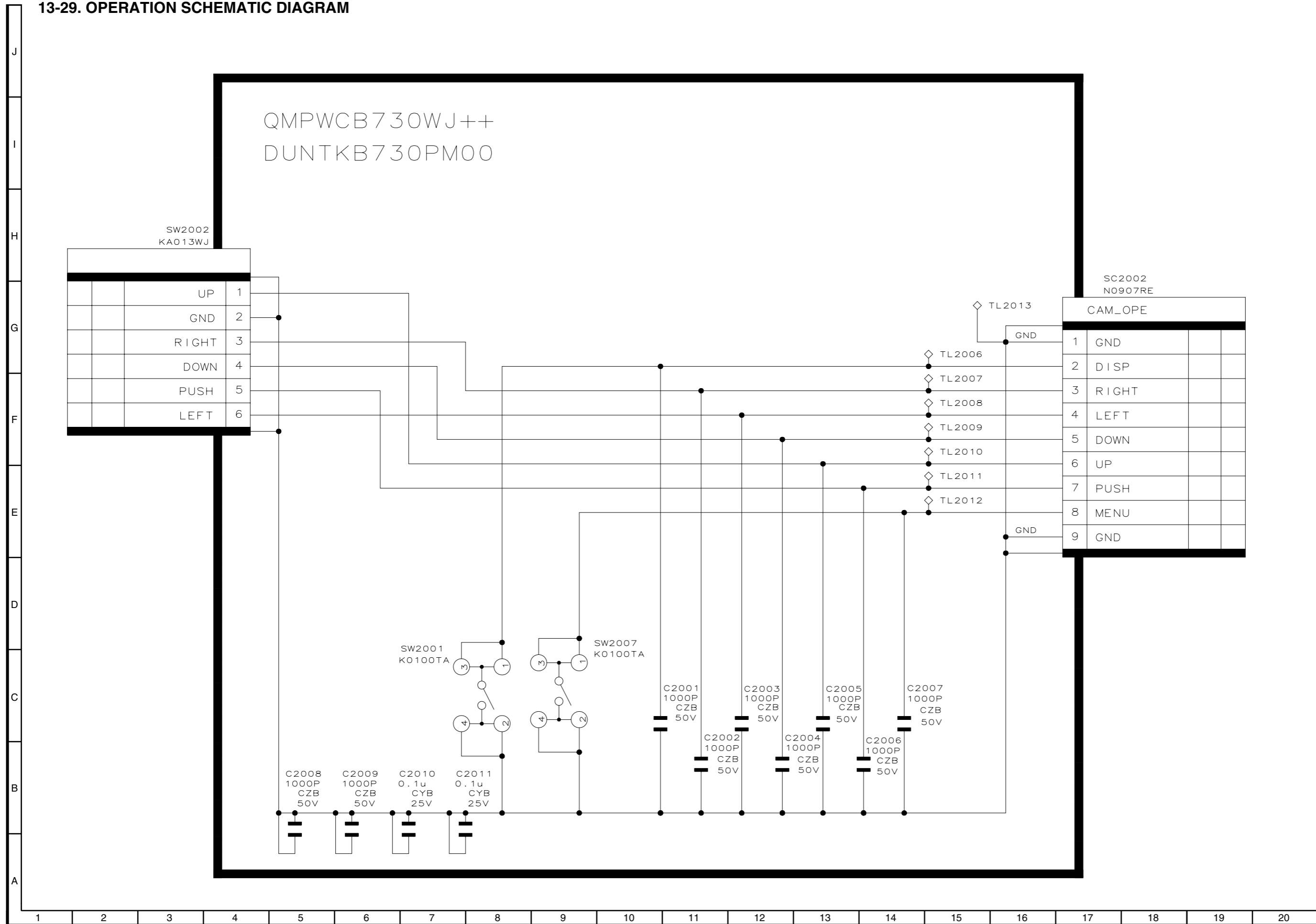




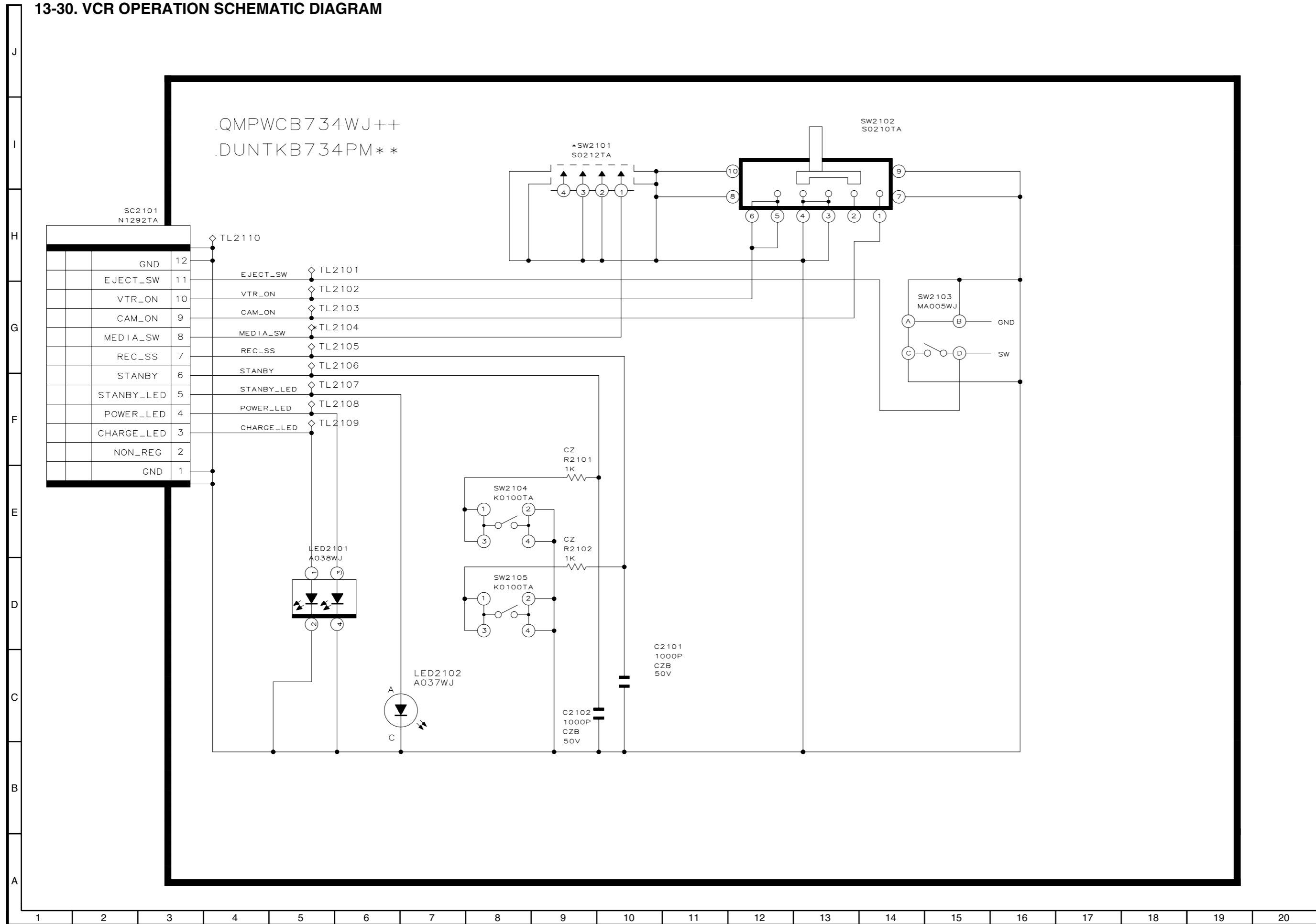
13-28. LITHIUM SCHEMATIC DIAGRAM



13-29. OPERATION SCHEMATIC DIAGRAM

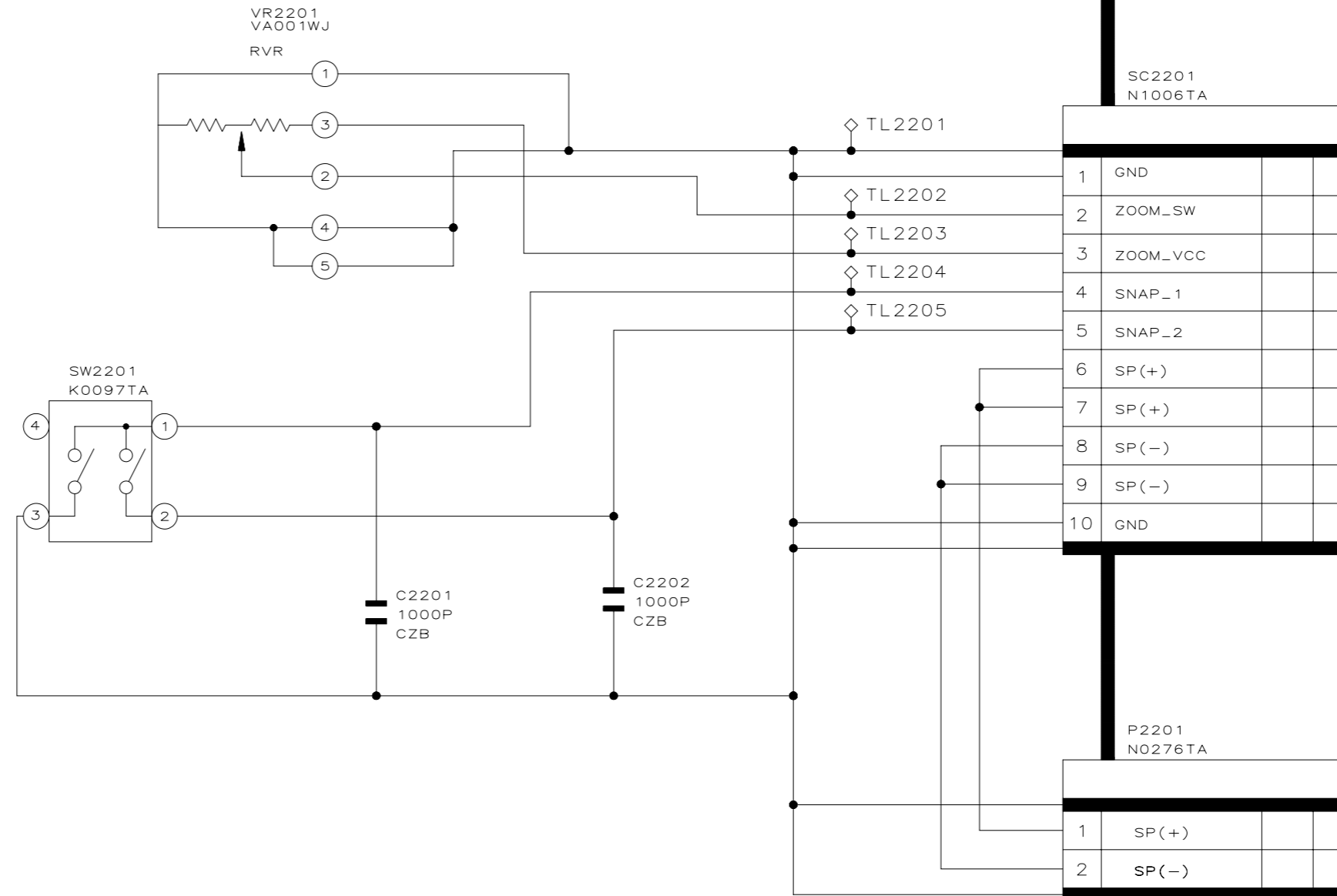


13-30. VCR OPERATION SCHEMATIC DIAGRAM



13-31. ZOOM SW SCHEMATIC DIAGRAM

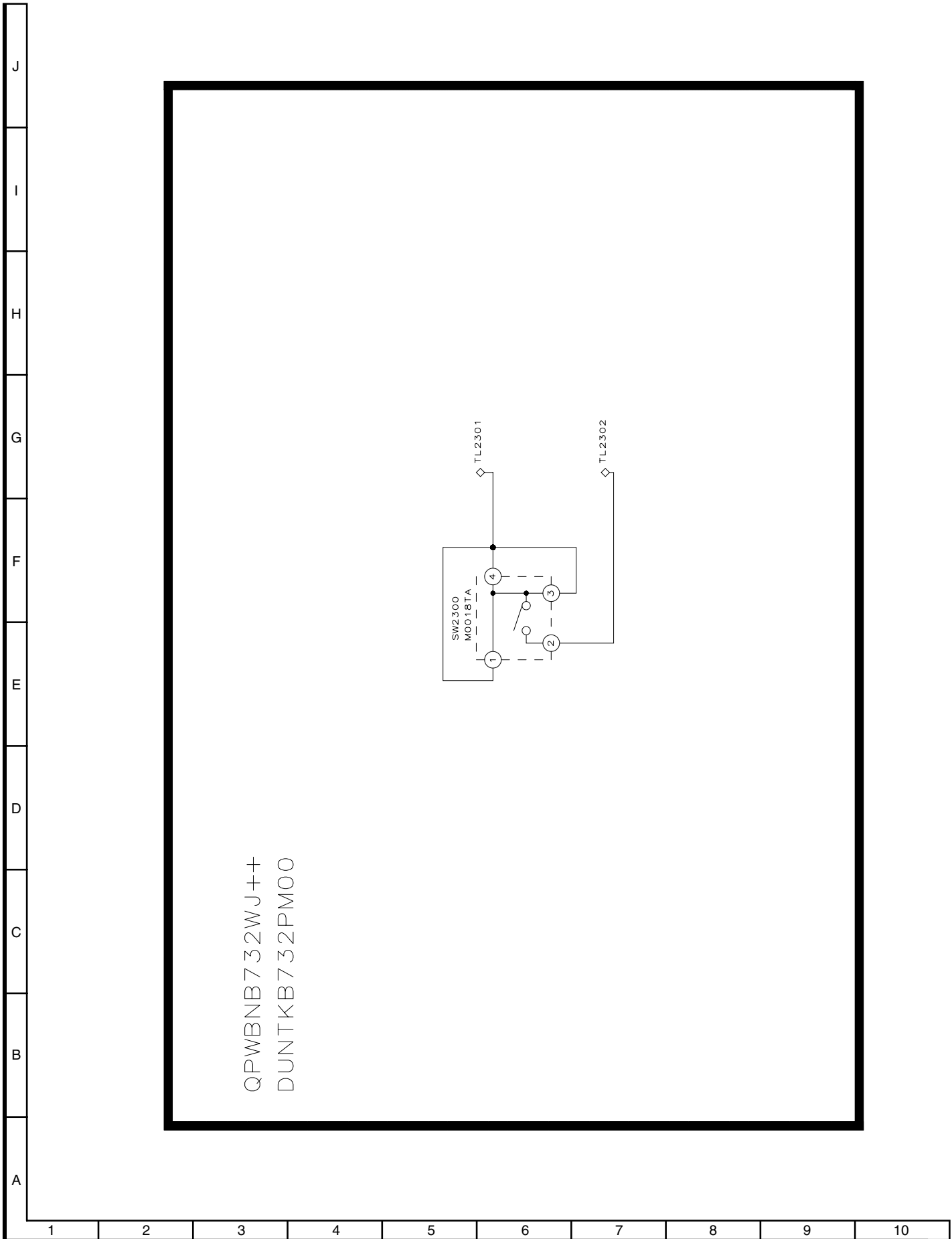
QMPWCB735WJ++  
DUNTKB735PM00



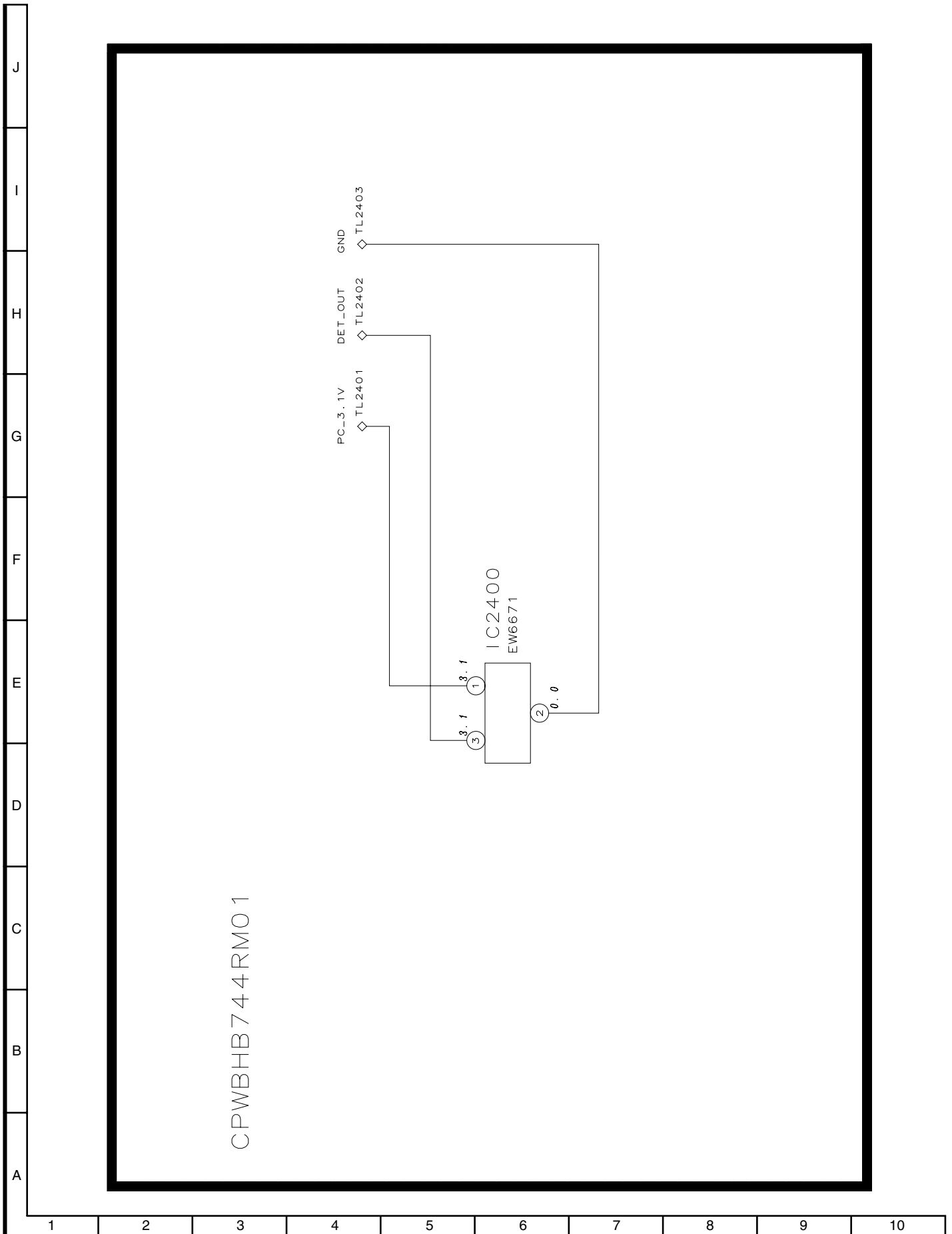
J  
I  
H  
G  
F  
E  
D  
C  
B  
A

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

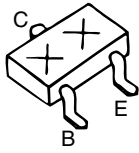
13-32. MECHA REVERSION DETECTION SCHEMATIC DIAGRAM



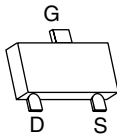
13-33. HOLE SENSOR UNIT SCHEMATIC DIAGRAM



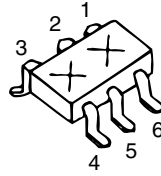
## 14. SEMICONDUCTOR LEAD IDENTIFICATION



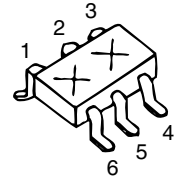
2SC4738Y KTA2014EY  
FMMT619 KTC4075EY  
2SC5376B RT1N144U  
12A01M 15C01M  
KRC401E 15C01SS  
KRC402E 2SC5536  
KRC404E 12A01SS



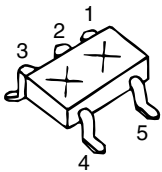
3LN01S



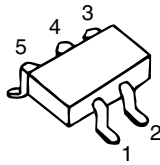
XP05534 EMD12  
7SB3157P XP4501  
MCH6617 XP6401  
MCH6305 XP4313  
XP0431N XP4601  
FDG312P XP6501  
FDC642P  
XP4316



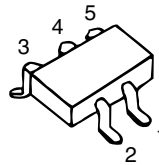
XN04391



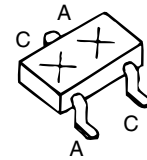
TA75S01F NC7SZ04P  
NJM2107F XP1213  
XP1111 NJU7008F  
XP1501  
XP4213



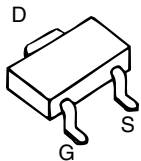
CPH5504



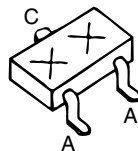
FMG12



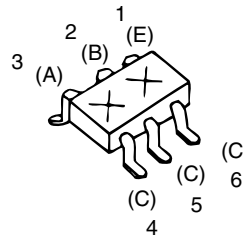
DAN217U



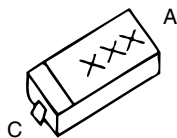
FDT458P



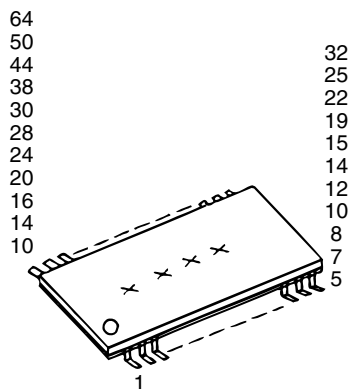
KDS121E



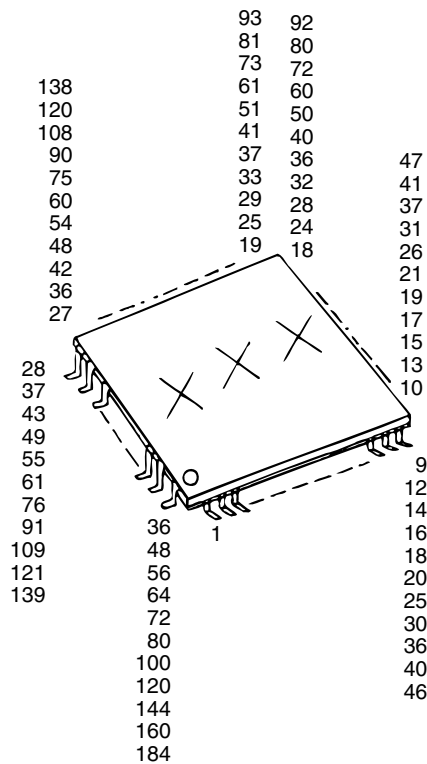
XN09D61



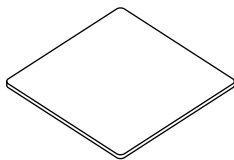
EX1394CE	HVC362
HVC359TR	HVC375B
RB160M30	HVC202A
A089WJ	1SS400



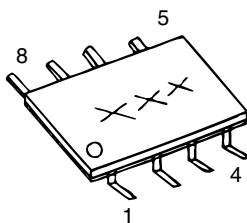
UPD16835	PCM3008
MB8346BV	IXA532WJ
MB88146A	LA73070V
UPD16510	R2101S01
MM1323XV	NJ12902V



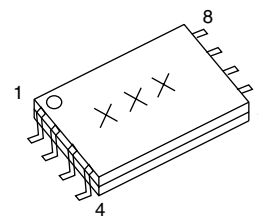
BH7277KV	LB11990F
MB3881++	LA74206W
MN52A6CD	AN2901FQ
H49334HN	LA70050W
IXA526WJ	



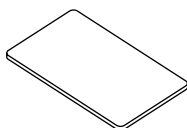
IX0785TA	IXA204WJ
IX0809TA	LB11990F
IXA543WJ	IR3Y54U
IXA503WJ	



NJM2143R
TLC2940
BR24L64F



NJU7015R
NJM2535V
NC7NZ04K
NC7WZ08K
BR24L02M



IXA550WJ
IXA320WJ
ADC8351C

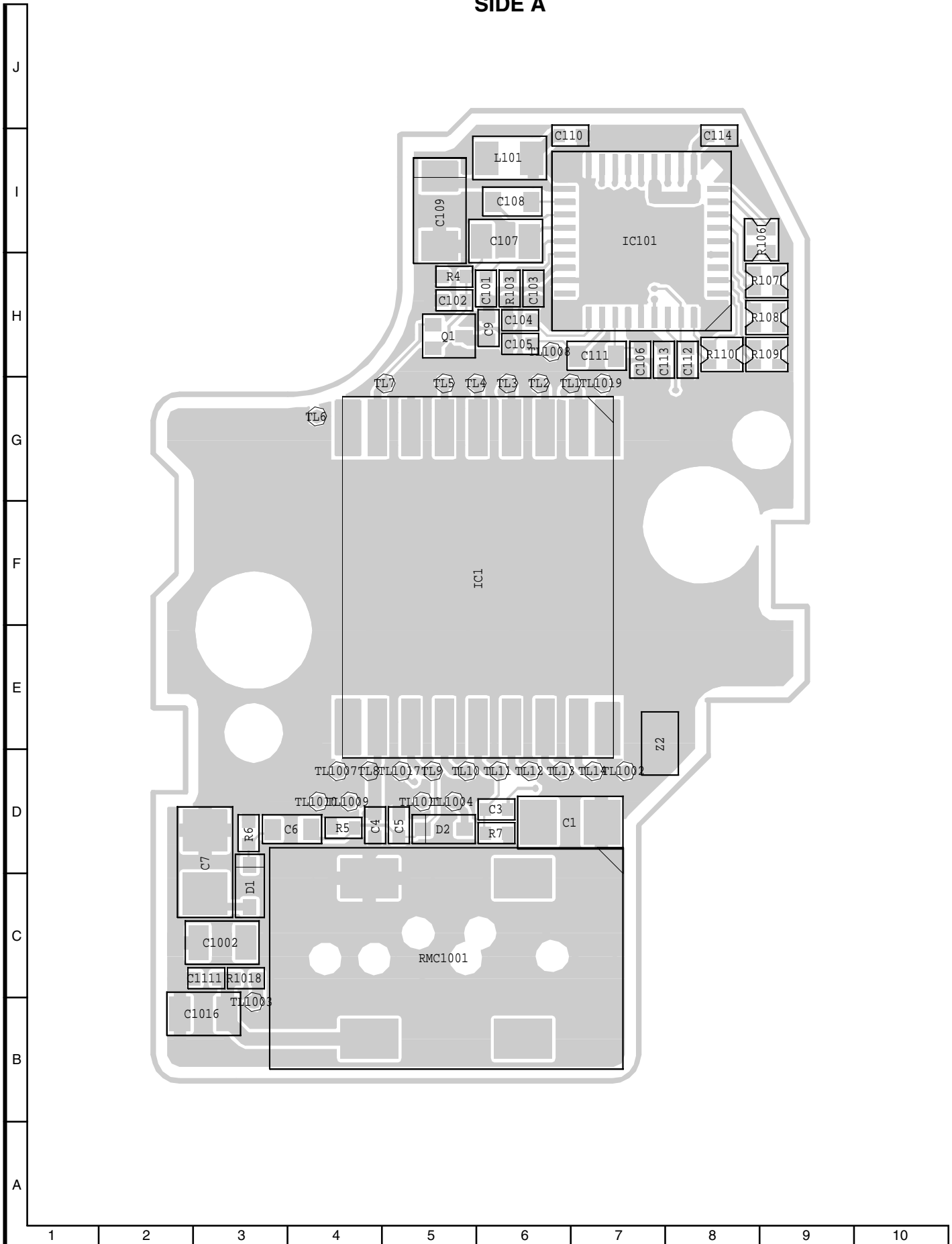




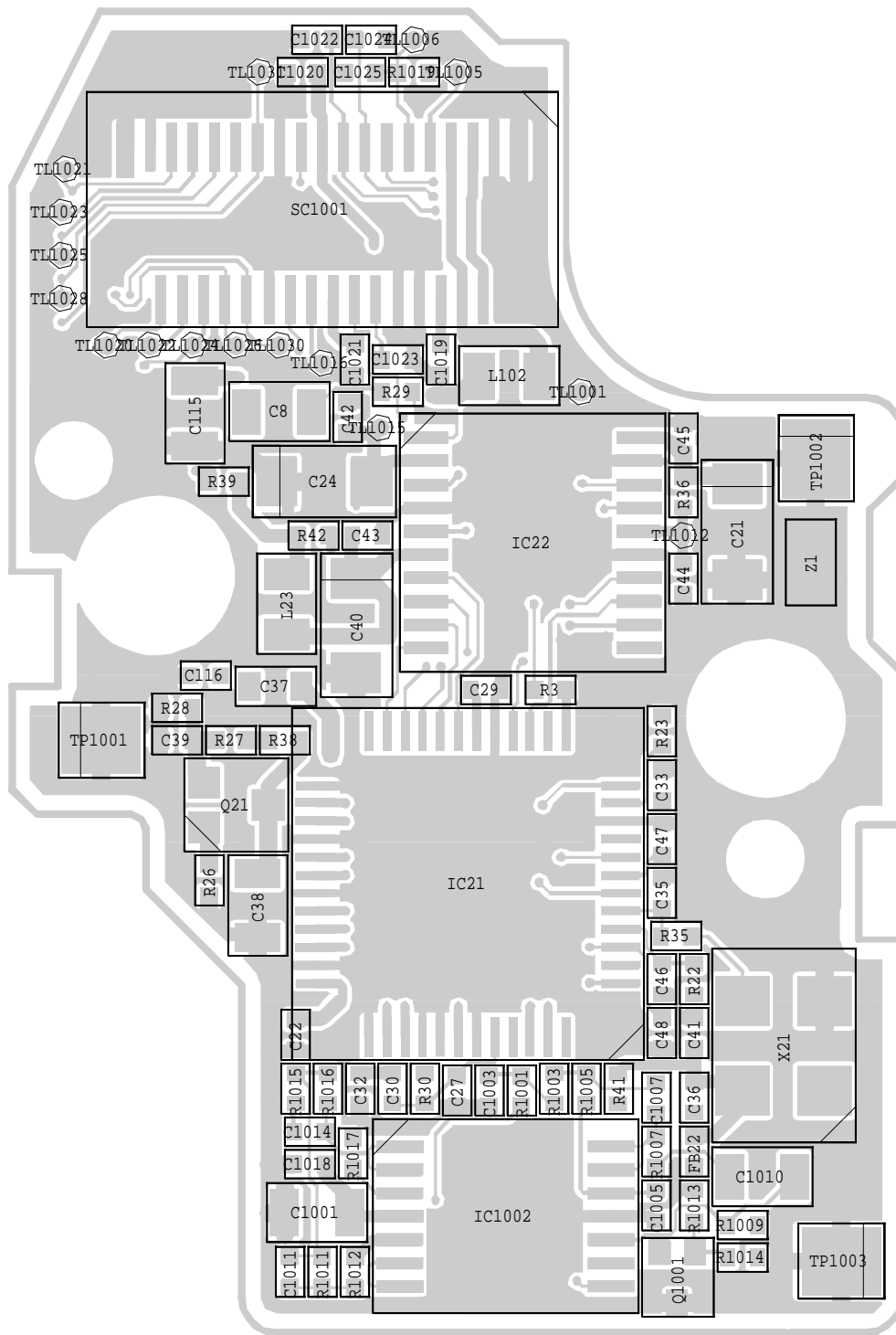


CCD PWB

SIDE A



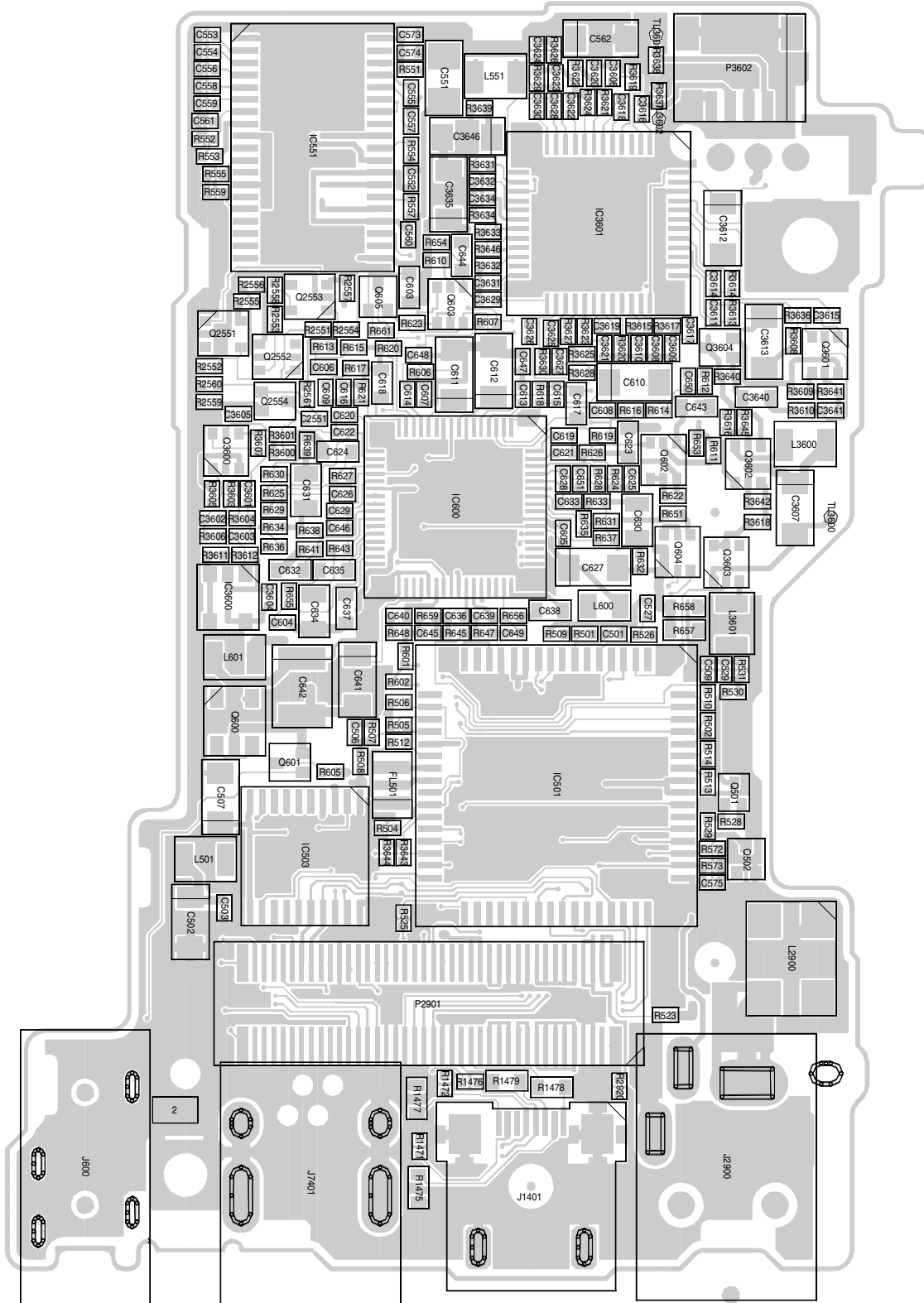
SIDE B



10	11	12	13	14	15	16	17	18	19
----	----	----	----	----	----	----	----	----	----

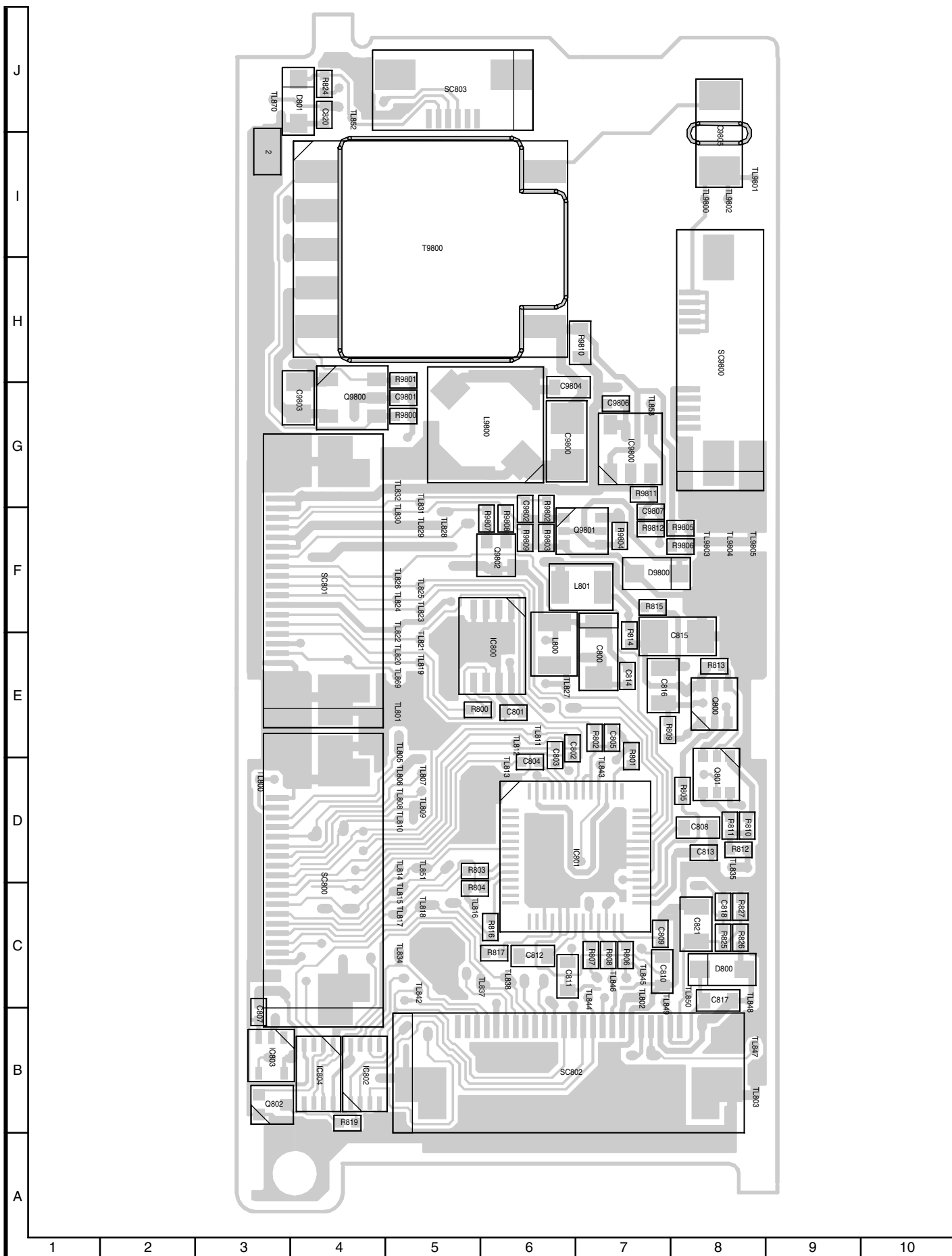


SIDE B

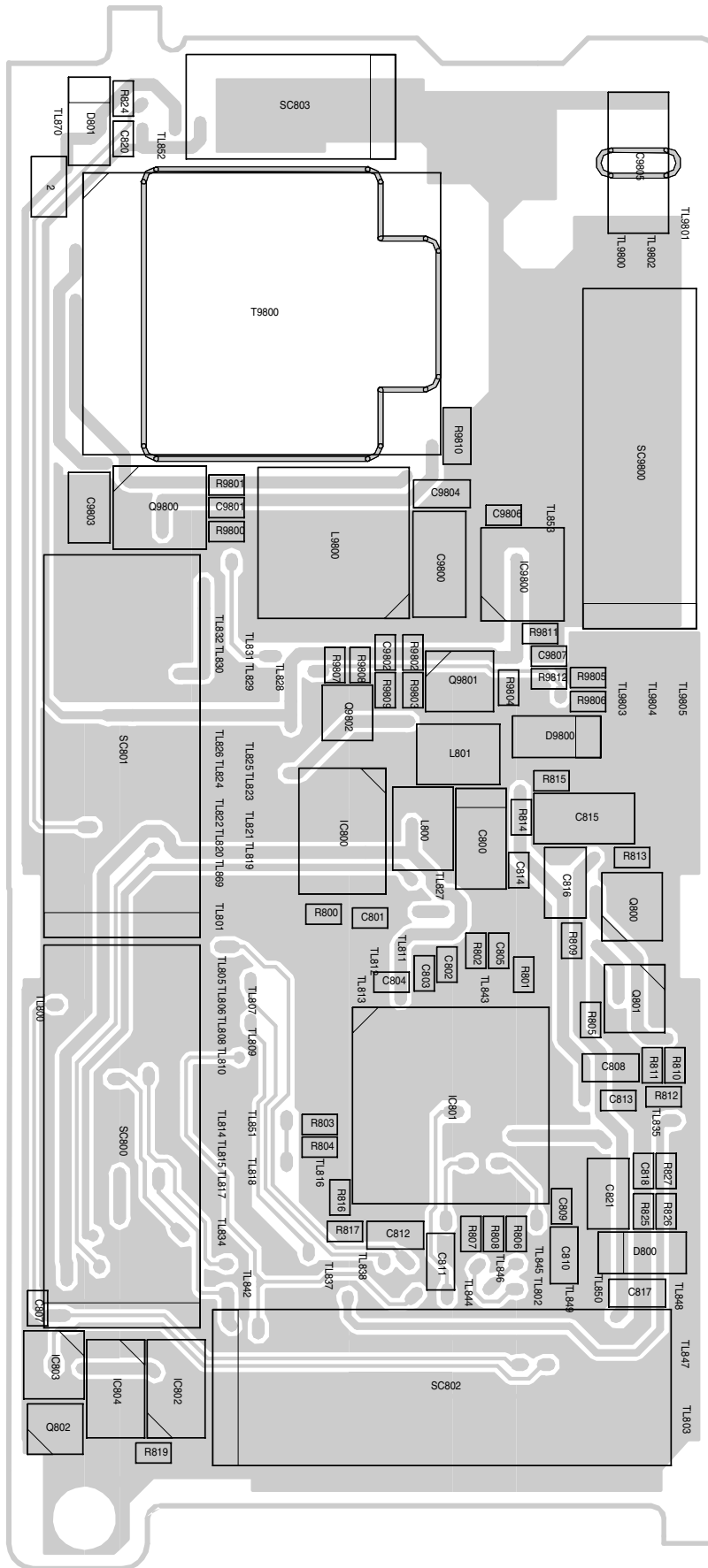


10	11	12	13	14	15	16	17	18	19
----	----	----	----	----	----	----	----	----	----

SIDE A



SIDE B



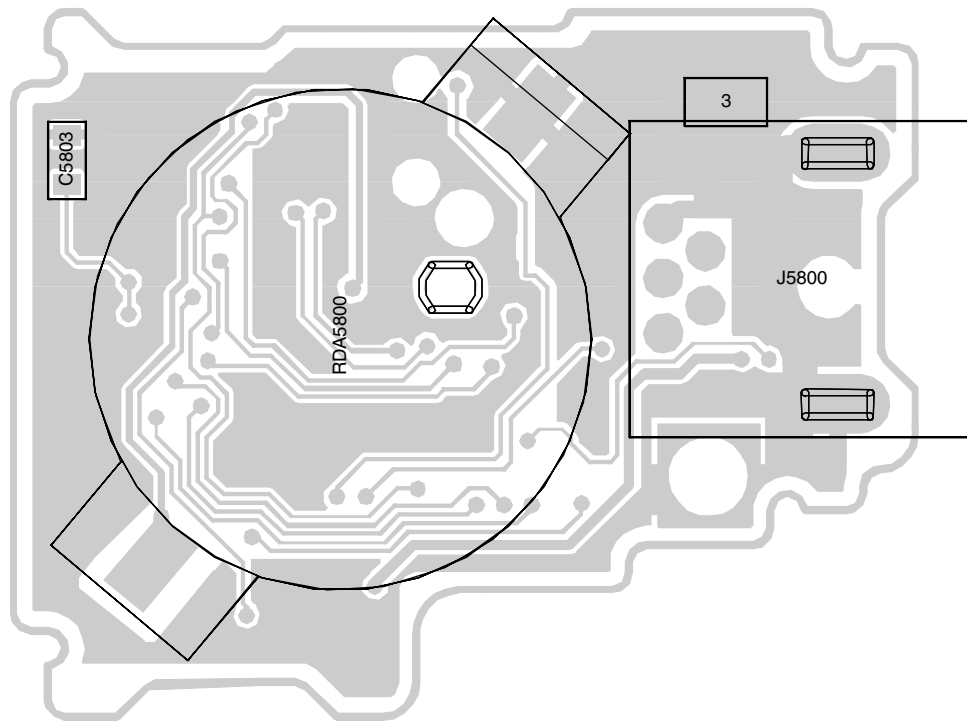
10	11	12	13	14	15	16	17	18	19
----	----	----	----	----	----	----	----	----	----



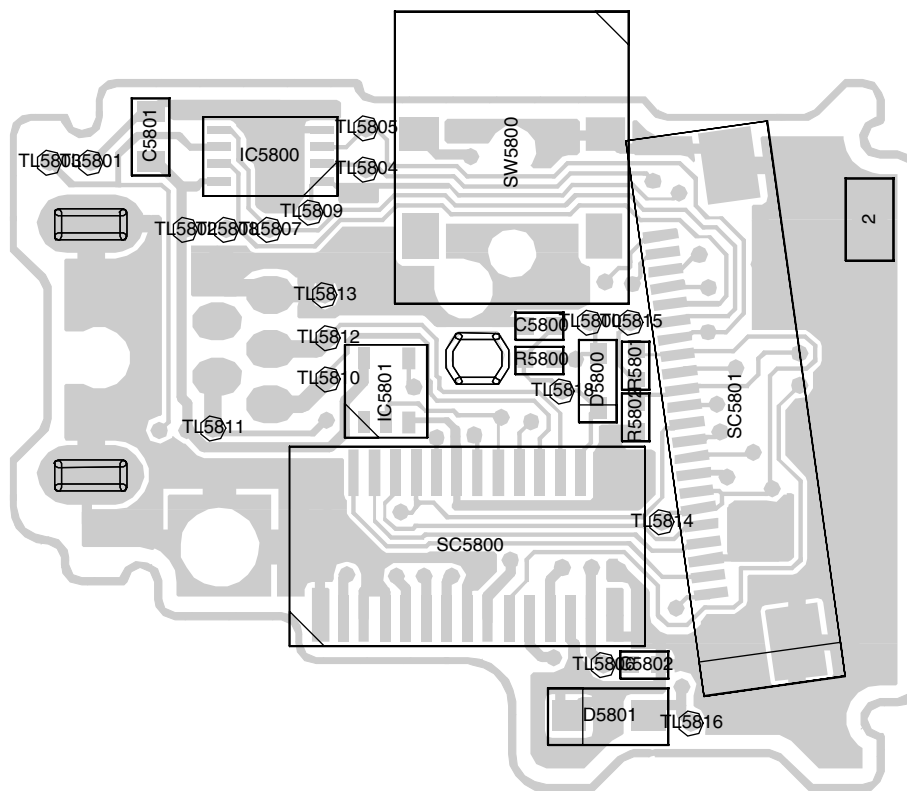


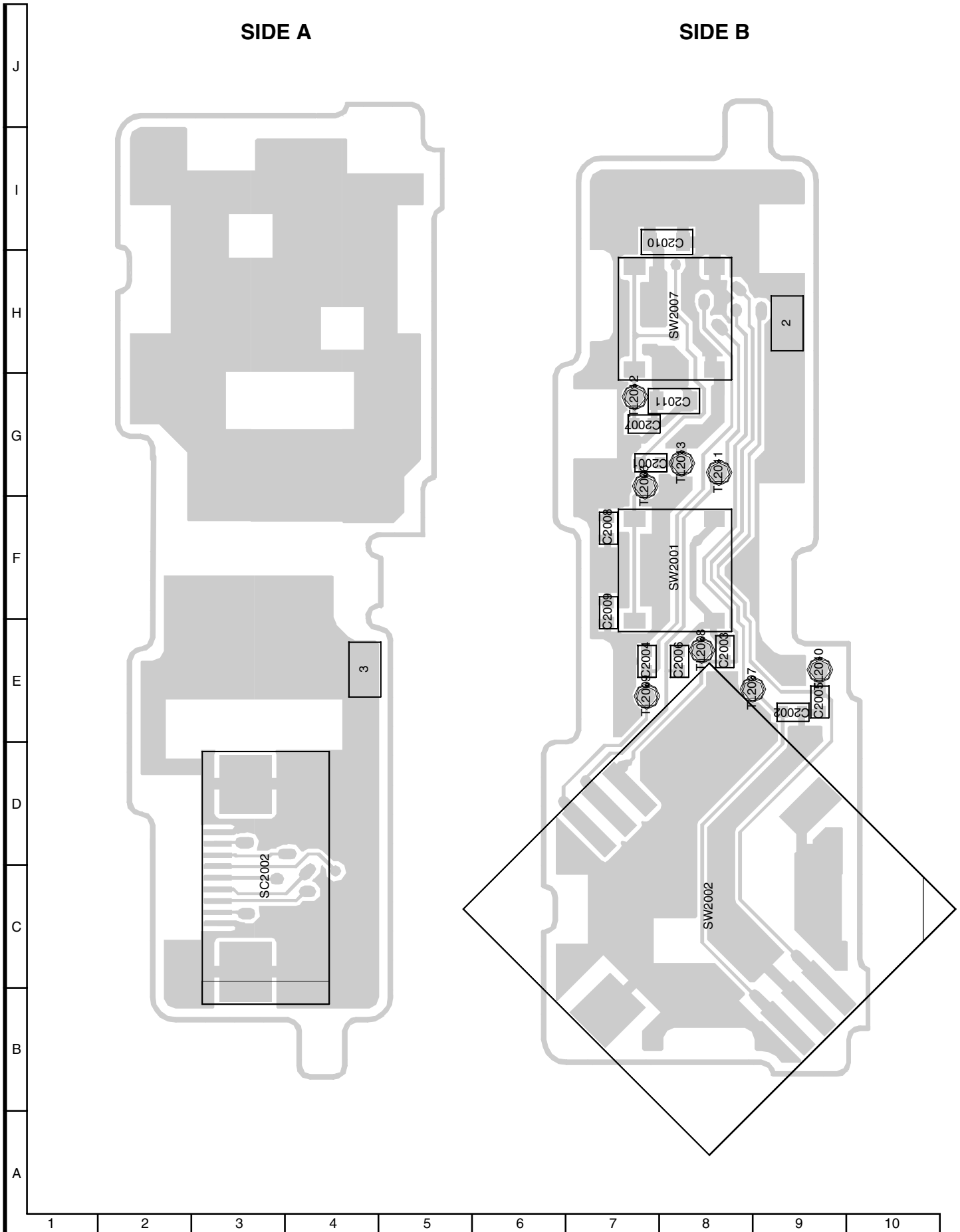
LITHIUM PWB

SIDE A

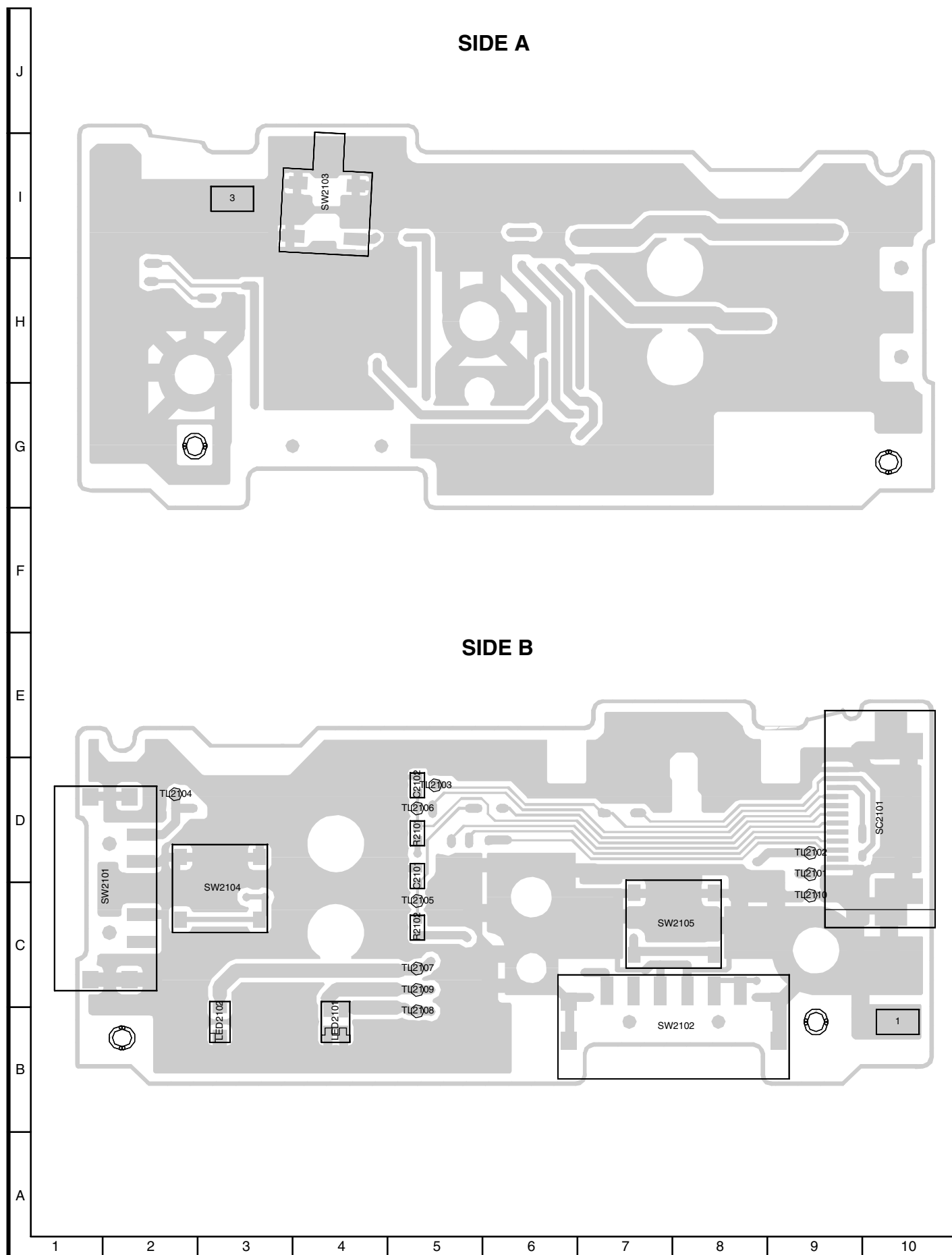


SIDE B

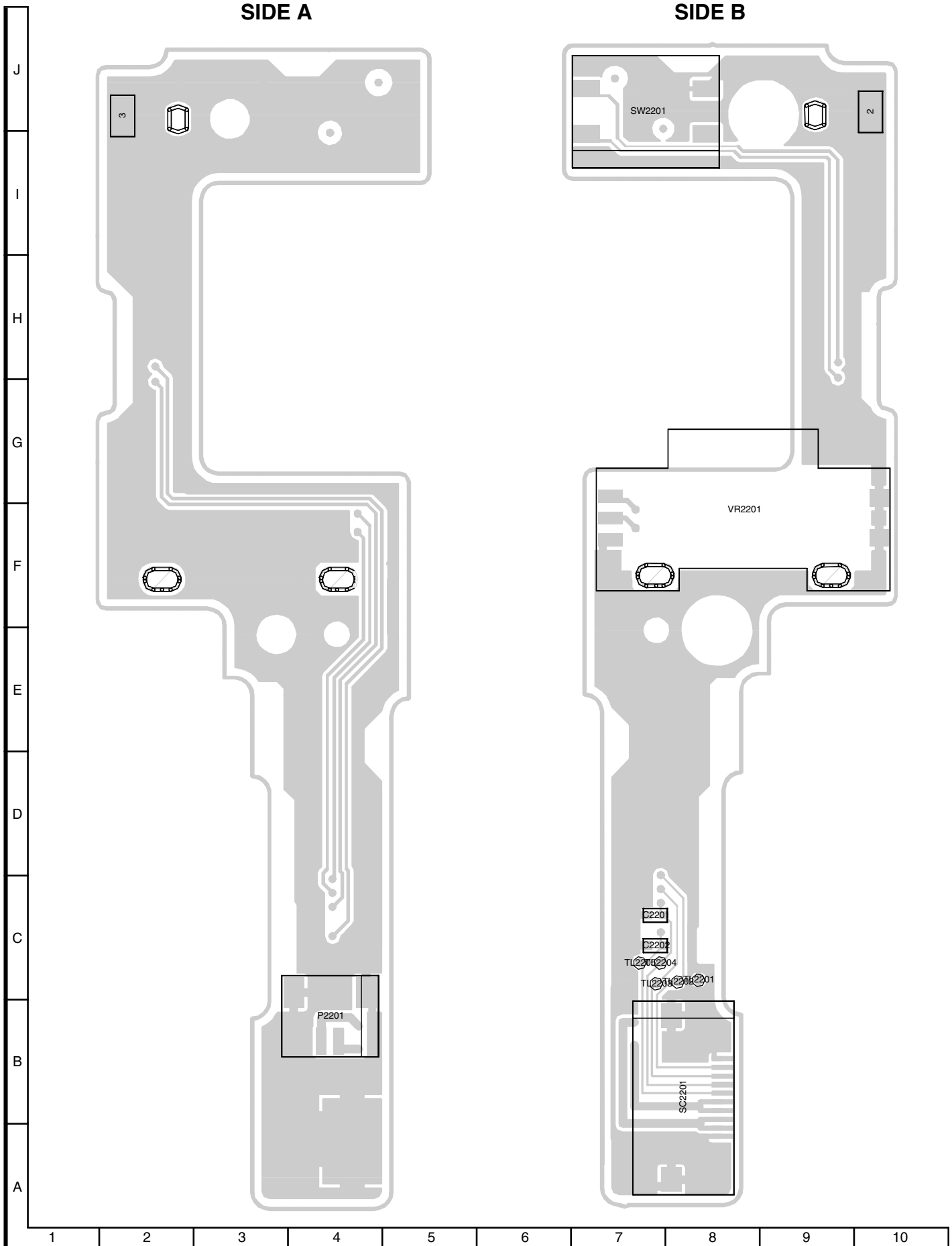




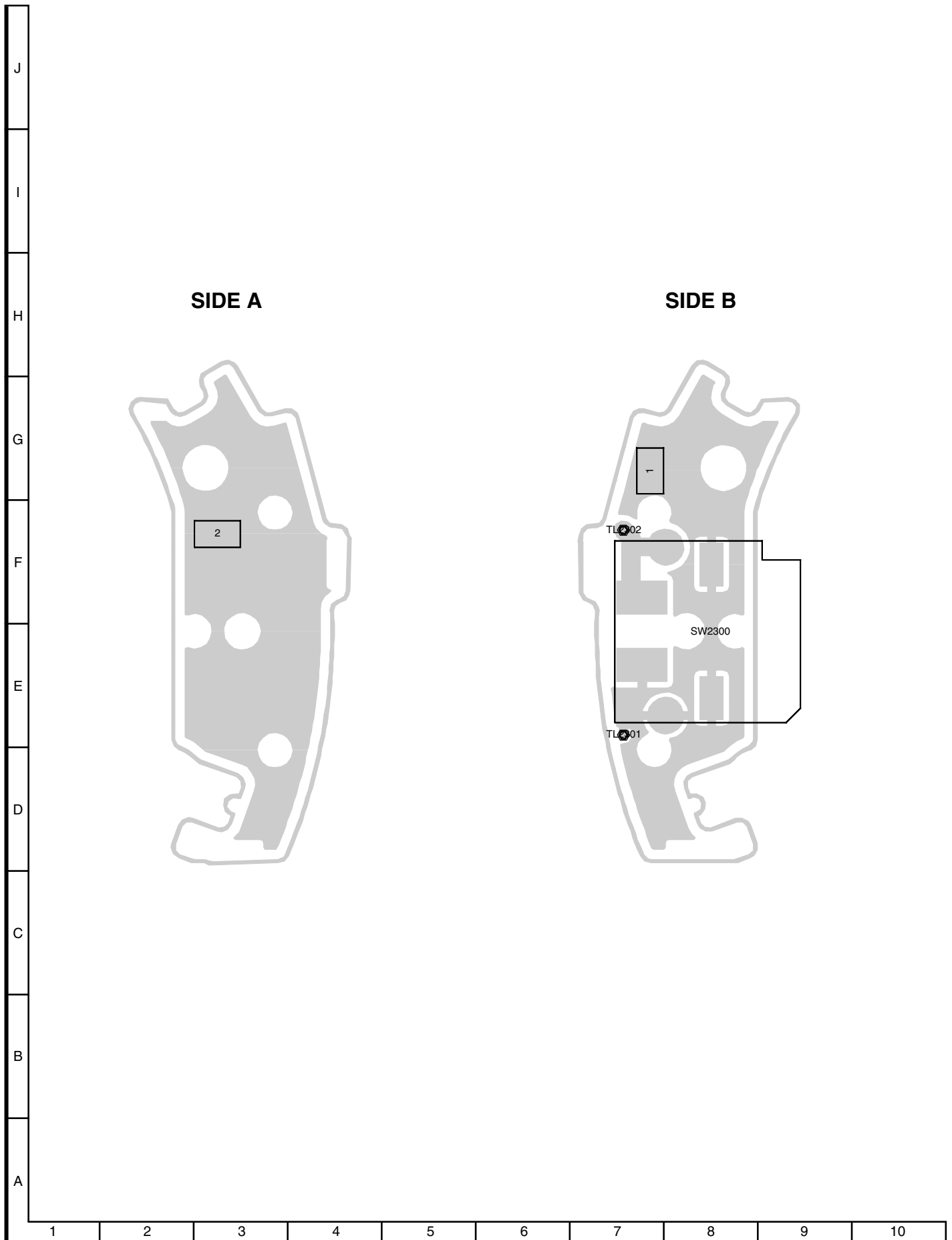
VCR OPERATION PWB



VL-Z7S/E/Z7E-A/Z7E-W  
 VL-Z8H  
 ZOOM SW PWB



MECHA REVERSION DETECTION PWB





# 16. REPLACEMENT PARTS LIST/ EXPLODED VIEWS

## ELECTRICAL PARTS LIST

Parts marked with "△" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

### " HOW TO ORDER REPLACEMENT PARTS "

★MARK : SPARE PARTS-DELIVERY SECTION:ALL JAPAN

To have your order filled promptly and correctly, please furnish the following informations.

- |                 |                |
|-----------------|----------------|
| 1. MODEL NUMBER | 2. REF. NO.    |
| 3. PART NO.     | 4. DESCRIPTION |
| 5. PRICE CODE   |                |

△ MARK: SAFETY RELATED PARTS

PWB ASSEMBLY IS NOT REPLACEMENT ITEM

Ref. No.	Part No.	★	Description	Code
----------	----------	---	-------------	------

### PRINTED WIRING BOARD ASSEMBLIES (NOT REPLACEMENT ITEM)

DUNTKB721QA05	MAIN PWB Unit	—	(VL-Z7S/SA/R)	
DUNTKB721QA08	MAIN PWB Unit	—	(VL-Z7E/EW/X/Z7EEA/EWA/ Z7EEW/EWW)	
DUNTKB721QA09	MAIN PWB Unit	—	(VL-Z8H)	
DUNTKB723QA01	CCD PWB Unit	—		
DUNTKB728QA05	SUB PWB Unit	—		
DUNTKB726QA00	LCD PWB Unit	—		
DUNTKB733QA00	HEAD AMP PWB Unit	—		
DUNTKB731PM00	LITHIUM PWB Unit	—		
DUNTKB730PM00	OPERATION PWB Unit	—		
DUNTKB734PM00	VCR OPERATION PWB Unit	—		
DUNTKB735PM00	ZOOM SW PWB Unit	—		
DUNTKB732PM00	MECHA REVERSION DETECTION PWB Unit	—		

Ref. No. Part No. ★ Description Code

### DUNTKB721QA05(VL-Z7S/SA/R) DUNTKB721QA08 (VL-Z7E/EW/X/Z7EEA/EWA/Z7EEW/EWW) DUNTKB721QA09(VL-Z8H) MAIN PWB UNIT

### INTEGRATED CIRCUITS

IC201	RH-iX0785TAZZQ		IX0785TA, CAM ENG	BL
IC203	RH-iXA320WJZZQ		IXA320WJ	BC
IC405	VHiNJU7015R-1Y		NJU7015R	AF
IC407	RH-iXA550WJZZY		IXA550WJ, Codec External Memory	AU
IC408	RH-iXA550WJZZY		IXA550WJ, ECC External Memory	AU
IC452	RH-iX0809TAZZQ		IX0809TA, Codec/ECC/ PCM/CLK,Gen/DIF	BM
IC701	RH-iXA543WJZZQ		IXA543WJ Mec/System Micon	AX
IC703	RH-iXA532WJZZY		IXA532WJ, Character Generator	AL
IC704	VHiR2101S01-1Y		R2101S01	AH
IC705	VHiBR24L64F-1Y		BR24L64F, E <sup>2</sup> PROM	AK
IC706	VHiNJM2143R-1Y		NJM2143R	AE
IC900	VHiMB3881+-1Y		MB3881+-, Power_CLT	AT
IC901	VHiNJM2143R-1Y		NJM2143R, 2.8V/2.5V Reg	AE
IC902	VHiNJM2143R-1Y		NJM2143R	AE
IC1401	VHiLA73070V-1Y		LA73070V, Video Out	AK
IC1431	VHiNJM2535V-1Y		NJM2535V, Video In SW	AE
IC1602	VHiPCM3008+-1Y		PCM3008+, 18Bit ADC/DAC	AN
IC3401	VHiBH7277KV-1Y		BH7277KV, EQ/PLL IC	AX
IC3402	VHiTLC2940/-1Y		TLC2940, VCO IC	AM
IC3403	VHiNC7SZ04P-1Y		NC7SZ04P, Inv IC	AD
IC3404	VHiADC8351C-1Y		ADC8351C, A/D Conv IC	AM
IC3405	VHi7SB3157P-1Y		7SB3157P	AE
IC3407	VHiNJU7008F-1Y		NJU7008F	AE
IC3701	RH-iXA503WJZZQ		IXA503WJ, Camera/ Card Micro Computer	BA
IC3702	RH-iXA550WJZZY		IXA550WJ, ECC External Memory	AU
IC4401	RH-iXA204WJZZQ		IXA204WJ, Digital ADC/DAC Decoder	BB
IC4461	VHi7SB3157P-1Y		7SB3157P	AE
IC4701	VHiMB8346BV-1Y		MB8346BV	AN
IC8800	VHiMM1323XV-1Y		MM1323XV, LCD Interface	AN

### TRANSISTORS

Q701	VSRT1N144U/-1Y		RT1N144U	AB
Q702	VSKTA2014EY-1Y		KTA2014EY	AB
Q704	VSKTA2014EY-1Y		KTA2014EY	AB
Q705	VSKTA2014EY-1Y		KTA2014EY	AB
Q900	VSXN09D61+-1Y		XN09D61+-	AD
Q901	VS15C01SS+-1Y		15C01SS+-	AC
Q902	VS12A01M+-1Y		12A01M+-	AC
Q903	VSXN09D61+-1Y		XN09D61+-	AD
Q904	VSXN09D61+-1Y		XN09D61+-	AD
Q905	VSFMMT619/-1Y		FMMT619	AE
Q906	VSXN09D61+-1Y		XN09D61+-	AD
Q907	VSXN09D61+-1Y		XN09D61+-	AD
Q908	VSXN09D61+-1Y		XN09D61+-	AD
Q909	VSMCH3405+-1Y		MCH3405+-	AD
Q910	VSMCH3405+-1Y		MCH3405+-	AD
Q911	VSXN09D61+-1Y		XN09D61+-	AD
Q1402	VS2SC5376B+-1Y		2SC5376B+-	AC
Q1403	VS2SC5376B+-1Y		2SC5376B+-	AC
Q1404	VSP4313///-1Y		XP4313	AC
Q1405	VS2SC5376B+-1Y		2SC5376B+-	AC
Q1431	VSP0431N+-1Y		XP0431N+-	AB
Q1432	VSP4601///-1Y		XP4601	AC
Q1433	VSKTC4075EY-1Y		KTC4075EY	AB
Q1434	VSP6401///-1Y		XP6401	AC
Q1800	VSP6401///-1Y		XP6401	AC
Q1801	VSP6401///-1Y		XP6401	AC





Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
C424	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C930	RC-KZA002WJZZY	4.7	16V Ceramic	AC
C425	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C931	RC-KZ0075TAZZY	2.2	16V Ceramic	AC
C430	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C932	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
C432	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C933	RC-KZA067WJZZY	4.7	10V Ceramic	AB
C435	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C934	RC-KZ0083TAZZY	2.2	10V Ceramic	AC
C447	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C936	RC-KZA069WJZZY	4.7	10V Ceramic	AB
C450	RC-KZA067WJZZY	4.7	10V Ceramic	AB	C938	RC-KZA067WJZZY	4.7	10V Ceramic	AB
C451	VCKYCY0JB105KY	1	6.3V Ceramic	AC	C939	VCKYTV1AB105KY	1	10V Ceramic	AC
C452	VCKYCZ1AB104KY	0.1	10V Ceramic	AB	C943	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
C456	RC-KZA067WJZZY	4.7	10V Ceramic	AB	C946	VCKYTV1AB105KY	1	10V Ceramic	AC
C460	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C948	RC-KZA069WJZZY	4.7	10V Ceramic	AB
C462	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C949	VCKYTV1AB105KY	1	10V Ceramic	AC
C463	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C951	VCKYTV1AB105KY	1	10V Ceramic	AC
C465	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C952	RC-KZ0083TAZZY	2.2	10V Ceramic	AC
C473	VCKYCZ1AB104KY	0.1	10V Ceramic	AB	C953	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
C474	VCKYCZ1AB104KY	0.1	10V Ceramic	AB	C954	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
C475	VCKYCZ1HB221KY	220p	50V Ceramic	AA	C955	RC-KZ0075TAZZY	2.2	16V Ceramic	AC
C476	VCKYCZ1HB221KY	220p	50V Ceramic	AA	C956	RC-KZA067WJZZY	4.7	10V Ceramic	AB
C477	VCKYCZ1HB221KY	220p	50V Ceramic	AA	C957	VCKYTV1AB105KY	1	10V Ceramic	AC
C478	VCKYCZ1HB221KY	220p	50V Ceramic	AA	C960	RC-KZA002WJZZY	4.7	16V Ceramic	AC
C701	VCKYCY1CB104KY	0.1	16V Ceramic	AB	C962	RC-KZA066WJZZY	1	25V Ceramic	AB
C702	VCKYCY0JF105ZY	1	6.3V Ceramic	AB	C966	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
C703	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C970	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
C704	VCKYCY0JB105KY	1	6.3V Ceramic	AC	C971	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
C705	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C972	RC-KZA002WJZZY	4.7	16V Ceramic	AC
C706	RC-KZA067WJZZY	4.7	10V Ceramic	AB	C973	RC-KZA067WJZZY	4.7	10V Ceramic	AB
C708	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C974	RC-KZA067WJZZY	4.7	10V Ceramic	AB
C709	VCKYCZ1HB102KY	1000p	50V Ceramic	AB	C978	RC-KZA066WJZZY	1	25V Ceramic	AB
C710	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C980	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
C711	VCKYCZ1HB102KY	1000p	50V Ceramic	AB	C981	RC-KZ0075TAZZY	2.2	16V Ceramic	AC
C712	VCKYCY0JB105KY	1	6.3V Ceramic	AC	C982	RC-KZA067WJZZY	4.7	10V Ceramic	AB
C713	VCKYCZ1HB102KY	1000p	50V Ceramic	AB	C983	VCKYTV1AB105KY	1	10V Ceramic	AC
C716	VCKYCZ1HB102KY	1000p	50V Ceramic	AB	C990	RC-KZ0075TAZZY	2.2	16V Ceramic	AC
C719	VCCCCZ1HH270JY	27p	50V Ceramic	AB	C991	RC-KZA002WJZZY	4.7	16V Ceramic	AC
C720	VCCCCZ1HH270JY	27p	50V Ceramic	AB	C992	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
C721	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C993	VCKYCY1AB224KY	0.22	10V Ceramic	AB
C722	VCKYCZ1AB104KY	0.1	10V Ceramic	AB	C1201	VCCCCZ1HH6R0DY	6p	50V Ceramic	AA
C723	VCKYCZ1AB104KY	0.1	10V Ceramic	AB	C1402	RC-KZA067WJZZY	4.7	10V Ceramic	AB
C724	VCKYCZ1HB102KY	1000p	50V Ceramic	AB	C1406	VCSATE0JJ107MY	100	6.3V Tantalum	AE
C725	VCKYCZ1EB682KY	6800p	25V Ceramic	AB	C1407	VCSATA0JJ336MY	33	6.3V Tantalum	AD
C726	VCKYCZ1HB102KY	1000p	50V Ceramic	AB	C1408	VCKYCY0JF105ZY	1	6.3V Ceramic	AB
C727	VCKYCZ1AF104ZY	0.1	10V Ceramic	AB	C1409	VCKYCY0JB105KY	1	6.3V Ceramic	AC
C728	VCKYCZ1AF104ZY	0.1	10V Ceramic	AB	C1410	VCKYCZ1AF104ZY	0.1	10V Ceramic	AB
C729	VCKYCZ1AF104ZY	0.1	10V Ceramic	AB	C1411	VCSATE0JJ107MY	100	6.3V Tantalum	AE
C730	VCKYCZ1AF104ZY	0.1	10V Ceramic	AB	C1412	VCSATA0JJ336MY	33	6.3V Tantalum	AD
C731	VCKYCZ1AF104ZY	0.1	10V Ceramic	AB	C1416	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
C732	VCKYCZ1AF104ZY	0.1	10V Ceramic	AB	C1417	VCKYCZ1AF104ZY	0.1	10V Ceramic	AB
C733	VCKYCZ1AF104ZY	0.1	10V Ceramic	AB	C1418	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
C734	VCKYCZ1AF104ZY	0.1	10V Ceramic	AB	C1419	VCKYCZ1AF104ZY	0.1	10V Ceramic	AB
C735	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C1431	RC-KZA067WJZZY	4.7	10V Ceramic	AB
C737	VCKYCZ1EB682KY	6800p	25V Ceramic	AB	C1432	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
C904	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C1433	VCCCCZ1HH150JY	15p	50V Ceramic	AB
C905	VCKYCZ0JB224KY	0.22	6.3V Ceramic	AB	C1434	VCCCCZ1HH680JY	68p	50V Ceramic	AB
C906	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C1435	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
C907	VCKYCZ1HB102KY	1000p	50V Ceramic	AB	C1436	VCCCCZ1HH150JY	15p	50V Ceramic	AB
C908	VCKYCZ1AB473KY	0.047	10V Ceramic	AB	C1437	VCCCCZ1HH680JY	68p	50V Ceramic	AB
C910	VCKYCZ1AB104KY	0.1	10V Ceramic	AB	C1438	VCKYCZ1AF104ZY	0.1	10V Ceramic	AB
C911	VCKYCZ1AB104KY	0.1	10V Ceramic	AB	C1439	VCKYCY0JB105KY	1	6.3V Ceramic	AC
C912	VCKYCY1CB104KY	0.1	16V Ceramic	AB	C1440	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
C913	VCKYCZ1HB222KY	2200p	50V Ceramic	AB	C1441	VCKYCY0JB105KY	1	6.3V Ceramic	AC
C914	VCCCCZ1HH101JY	100p	50V Ceramic	AB	C1603	VCKYCY0JB105KY	1	6.3V Ceramic	AC
C915	VCKYCY1AB224KY	0.22	10V Ceramic	AB	C1604	VCKYCY0JB105KY	1	6.3V Ceramic	AC
C916	VCKYCZ1HB102KY	1000p	50V Ceramic	AB	C1605	RC-KZ0083TAZZY	2.2	10V Ceramic	AC
C917	VCKYCZ1HB221KY	220p	50V Ceramic	AA	C1608	RC-KZA067WJZZY	4.7	10V Ceramic	AB
C918	VCKYCZ1HB221KY	220p	50V Ceramic	AA	C1610	VCKYCZ1AF104ZY	0.1	10V Ceramic	AB
C919	VCKYCZ1HB102KY	1000p	50V Ceramic	AB	C1611	VCKYCY1AB474KY	0.47	10V Ceramic	AC
C920	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	C1617	VCKYCY1AB474KY	0.47	10V Ceramic	AC
C921	VCKYCY1CB104KY	0.1	16V Ceramic	AB	C1800	RC-KZA067WJZZY	4.7	10V Ceramic	AB
C922	VCKYCY1CB104KY	0.1	16V Ceramic	AB	C1801	VCCCCZ1HH180JY	18p	50V Ceramic	AB
C923	VCKYCZ1HB102KY	1000p	50V Ceramic	AB	C1802	VCCCCZ1HH680JY	68p	50V Ceramic	AB
C924	VCKYCZ1HB471KY	470p	50V Ceramic	AB	C1803	VCCCCZ1HH180JY	18p	50V Ceramic	AB
C926	VCKYCY1EB223KY	0.022	25V Ceramic	AA	C1804	VCCCCZ1HH680JY	68p	50V Ceramic	AB
C927	VCKYCZ1HB471KY	470p	50V Ceramic	AB	C1805	VCCCCZ1HH180JY	18p	50V Ceramic	AB
C928	VCKYCZ1AB104KY	0.1	10V Ceramic	AB	C1806	VCCCCZ1HH680JY	68p	50V Ceramic	AB
C929	RC-KZA066WJZZY	1	25V Ceramic	AB	C1811	VCKYCZ1CB103KY	0.01	16V Ceramic	AB

VL-Z7S/E/Z7E-A/Z7E-W  
VL-Z8H

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
C1815	VCKY CZ1AB104KY	0.1	10V Ceramic	AB	C3704	VCKY CZ1HB102KY	1000p	50V Ceramic	AB
C1901	VCKY CY1EB104KY	0.1	25V Ceramic	AB	C3706	VCKY CZ1AB104KY	0.1	10V Ceramic	AB
C1902	VCKY CZ1AB104KY	0.1	10V Ceramic	AB	C3708	RC-KZA067WJZZY	4.7	10V Ceramic	AB
C1903	VCKY CY1EB104KY	0.1	25V Ceramic	AB	C3709	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C1904	VCKY CY1EB104KY	0.1	25V Ceramic	AB	C3710	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C1905	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	C3711	VCKY CZ1AB104KY	0.1	10V Ceramic	AB
C1906	RC-KZA069WJZZY	4.7	10V Ceramic	AB	C3712	VCKY CZ1AB104KY	0.1	10V Ceramic	AB
C1907	VCKY CZ1AB104KY	0.1	10V Ceramic	AB	C3714	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C1908	VCKY CY1EB104KY	0.1	25V Ceramic	AB	C3716	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C1909	RC-KZ1025CEZZY	1	10V Ceramic	AB	C3717	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C1910	VCKY CY1EB104KY	0.1	25V Ceramic	AB	C4401	RC-KZ0083TAZZY	2.2	10V Ceramic	AC
C1911	RC-KZA069WJZZY	4.7	10V Ceramic	AB	C4402	RC-KZ0083TAZZY	2.2	10V Ceramic	AC
C1912	VCKY CY1EB104KY	0.1	25V Ceramic	AB	C4403	RC-KZ0083TAZZY	2.2	10V Ceramic	AC
C1913	VCKY CY1EB104KY	0.1	25V Ceramic	AB	C4404	RC-KZA067WJZZY	4.7	10V Ceramic	AB
C1914	VCKY TV1CB105KY	1	16V Ceramic	AC	C4405	RC-KZ0083TAZZY	2.2	10V Ceramic	AC
C1915	VCKY CY1EB104KY	0.1	25V Ceramic	AB	C4406	RC-KZA067WJZZY	4.7	10V Ceramic	AB
C1916	VCKY CY1EB104KY	0.1	25V Ceramic	AB	C4407	VCKY CZ0JB224KY	0.22	6.3V Ceramic	AB
C1990	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	C4408	VCKY CZ0JB224KY	0.22	6.3V Ceramic	AB
C3320	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C4409	VCKY CZ0JB224KY	0.22	6.3V Ceramic	AB
C3321	VCKY TV1CB105KY	1	16V Ceramic	AC	C4410	VCKY CY1CB104KY	0.1	16V Ceramic	AB
C3401	VCCCCZ1HH390JY	39p	50V Ceramic	AB	C4413	VCKY CY1CB104KY	0.1	16V Ceramic	AB
C3402	VCCCCZ1HH100DY	10p	50V Ceramic	AB	C4414	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB
C3403	VCCCCZ1HH100DY	10p	50V Ceramic	AB	C4415	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB
C3405	VCCCCZ1HH820JY	82p	50V Ceramic	AB	C4416	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3406	VCKY CY0JB105KY	1	6.3V Ceramic	AC	C4417	VCCCCZ1HH221JY	220p	50V Ceramic	AB
C3407	VCCCCZ1HH101JY	100p	50V Ceramic	AB	C4418	VCCCCZ1HH221JY	220p	50V Ceramic	AB
C3408	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C4419	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3409	VCKY CZ1HB471KY	470p	50V Ceramic	AB	C4420	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3410	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C4421	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3411	VCKY CZ1HB471KY	470p	50V Ceramic	AB	C4422	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3412	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C4423	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3413	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C4424	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3414	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C4426	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3415	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C4427	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3416	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C4428	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3417	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C4435	RC-KZA067WJZZY	4.7	10V Ceramic	AB
C3418	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C4436	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3419	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C4451	VCCCCZ1HH390JY	39p	50V Ceramic	AB
C3421	VCCCCZ1HH121JY	120p	50V Ceramic	AB	C4454	VCCCCZ1HH390JY	39p	50V Ceramic	AB
C3423	VCCCCZ1HH121JY	120p	50V Ceramic	AB	C4461	VCKY CY0JB105KY	1	6.3V Ceramic	AC
C3424	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	C4462	VCKY CZ1AB104KY	0.1	10V Ceramic	AB
C3426	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	C4463	VCKY CZ1EB682KY	6800p	25V Ceramic	AB
C3428	VCKY CY0JB105KY	1	6.3V Ceramic	AC	C4481	VCSATA0JJ106MY	10	6.3V Tantalum	AD
C3429	VCKY CZ1HB102KY	1000p	50V Ceramic	AB	C4482	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3430	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C4483	RC-KZA067WJZZY	4.7	10V Ceramic	AB
C3431	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	C4485	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB
C3432	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C4702	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB
C3433	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	C4703	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB
C3434	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	C6800	VCKY CZ1HB102KY	1000p	50V Ceramic	AB
C3436	VCSATA0YJ336MY	33	Tantalum	AD	C6801	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3442	VCCCCZ1HH180JY	18p	50V Ceramic	AB	C6802	VCCCCZ1HH101JY	100p	50V Ceramic	AB
C3443	VCCCCZ1HH220JY	22p	50V Ceramic	AB	C6803	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3444	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C6804	VCKY CZ1HB102KY	1000p	50V Ceramic	AB
C3451	VCCCCZ1HH100DY	10p	50V Ceramic	AB	C6805	VCCCCZ1HH390JY	39p	50V Ceramic	AB
C3452	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	C6806	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3454	VCKY CY0JB105KY	1	6.3V Ceramic	AC	C6810	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3455	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	C6811	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3456	RC-KZA067WJZZY	4.7	10V Ceramic	AB	C6812	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3457	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	C6813	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB
C3458	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C6814	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB
C3462	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	C6815	VCKY CZ1CB103KY	0.01	16V Ceramic	AB
C3465	VCCCCZ1HH100DY	10p	50V Ceramic	AB	C6816	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB
C3467	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	C7400	VCKY CY0JB105KY	1	6.3V Ceramic	AC
C3470	VCCCCZ1HH5R0CY	5p	50V Ceramic	AA	C7401	VCKY CY0JB105KY	1	6.3V Ceramic	AC
C3471	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C7404	VCKY CZ1EB472KY	4700p	25V Ceramic	AB
C3473	VCSATA0YJ336MY	33	Tantalum	AD	C7413	VCKY CZ1HB221KY	220p	50V Ceramic	AA
C3474	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	C7414	VCCCCZ1HH330JY	33p	50V Ceramic	AB
C3475	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C7417	VCKY CY0JB105KY	1	6.3V Ceramic	AC
C3476	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C7800	RC-KZA067WJZZY	4.7	10V Ceramic	AB
C3477	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	C7801	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB
C3478	VCCCCZ1HH390JY	39p	50V Ceramic	AB	C7802	VCKY CY0JB105KY	1	6.3V Ceramic	AC
C3479	VCKY CZ0JB224KY	0.22	6.3V Ceramic	AB	C7803	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB
C3481	VCCCCZ1HH100DY	10p	50V Ceramic	AB	C7804	VCKY CY0JB105KY	1	6.3V Ceramic	AC
C3701	VCKY TV1AB105KY	1	10V Ceramic	AC	C7805	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB
C3702	VCKY TV1AB105KY	1	10V Ceramic	AC	C7806	VCKY CY0JB105KY	1	6.3V Ceramic	AC

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
C7807	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	R719	VRS-CZ1JF101JY	100	1/16W Metal Oxide	AA
C7808	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	R720	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
C7809	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	R721	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
C7810	VCCCZ1HH470JY	47p	50V Ceramic	AB	R722	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
C7812	VCKYCZ1HB102KY	1000p	50V Ceramic	AB	R723	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
C7827	VCKYCZ1HB102KY	1000p	50V Ceramic	AB	R724	VRS-CZ1JF823DY	82k	1/16W Metal Oxide	AA
C7828	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	R725	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
C7829	VCCCZ1HH101JY	100p	50V Ceramic	AB	R726	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
C7830	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	R728	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
C8800	VCKYCZ1HF103ZY	0.01	50V Ceramic	AB	R729	VRS-CZ1JF332JY	3.3k	1/16W Metal Oxide	AA
C8801	VCKYCY0JF105ZY	1	6.3V Ceramic	AB	R730	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
C8802	VCKYTV1CB105KY	1	16V Ceramic	AC	R731	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
C8803	VCKYCZ1HF103ZY	0.01	50V Ceramic	AB	R732	VRS-CZ1JF474DY	470k	1/16W Metal Oxide	AA
C8804	VCKYTV1AB105KY	1	10V Ceramic	AC	R733	VRS-CZ1JF331JY	330	1/16W Metal Oxide	AA
C8805	RC-KZA067WJZZY	4.7	10V Ceramic	AB	R734	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
C8806	VCKYTV1EB104KY	0.1	25V Ceramic	AB	R735	VRS-CZ1JF332JY	3.3k	1/16W Metal Oxide	AA
C8807	VCKYCY0JB105KY	1	6.3V Ceramic	AC	R736	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
C8808	VCKYCY0JB105KY	1	6.3V Ceramic	AC	R737	VRS-CZ1JF332JY	3.3k	1/16W Metal Oxide	AA
C8809	VCKYCY0JB105KY	1	6.3V Ceramic	AC	R738	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
C8813	VCKYTV1CB105KY	1	16V Ceramic	AC	R739	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
C8816	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	R741	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
C8822	VCKYCZ1CB103KY	0.01	16V Ceramic	AB	R742	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
					R743	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
					R744	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
					R745	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
					R746	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
					R747	VRS-CZ1JF184JY	180k	1/16W Metal Oxide	AA
					R748	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
					R749	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
					R750	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
					R751	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
					R752	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
					R753	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
					R754	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
					R755	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA
					R756	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
					R757	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
					R758	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
					R759	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
					R760	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
					R761	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
					R762	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
					R764	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
					R765	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
					R766	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
					R767	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA
					R771	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
					R772	VRS-CZ1JF474JY	470k	1/16W Metal Oxide	AA
					R779	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
					R780	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
					R782	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
					R902	VRS-CZ1JF472JY	4.7k	1/16W Metal Oxide	AA
					R903	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
					R904	VRS-CZ1JF123JY	12k	1/16W Metal Oxide	AA
					R905	VRS-CZ1JF153JY	15k	1/16W Metal Oxide	AA
					R906	VRS-CZ1JF153JY	15k	1/16W Metal Oxide	AA
					R907	VRS-CZ1JF822JY	8.2k	1/16W Metal Oxide	AA
					R909	VRS-CZ1JF562DY	5.6k	1/16W Metal Oxide	AA
					R910	VRS-CZ1JF272DY	2.7k	1/16W Metal Oxide	AB
					R912	VRS-CZ1JF473JY	47k	1/16W Metal Oxide	AA
					R914	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
					R917	VRS-CZ1JF682DY	6.8k	1/16W Metal Oxide	AB
					R918	VRS-CZ1JF472DY	4.7k	1/16W Metal Oxide	AB
					R919	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
					R920	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
					R924	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
					R926	VRS-CZ1JF333DY	33k	1/16W Metal Oxide	AA
					R927	VRS-CZ1JF683DY	68k	1/16W Metal Oxide	AA
					R928	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
					R929	VRS-CZ1JF473DY	47k	1/16W Metal Oxide	AA
					R930	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA
					R931	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
					R932	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
					R933	VRS-CZ1JF683JY	68k	1/16W Metal Oxide	AA
					R934	VRS-CZ1JF153JY	15k	1/16W Metal Oxide	AA

RESISTORS

VL-Z7S/E/Z7E-A/Z7E-W  
VL-Z8H

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
R935	VRS-CZ1JF183JY	18k	1/16W Metal Oxide	AA	R1826	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R936	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA	R1901	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
R937	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA	R1902	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R938	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA	R1903	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R939	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA	R1904	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R940	VRS-CZ1JF153DY	15k	1/16W Metal Oxide	AA	R1905	VRS-CZ1JF331JY	330	1/16W Metal Oxide	AA
R941	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA	R1906	VRS-CZ1JF153DY	15k	1/16W Metal Oxide	AA
R942	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA	R1907	VRS-CZ1JF222DY	2.2k	1/16W Metal Oxide	AA
R943	VRS-CZ1JF303DY	30k	1/16W Metal Oxide	AA	R1908	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R946	VRS-CZ1JF163DY	16k	1/16W Metal Oxide	AA	R1909	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
R948	VRS-CZ1JF473DY	47k	1/16W Metal Oxide	AA	R1910	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R949	VRS-CZ1JF681DY	680	1/16W Metal Oxide	AB	R1911	VRS-CZ1JF153JY	15k	1/16W Metal Oxide	AA
R951	VRS-CZ1JF681JY	680	1/16W Metal Oxide	AA	R1912	VRS-CZ1JF153JY	15k	1/16W Metal Oxide	AA
R952	VRS-CZ1JF223DY	22k	1/16W Metal Oxide	AB	R1913	VRS-CZ1JF152JY	1.5k	1/16W Metal Oxide	AA
R954	VRS-CZ1JF333DY	33k	1/16W Metal Oxide	AA	R1914	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R957	VRS-CZ1JF333DY	33k	1/16W Metal Oxide	AA	R1915	VRS-CZ1JF363DY	36k	1/16W Metal Oxide	AA
R959	VRS-CZ1JF123DY	12k	1/16W Metal Oxide	AA	R1916	VRS-CZ1JF821JY	820	1/16W Metal Oxide	AA
R960	VRS-CZ1JF182DY	1.8k	1/16W Metal Oxide	AA	R1917	VRS-CZ1JF163JY	16k	1/16W Metal Oxide	AA
R962	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA	R1918	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R965	VRS-CZ1JF122DY	1.2k	1/16W Metal Oxide	AA	R1919	VRS-CZ1JF153JY	15k	1/16W Metal Oxide	AA
R966	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA	R1920	VRS-CZ1JF682JY	6.8k	1/16W Metal Oxide	AA
R968	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA	R1921	VRS-CZ1JF243DY	24k	1/16W Metal Oxide	AA
R970	VRS-CZ1JF681JY	680	1/16W Metal Oxide	AA	R1922	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R972	VRS-CZ1JF133DY	13k	1/16W Metal Oxide	AA	R1923	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R973	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA	R1924	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R974	VRS-CZ1JF102DY	1k	1/16W Metal Oxide	AA	R1925	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R975	VRS-CZ1JF331JY	330	1/16W Metal Oxide	AA	R1926	VRS-CZ1JF392DY	3.9k	1/16W Metal Oxide	AA
R977	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA	R1927	VRS-CZ1JF241DY	240	1/16W Metal Oxide	AA
R979	VRS-CZ1JF104DY	100k	1/16W Metal Oxide	AA	R1928	VRS-CZ1JF182DY	1.8k	1/16W Metal Oxide	AA
R980	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA	R1929	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA
R982	VRS-CZ1JF471JY	470	1/16W Metal Oxide	AA	R1931	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R983	VRS-CZ1JF471JY	470	1/16W Metal Oxide	AA	R1932	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R987	VRS-CZ1JF821JY	820	1/16W Metal Oxide	AA	R1933	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R988	VRS-CZ1JF821JY	820	1/16W Metal Oxide	AA	R1934	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R990	VRS-CZ1JF681JY	680	1/16W Metal Oxide	AA	R1935	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R1201	VRS-CZ1JF393JY	39k	1/16W Metal Oxide	AA	R1940	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R1402	VRS-CZ1JF470JY	47	1/16W Metal Oxide	AA	R1943	VRS-CZ1JF681JY	680	1/16W Metal Oxide	AA
R1403	VRS-CZ1JF470JY	47	1/16W Metal Oxide	AA	R1990	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
R1404	VRS-CZ1JF270JY	27	1/16W Metal Oxide	AA	R1991	VRS-CZ1JF474JY	470k	1/16W Metal Oxide	AA
R1405	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA	R1993	VRS-CZ1JF152JY	1.5k	1/16W Metal Oxide	AA
R1406	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA	R3320	VRS-CZ1JF562JY	5.6k	1/16W Metal Oxide	AA
R1413	VRS-CZ1JF470JY	47	1/16W Metal Oxide	AA	R3321	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R1414	VRS-CZ1JF270JY	27	1/16W Metal Oxide	AA	R3401	VRS-CZ1JF181JY	180	1/16W Metal Oxide	AA
R1419	VRS-CZ1JF270JY	27	1/16W Metal Oxide	AA	R3402	VRS-CZ1JF472JY	4.7k	1/16W Metal Oxide	AA
R1422	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA	R3403	VRS-CZ1JF273JY	27k	1/16W Metal Oxide	AA
R1423	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA	R3404	VRS-CZ1JF181JY	180	1/16W Metal Oxide	AA
R1424	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA	R3405	VRS-CZ1JF152JY	1.5k	1/16W Metal Oxide	AA
R1431	VRS-CZ1JF122JY	1.2k	1/16W Metal Oxide	AA	R3406	VRS-CZ1JF562JY	5.6k	1/16W Metal Oxide	AA
R1432	VRS-CZ1JF332JY	3.3k	1/16W Metal Oxide	AA	R3407	VRS-CZ1JF101JY	100	1/16W Metal Oxide	AA
R1433	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA	R3408	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R1434	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA	R3409	VRS-CZ1JF121JY	120	1/16W Metal Oxide	AA
R1435	VRS-CZ1JF122JY	1.2k	1/16W Metal Oxide	AA	R3410	VRS-CZ1JF151JY	150	1/16W Metal Oxide	AA
R1436	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA	R3411	VRS-CZ1JF391JY	390	1/16W Metal Oxide	AA
R1437	VRS-CZ1JF223JY	22k	1/16W Metal Oxide	AA	R3412	VRS-CZ1JF221JY	220	1/16W Metal Oxide	AA
R1438	VRS-CZ1JF122JY	1.2k	1/16W Metal Oxide	AA	R3413	VRS-CZ1JF391JY	390	1/16W Metal Oxide	AA
R1439	VRS-CZ1JF272JY	2.7k	1/16W Metal Oxide	AA	R3414	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R1440	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA	R3415	VRS-CZ1JF151JY	150	1/16W Metal Oxide	AA
R1441	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA	R3416	VRS-CZ1JF221JY	220	1/16W Metal Oxide	AA
R1442	VRS-CZ1JF750JY	75	1/16W Metal Oxide	AA	R3417	VRS-CZ1JF221JY	220	1/16W Metal Oxide	AA
R1462	VRS-CZ1JF474DY	470k	1/16W Metal Oxide	AA	R3418	VRS-CZ1JF181JY	180	1/16W Metal Oxide	AA
R1800	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA	R3419	VRS-CZ1JF472JY	4.7k	1/16W Metal Oxide	AA
R1801	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA	R3420	VRS-CZ1JF472JY	4.7k	1/16W Metal Oxide	AA
R1802	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA	R3421	VRS-CZ1JF183JY	18k	1/16W Metal Oxide	AA
R1804	VRS-CZ1JF122JY	1.2k	1/16W Metal Oxide	AA	R3422	VRS-CZ1JF151JY	150	1/16W Metal Oxide	AA
R1806	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA	R3423	VRS-CZ1JF182JY	1.8k	1/16W Metal Oxide	AA
R1807	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA	R3424	VRS-CZ1JF151JY	150	1/16W Metal Oxide	AA
R1808	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA	R3425	VRS-CZ1JF122DY	1.2k	1/16W Metal Oxide	AA
R1810	VRS-CZ1JF122JY	1.2k	1/16W Metal Oxide	AA	R3426	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA
R1812	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA	R3427	VRS-CZ1JF122JY	1.2k	1/16W Metal Oxide	AA
R1813	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA	R3428	VRS-CZ1JF273DY	27k	1/16W Metal Oxide	AA
R1814	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA	R3429	VRS-CZ1JF101JY	100	1/16W Metal Oxide	AA
R1816	VRS-CZ1JF122JY	1.2k	1/16W Metal Oxide	AA	R3430	VRS-CZ1JF123JY	12k	1/16W Metal Oxide	AA
R1823	VRS-CZ1JF221JY	220	1/16W Metal Oxide	AA	R3431	VRS-CZ1JF824JY	820k	1/16W Metal Oxide	AA
R1824	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA	R3432	VRS-CZ1JF333DY	33k	1/16W Metal Oxide	AA
R1825	VRS-CZ1JF331JY	330	1/16W Metal Oxide	AA	R3433	VRS-CZ1JF335JY	3.3M	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
R3434	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA	R4489	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R3435	VRS-CZ1JF122JY	1.2k	1/16W Metal Oxide	AA	R4494	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R3436	VRS-CZ1JF182JY	1.8k	1/16W Metal Oxide	AA	R4495	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R3437	VRS-CZ1JF472JY	4.7k	1/16W Metal Oxide	AA	R6802	VRS-CZ1JF682DY	6.8k	1/16W Metal Oxide	AB
R3439	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA	R6803	VRS-CZ1JF682DY	6.8k	1/16W Metal Oxide	AB
R3440	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA	R6804	VRS-CZ1JF564JY	560k	1/16W Metal Oxide	AB
R3442	VRS-CZ1JF332JY	3.3k	1/16W Metal Oxide	AA	R6805	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R3445	VRS-CZ1JF122DY	1.2k	1/16W Metal Oxide	AA	R6806	VRS-CZ1JF334JY	330k	1/16W Metal Oxide	AA
R3451	VRS-CZ1JF334JY	330k	1/16W Metal Oxide	AA	R6807	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA
R3452	VRS-CZ1JF820JY	82	1/16W Metal Oxide	AA	R6808	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA
R3454	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA	R6809	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
R3457	VRS-CZ1JF820JY	82	1/16W Metal Oxide	AA	R6816	VRS-CZ1JF564JY	560k	1/16W Metal Oxide	AB
R3462	VRS-CZ1JF211JY	270	1/16W Metal Oxide	AA	R6817	VRS-CZ1JF564JY	560k	1/16W Metal Oxide	AB
R3463	VRS-CZ1JF122JY	1.2k	1/16W Metal Oxide	AA	R6818	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R3468	VRS-CZ1JF100JY	10	1/16W Metal Oxide	AA	R6819	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R3469	VRS-CZ1JF390JY	39	1/16W Metal Oxide	AA	R6820	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R3470	VRS-CZ1JF101JY	100	1/16W Metal Oxide	AA	R7401	VRS-CZ1JF561JY	560	1/16W Metal Oxide	AA
R3471	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA	R7402	VRS-CZ1JF472JY	4.7k	1/16W Metal Oxide	AA
R3472	VRS-CZ1JF562JY	5.6k	1/16W Metal Oxide	AA	R7403	VRS-CZ1JF273JY	27k	1/16W Metal Oxide	AA
R3473	VRS-CZ1JF562JY	5.6k	1/16W Metal Oxide	AA	R7413	VRS-CZ1JF512DY	5.1k	1/16W Metal Oxide	AA
R3478	VRS-CZ1JF123JY	12k	1/16W Metal Oxide	AA	R7415	VRS-CZ1JF560DY	56	1/16W Metal Oxide	AA
R3479	VRS-CZ1JF183JY	18k	1/16W Metal Oxide	AA	R7416	VRS-CZ1JF560DY	56	1/16W Metal Oxide	AA
R3480	VRS-CZ1JF681JY	680	1/16W Metal Oxide	AA	R7417	VRS-CZ1JF560DY	56	1/16W Metal Oxide	AA
R3481	VRS-CZ1JF680JY	68	1/16W Metal Oxide	AB	R7418	VRS-CZ1JF560DY	56	1/16W Metal Oxide	AA
R3482	VRS-CZ1JF562JY	5.6k	1/16W Metal Oxide	AA	R7419	VRS-CZ1JF221JY	220	1/16W Metal Oxide	AA
R3486	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA	R7420	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R3487	VRS-CZ1JF152JY	1.5k	1/16W Metal Oxide	AA	R7422	VRS-CZ1JF392DY	3.9k	1/16W Metal Oxide	AA
R3488	VRS-CZ1JF681DY	680	1/16W Metal Oxide	AB	R7423	VRS-CZ1JF392DY	3.9k	1/16W Metal Oxide	AA
R3489	VRS-CZ1JF332JY	3.3k	1/16W Metal Oxide	AA	R7424	VRS-CZ1JF242DY	2.4k	1/16W Metal Oxide	AA
R3492	VRS-CZ1JF272JY	2.7k	1/16W Metal Oxide	AA	R7800	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R3493	VRS-CZ1JF272JY	2.7k	1/16W Metal Oxide	AA	R7811	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
R3495	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA	R7819	VRS-CZ1JF564JY	560k	1/16W Metal Oxide	AB
R3496	VRS-CZ1JF332JY	3.3k	1/16W Metal Oxide	AA	R7820	VRS-CZ1JF564JY	560k	1/16W Metal Oxide	AB
R3499	VRS-CZ1JF271JY	270	1/16W Metal Oxide	AA	R7826	VRS-CZ1JF331JY	330	1/16W Metal Oxide	AA
R3701	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA	R7827	VRS-CZ1JF331JY	330	1/16W Metal Oxide	AA
R3702	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA	R7828	VRS-CZ1JF331JY	330	1/16W Metal Oxide	AA
R3705	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA	R7829	VRS-CZ1JF821JY	820	1/16W Metal Oxide	AA
R3706	VRS-CZ1JF471JY	470	1/16W Metal Oxide	AA	R7830	VRS-CZ1JF821JY	820	1/16W Metal Oxide	AA
R3707	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA	R7831	VRS-CZ1JF821JY	820	1/16W Metal Oxide	AA
R3708	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA	R7832	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA
R3709	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA	R7833	VRS-CZ1JF334JY	330k	1/16W Metal Oxide	AA
R3710	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA	R7834	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA
R3711	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA	R7836	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R3712	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA	R7837	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R3713	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA	R7838	VRS-CZ1JF682DY	6.8k	1/16W Metal Oxide	AB
R3717	VRS-CZ1JF471JY	470	1/16W Metal Oxide	AA	R7839	VRS-CZ1JF682DY	6.8k	1/16W Metal Oxide	AB
R3718	VRS-CZ1JF152JY	1.5k	1/16W Metal Oxide	AA	R8800	VRS-CZ1JF223JY	22k	1/16W Metal Oxide	AA
R3737	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA	R8801	VRS-CZ1JF273JY	27k	1/16W Metal Oxide	AA
R3738	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA	R8804	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R3739	VRS-CZ1JF220JY	22	1/16W Metal Oxide	AA	R8805	VRS-CZ1JF473JY	47k	1/16W Metal Oxide	AA
R3740	VRS-CZ1JF220JY	22	1/16W Metal Oxide	AA	R8806	VRS-CZ1JF563JY	56k	1/16W Metal Oxide	AA
R4401	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA	R8807	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R4402	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA	R8808	VRS-CZ1JF223JY	22k	1/16W Metal Oxide	AA
R4403	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA	R8809	VRS-CZ1JF473JY	47k	1/16W Metal Oxide	AA
R4404	VRS-CZ1JF472DY	4.7k	1/16W Metal Oxide	AB	R8810	VRS-CZ1JF473DY	47k	1/16W Metal Oxide	AA
R4414	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA	R8814	VRS-CZ1JF100JY	10	1/16W Metal Oxide	AA
R4415	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA	R8815	VRS-CZ1JF473DY	47k	1/16W Metal Oxide	AA
R4435	VRS-CZ1JF330JY	33	1/16W Metal Oxide	AA	R8816	VRS-CZ1JF153DY	15k	1/16W Metal Oxide	AA
R4436	VRS-CZ1JF272JY	2.7k	1/16W Metal Oxide	AA	R8817	VRS-CZ1JF100JY	10	1/16W Metal Oxide	AA
R4437	VRS-CZ1JF272JY	2.7k	1/16W Metal Oxide	AA	R8818	VRS-CZ1JF151DY	150	1/16W Metal Oxide	AA
R4451	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA	R8819	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R4453	VRS-CZ1JF151JY	150	1/16W Metal Oxide	AA	R8820	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R4454	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA	R8825	VRS-CZ1JF472JY	4.7k	1/16W Metal Oxide	AA
R4456	VRS-CZ1JF151JY	150	1/16W Metal Oxide	AA	R8826	VRS-CZ1JF473JY	47k	1/16W Metal Oxide	AA
R4460	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA	R8827	VRS-CZ1JF393DY	39k	1/16W Metal Oxide	AA
R4461	VRS-CZ1JF123JY	12k	1/16W Metal Oxide	AA	R8828	VRS-CZ1JF303DY	30k	1/16W Metal Oxide	AA
R4462	VRS-CZ1JF123JY	12k	1/16W Metal Oxide	AA	R8832	VRS-CZ1JF221JY	220	1/16W Metal Oxide	AA
R4463	VRS-CZ1JF473JY	47k	1/16W Metal Oxide	AA	R8834	VRS-CZ1JF330JY	33	1/16W Metal Oxide	AA
R4466	VRS-CZ1JF332JY	3.3k	1/16W Metal Oxide	AA	R8835	VRS-CZ1JF330JY	33	1/16W Metal Oxide	AA
R4471	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA	R8836	VRS-CZ1JF330JY	33	1/16W Metal Oxide	AA
R4472	VRS-CZ1JF152DY	1.5k	1/16W Metal Oxide	AA	R8838	VRS-CZ1JF221JY	220	1/16W Metal Oxide	AA
R4485	VRS-CZ1JF224JY	220k	1/16W Metal Oxide	AA	R8839	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R4486	VRS-CZ1JF224JY	220k	1/16W Metal Oxide	AA	R8840	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
R4487	VRS-CZ1JF332JY	3.3k	1/16W Metal Oxide	AA	R8841	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R4488	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA	R8842	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA

**VL-Z7S/E/Z7E-A/Z7E-W  
VL-Z8H**

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
<b>BALUNES</b>									
FB201	RBLN-0049TAZZY		Balun, BLN-0049TA	AA	C40	VCSATA0JJ156MY	15	6.3V Tantalum	AC
FB203	RBLN-0049TAZZY		Balun, BLN-0049TA	AA	C42	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
FB204	RBLN-0049TAZZY		Balun, BLN-0049TA	AA	C43	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
FB415	RBLN-0257TAZZY		Balun, BLN-0257TA	AB	C44	VCKYCZ1EB103KY	0.01	25V Ceramic	AA
FB456	RBLN-0102TAZZY		Balun, BLN-0102TA	AB	C45	VCKYCZ1EB103KY	0.01	25V Ceramic	AA
FB900	RBLN-0119TAZZY		Balun, BLN-0119TA	AC	C101	VCKYCZ1CB153KY	0.015	16V Ceramic	AB
FB901	RBLN-0119TAZZY		Balun, BLN-0119TA	AC	C103	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
FB3701	RBLN-0102TAZZY		Balun, BLN-0102TA	AB	C104	VCKYCZ1AB104KY	0.1	10V Ceramic	AB
FB4405	RBLN-0102TAZZY		Balun, BLN-0102TA	AB	C105	VCKYCZ1AB104KY	0.1	10V Ceramic	AB
FB4461	RBLN-0102TAZZY		Balun, BLN-0102TA	AB	C106	VCKYCZ1AB104KY	0.1	10V Ceramic	AB
FB7401	RBLN-0102TAZZY		Balun, BLN-0102TA	AB	C107	VCKYTV1CB105KY	1	16V Ceramic	AC
FB8800	RBLN-0102TAZZY		Balun, BLN-0102TA	AB	C108	VCKYCY0JB105KY	1	6.3V Ceramic	AC
<b>MISCELLANEOUS PARTS</b>									
P1201	QPLGN0276TAZZY		Plug, 2Pin	AD	C109	VCSATA0JJ156MY	15	6.3V Tantalum	AC
P3301	QPLGN0576TAZZY		Plug, 5Pin	AC	C110	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
P8800	QPLGN0274TAZZY		Plug, 2Pin	AD	C111	VCKYCY0JB105KY	1	6.3V Ceramic	AC
P3303	QCNCMA088WJZZY		Connector, 30Pin	AF	C113	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
SC1201	QCNCW8089TAZZY		Connector, 80Pin	AK	C114	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
SC1202	QCNCW3396TAZZY		Connector, 33Pin	AG	C115	RC-KZA069WJZZY	4.7	10V Ceramic	AB
SC1204	QSOCN1207REN1Y		Socket, 12Pin	AD	C1002	RC-KZA069WJZZY	4.7	10V Ceramic	AB
SC1800	QCNCW1895TAZZY		Connector, 18Pin	AE	C1003	VCKYCZ1CB223KY	0.022	16V Ceramic	AC
SC1801	QCNCW1894TAZZY		Connector, 18Pin	AE	C1005	VCKYCZ1HB332KY	3300p	50V Ceramic	AA
SC3301	QCNCWA082WJZZY		Connector, 33Pin	AG	C1007	VCKYCZ1AB473KY	0.047	10V Ceramic	AB
SC3302	QCNCWA041WJZZY		Connector, 33Pin	AE	C1010	RC-KZ0124TAZZY		Capacitor	AC
SC8800	QCNCWA081WJZZY		Connector, 27Pin	AG	C1011	VCCCCZ1HH101JY	100p	50V Ceramic	AB
RMC701	RRMCUA012WJZZ		Remote Receiver	AF	C1014	VCKYCZ1CB223KY	0.022	16V Ceramic	AC
					<b>RESISTORS</b>				
<b>DUNTKB723QA01 CCD PWB UNIT</b>					R3	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
					R4	VRS-CZ1JF272JY	2.7k	1/16W Metal Oxide	AA
					R5	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
					R6	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
					R7	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
					R22	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
					R26	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
					R27	VRS-CZ1JF271JY	270	1/16W Metal Oxide	AA
					R28	VRS-CZ1JF182JY	1.8k	1/16W Metal Oxide	AA
					R29	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
					R30	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
					R35	VRS-CZ1JF331JY	330	1/16W Metal Oxide	AA
					R36	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
					R38	VRS-CZ1JF100JY	10	1/16W Metal Oxide	AA
					R39	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
					R41	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
					R103	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA
					R106	VRK-SA1JF101JY	100	1/16W Metal Composition	AC
					R107	VRK-SA1JF101JY	100	1/16W Metal Composition	AC
					R108	VRK-SA1JF101JY	100	1/16W Metal Composition	AC
					R109	VRK-SA1JF101JY	100	1/16W Metal Composition	AC
					R110	VRK-SA1JF101JY	100	1/16W Metal Composition	AC
					R1001	VRS-CZ1JF223JY	22k	1/16W Metal Oxide	AA
					R1003	VRS-CZ1JF223JY	22k	1/16W Metal Oxide	AA
					R1005	VRS-CZ1JF223JY	22k	1/16W Metal Oxide	AA
					R1007	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
					R1009	VRS-CZ1JF154DY	150k	1/16W Metal Oxide	AB
					R1011	VRS-CZ1JF274JY	270k	1/16W Metal Oxide	AA
					R1012	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
					R1013	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
					R1014	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA
					R1015	VRS-CZ1JF153JY	15k	1/16W Metal Oxide	AA
					R1016	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
					R1017	VRS-CZ1JF154DY	150k	1/16W Metal Oxide	AB
					R1018	VRS-CZ1JF100JY	10	1/16W Metal Oxide	AA
					R1019	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
<b>CAPACITORS</b>					<b>BALUNE</b>				
C1	RC-KZ0044TAZZY	4.7	10V Ceramic	AD	R23	RBLN-0257TAZZY		Balun, BLN-0257TA	AB
C3	VCKYCZ1CB103KY	0.01	16V Ceramic	AB					
C4	VCKYCZ1EB103KY	0.01	25V Ceramic	AA					
C5	VCKYCZ1HB102KY	1000p	50V Ceramic	AB					
C6	VCKYCY1EB104KY	0.1	25V Ceramic	AB					
C7	RC-KZA002WJZZY	4.7	16V Ceramic	AC					
C8	RC-KZA066WJZZY	1	25V Ceramic	AB					
C9	VCKYCZ1EB103KY	0.01	25V Ceramic	AA					
C22	VCKYCZ1CB103KY	0.01	16V Ceramic	AB					
C24	VCSATA1CJ106MY	10	16V Tantalum	AD					
C29	VCKYCZ1CB103KY	0.01	16V Ceramic	AB					
C32	VCKYCZ1CB103KY	0.01	16V Ceramic	AB					
C33	VCKYCZ1CB103KY	0.01	16V Ceramic	AB					
C36	VCKYCZ1HB102KY	1000p	50V Ceramic	AB					
C38	RC-KZA069WJZZY	4.7	10V Ceramic	AB					
C39	VCKYCZ1AB104KY	0.1	10V Ceramic	AB					

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
<b>MISCELLANEOUS PARTS</b>					<b>CAPACITORS</b>				
SC1001	QCNCWA082WJZZY		Connector, 33Pin	AG	C501	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
TP1001	QLUGZA001WJZZY		Lug	AB	C502	VCSATA1AJ106MY	10	10V Tantalum	AC
TP1002	QLUGZA001WJZZY		Lug	AB	C503	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
TP1003	QLUGZA001WJZZY		Lug	AB	C506	VCCCCZ1HH101JY	100p	50V Ceramic	AB
RMC1001	RSNSGA005WJPZY		Gyro sensor	AW	C507	VCSATA1AJ106MY	10	10V Tantalum	AC
<b>DUNTKB7281QA05 SUB PWB UNIT</b>									
<b>INTEGRATED CIRCUITS</b>									
△ CP1	QPRTRA002WJZZY		PRTRA002WJ	AD	C521	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
△ CP2	VHiCCP2B25-1Y		CCP2B25	AD	C522	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
△ CP3	VHiCCP2B25-1Y		CCP2B25	AD	C523	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
IC501	RH-iXA526WJZZQ		IXA526WJ	AR	C524	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
IC503	VHiMB8346BV-1Y		MB88346BV	AN	C525	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
IC551	VHiUPD16835-1Y		UPD16835, Lens Drive	AM	C527	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
IC600	VHiLA74206W-1Q		LA74206W	AP	C528	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
IC2502	VHiNJ12902V-1Y		NJM12902V	AE	C529	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
IC2901	VHiMM1332E-1Y		MM1332E	AH	C551	RC-KZ0075TAZZY	2.2	16V Ceramic	AC
IC3600	VHiNJM2107F-1Y		NJM2107F	AE	C552	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
IC3601	VHiAN2901FQ-1Y		AN2901FQ	AM	C553	VCCCCZ1HH330JY	33p	50V Ceramic	AB
<b>TRANSISTORS</b>									
Q501	VS12A01SS+++1Y		12A01SS++	AC	C554	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
Q502	VSKRC401E+++1Y		KRC401E++	AB	C555	VCCCCZ1HH101JY	100p	50V Ceramic	AB
Q552	VSKRC402E+++1Y		KRC402E++	AB	C556	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
Q600	VSMFG12///-1Y		FMG12	AD	C557	VCCCCZ1HH101JY	100p	50V Ceramic	AB
Q601	VSKRC404E+++1Y		KRC404E++	AB	C558	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
Q604	VSP4313///-1Y		XP4313	AC	C559	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
Q1501	VSKTA2014EY-1Y		KTA2014EY	AB	C561	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
Q1502	VSP6501///-1Y		XP6501	AC	C562	VCSATA0JJ106MY	10	6.3V Tantalum	AD
Q2551	VSP1213///-1Y		XP1213	AC	C573	VCCCCZ1HH221JY	220p	50V Ceramic	AB
Q2552	VSP4601///-1Y		XP4601	AC	C574	VCCCCZ1HH221JY	220p	50V Ceramic	AB
Q2553	VSP1501///-1Y		XP1501	AC	C575	VCCCCZ1HH221JY	220p	50V Ceramic	AB
Q2901	VSFDC642P+++1Y		FDC642P++	AE	C600	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
Q2902	VSFDC642P+++1Y		FDC642P++	AE	C601	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
Q2903	VSFDT458P+++1Y		FDT458P++	AE	C602	VCKYCY0JB105KY	1	6.3V Ceramic	AC
Q2904	VSP4213///-1Y		XP4213	AC	C605	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
Q2905	VSP1213///-1Y		XP1213	AC	C612	VCSATA0JJ336MY	33	6.3V Tantalum	AD
Q2906	VSN04391///-1Y		XN04391	AC	C627	VCSATA0JJ336MY	33	6.3V Tantalum	AD
Q3600	VSP4601///-1Y		XP4601	AC	C630	RC-KZ0083TAZZY	2.2	10V Ceramic	AC
Q3601	VSP6501///-1Y		XP6501	AC	C631	RC-KZ0083TAZZY	2.2	10V Ceramic	AC
Q3602	VSP6401///-1Y		XP6401	AC	C632	VCKYCY0JB105KY	1	6.3V Ceramic	AC
Q3603	VSP0431N+++1Y		XP0431N++	AB	C633	VCKYCZ1AB104KY	0.1	10V Ceramic	AB
Q3604	VSKTC4075EY-1Y		KTC4075EY	AB	C634	RC-KZA069WJZZY	4.7	10V Ceramic	AB
<b>DIODES</b>									
C526	RH-VXA003WJZZY		Varistor	AC	C635	VCKYCY1AB224KY	0.22	10V Ceramic	AB
D551	VHD1SS400+++1Y		D1SS400++	AB	C636	VCKYCZ1AB104KY	0.1	10V Ceramic	AB
D2902	VHDKDS121E+-1Y		DKDS121E+	AB	C637	VCKYCY0JB105KY	1	6.3V Ceramic	AC
D2904	VHDRB160M30-1Y		DRB160M30	AC	C638	VCKYCY1AB224KY	0.22	10V Ceramic	AB
D2905	VHD1SS400+++1Y		D1SS400++	AB	C641	VCSATA0JJ336MY	33	6.3V Tantalum	AD
D2906	RH-EX1398CEZZY		Zener Diode, EX1398CE	AB	C642	VCSATE1AJ476MY	47	10V Tantalum	AD
D3600	RH-EX1394CEZZY		Zener Diode, EX1394CE	AB	C645	VCKYCZ1AB104KY	0.1	10V Ceramic	AB
D3601	RH-EX1394CEZZY		Zener Diode, EX1394CE	AB	C646	VCKYCZ1AB104KY	0.1	10V Ceramic	AB
VA501	RH-VXA003WJZZY		Varistor	AC	C1503	VCKYCZ1AF104ZY	0.1	10V Ceramic	AB
VA600	RH-VXA003WJZZY		Varistor	AC	C1513	VCSATA0JJ106MY	10	6.3V Tantalum	AD
VA602	RH-VXA003WJZZY		Varistor	AC	C2514	RC-KZ0075TAZZY	2.2	16V Ceramic	AC
VA603	RH-VXA003WJZZY		Varistor	AC	C2516	VCKYCY1AB224KY	0.22	10V Ceramic	AB
<b>COILS</b>									
FL501	RFiLZA003WJPZY		Filter, FiLZA003WJ	AD	C2517	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
L501	VPD9M100KR86NY		Peaking, 10μH	AC	C2518	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
L551	VPD9M100KR86NY		Peaking, 10μH	AC	C2519	VCKYCZ1AB104KY	0.1	10V Ceramic	AB
L600	VPCEM470M3R7NY		Peaking, 47μH	AC	C2520	VCCCCZ1HH151JY	150p	50V Ceramic	AB
L601	VPBWM100KR50NY		Peaking, 10μH	AC	C2521	VCKYCZ1CB103KY	0.01	16V Ceramic	AB
L2900	RCiLFA009WJZZY		Coil, CiLFA009WJ	AG	C2901	VCKYCY1CB104KY	0.1	16V Ceramic	AB
L2901	RCiLP0323TAZZY		Coil, 22μH	AD	C2902	VCKYTV1CF105ZY	1	16V Ceramic	AB
L3600	VPD9M470K4R1NY		Peaking, 47μH	AC	C2903	VCKYCY1CB104KY	0.1	16V Ceramic	AB
L3601	VPD9M470K4R1NY		Peaking, 47μH	AC	C2905	RC-KZA002WJZZY	4.7	16V Ceramic	AC
					C2906	VCKYCY1CB104KY	0.1	16V Ceramic	AB
					C2910	VCKYCY0JB105KY	1	6.3V Ceramic	AC
					C3600	VCKYCZ1AF104ZY	0.1	10V Ceramic	AB
					C3601	VCKYCZ1CB123KY	0.012	16V Ceramic	AA
					C3602	VCKYCZ1CB223KY	0.022	16V Ceramic	AC
					C3603	VCKYCZ1CB123KY	0.012	16V Ceramic	AA
					C3604	VCKYCZ1AF104ZY	0.1	10V Ceramic	AB
					C3605	VCKYCZ1AB104KY	0.1	10V Ceramic	AB
					C3606	VCKYCZ1AB104KY	0.1	10V Ceramic	AB
					C3607	VCSATA1AJ106MY	10	10V Tantalum	AC
					C3608	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
					C3609	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
					C3610	VCKYCZ1HB102KY	1000p	50V Ceramic	AB
					C3611	VCKYCZ1HB102KY	1000p	50V Ceramic	AB



VL-Z7S/E/Z7E-A/Z7E-W  
VL-Z8H

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
C3612	VCSATA1AJ106MY	10	10V Tantalum	AC	R651	VRS-CZ1JF562JY	5.6k	1/16W Metal Oxide	AA
C3613	VCSATA1AJ106MY	10	10V Tantalum	AC	R652	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
C3614	VCKYCZ1AB104KY	0.1	10V Ceramic	AB	R655	VRS-CZ1JF472JY	4.7k	1/16W Metal Oxide	AA
C3615	VCKYCZ1AB104KY	0.1	10V Ceramic	AB	R656	VRS-CZ1JF472JY	4.7k	1/16W Metal Oxide	AA
C3616	VCKYCZ1AB104KY	0.1	10V Ceramic	AB	R657	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
C3617	VCKYCZ1AB104KY	0.1	10V Ceramic	AB	R658	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
C3618	VCKYCZ1AB104KY	0.1	10V Ceramic	AB	R659	VRS-CZ1JF681JY	680	1/16W Metal Oxide	AA
C3619	VCKYCZ1AB104KY	0.1	10V Ceramic	AB	R1471	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
C3620	VCKYCZ1CB123KY	0.012	16V Ceramic	AA	R1472	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
C3621	VCKYCZ1CB123KY	0.012	16V Ceramic	AA	R1475	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
C3622	VCKYCZ1CB153KY	0.015	16V Ceramic	AB	R1476	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
C3623	VCKYCZ1HB392KY	3900p	50V Ceramic	AA	R1477	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
C3624	VCKYCZ1EB682KY	6800p	25V Ceramic	AB	R1501	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
C3625	VCKYCZ1CB153KY	0.015	16V Ceramic	AB	R1502	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
C3626	VCKYCZ1EB682KY	6800p	25V Ceramic	AB	R1503	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
C3627	VCKYCZ1HB392KY	3900p	50V Ceramic	AA	R1504	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
C3628	VCKYCZ1CB223KY	0.022	16V Ceramic	AC	R1505	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
C3629	VCKYCZ1CB223KY	0.022	16V Ceramic	AC	R1506	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
C3630	VCKYCZ1CB223KY	0.022	16V Ceramic	AC	R1507	VRS-CZ1JF332DY	3.3k	1/16W Metal Oxide	AA
C3631	VCKYCZ1CB223KY	0.022	16V Ceramic	AC	R1508	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
C3632	VCKYCZ1AB104KY	0.1	10V Ceramic	AB	R1509	VRS-CZ1JF153DY	15k	1/16W Metal Oxide	AA
C3635	VCSATA0JJ336MY	33	6.3V Tantalum	AD	R1510	VRS-CZ1JF152JY	1.5k	1/16W Metal Oxide	AA
C3640	VCKYCY0JB105KY	1	6.3V Ceramic	AC	R1511	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
C3646	VCSATA1AJ106MY	10	10V Tantalum	AC	R1512	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
					R1513	VRS-CZ1JF103DY	10k	1/16W Metal Oxide	AA
					R2508	VRS-CZ1JF622DY	6.2k	1/16W Metal Oxide	AA
					R2509	VRS-CZ1JF104DY	100k	1/16W Metal Oxide	AA
					R2510	VRS-CZ1JF822DY	8.2k	1/16W Metal Oxide	AA
					R2511	VRS-CZ1JF223JY	22k	1/16W Metal Oxide	AA
					R2512	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
					R2513	VRS-CZ1JF153DY	15k	1/16W Metal Oxide	AA
					R2514	VRS-CZ1JF153JY	15k	1/16W Metal Oxide	AA
					R2515	VRS-CZ1JF153JY	15k	1/16W Metal Oxide	AA
					R2516	VRS-CZ1JF154JY	150k	1/16W Metal Oxide	AA
					R2520	VRS-CZ1JF122JY	1.2k	1/16W Metal Oxide	AA
					R2523	VRS-CZ1JF471JY	470	1/16W Metal Oxide	AA
					R2525	VRS-CZ1JF474JY	470k	1/16W Metal Oxide	AA
					R2526	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA
					R2527	VRS-CZ1JF472JY	4.7k	1/16W Metal Oxide	AA
					R2528	VRS-CZ1JF682JY	6.8k	1/16W Metal Oxide	AA
					R2530	VRS-CZ1JF474JY	470k	1/16W Metal Oxide	AA
					R2531	VRS-CZ1JF682JY	6.8k	1/16W Metal Oxide	AA
					R2533	VRS-CZ1JF100JY	10	1/16W Metal Oxide	AA
					R2551	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
					R2552	VRS-CZ1JF153JY	15k	1/16W Metal Oxide	AA
					R2553	VRS-CZ1JF180JY	18	1/16W Metal Oxide	AA
					R2554	VRS-CZ1JF152JY	1.5k	1/16W Metal Oxide	AA
					R2555	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA
					R2556	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
					R2557	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
					R2903	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
					R2905	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
					R2906	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
					R2907	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
					R2908	VRS-TV2BDR15JY	0.15	1/8W Metal Oxide	AA
					R2909	VRS-TV1JD1R5JY	1.5	1/16W Metal Oxide	AA
					R2910	VRS-CZ1JF224DY	220k	1/16W Metal Oxide	AA
					R2911	VRS-CZ1JF101JY	100	1/16W Metal Oxide	AA
					R2913	VRS-TW2HF181JY	180	1/2W Metal Oxide	AA
					R2914	VRS-CZ1JF224DY	220k	1/16W Metal Oxide	AA
					R2915	VRS-CZ1JF823DY	82k	1/16W Metal Oxide	AA
					R2916	VRS-CZ1JF823DY	82k	1/16W Metal Oxide	AA
					R2917	VRS-CZ1JF474JY	470k	1/16W Metal Oxide	AA
					R2918	VRS-CZ1JF474JY	470k	1/16W Metal Oxide	AA
					R2920	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
					R3600	VRS-CZ1JF682JY	6.8k	1/16W Metal Oxide	AA
					R3601	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA
					R3602	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
					R3603	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
					R3604	VRS-CZ1JF563JY	56k	1/16W Metal Oxide	AA
					R3605	VRS-CZ1JF392JY	3.9k	1/16W Metal Oxide	AA
					R3606	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
					R3607	VRS-CZ1JF272JY	2.7k	1/16W Metal Oxide	AA
					R3608	VRS-CZ1JF392JY	3.9k	1/16W Metal Oxide	AA
					R3609	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA

RESISTORS

R501	VRS-CZ1JF223JY	22k	1/16W Metal Oxide	AA
R502	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R504	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R505	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R506	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R507	VRS-CZ1JF153JY	15k	1/16W Metal Oxide	AA
R508	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R509	VRS-CZ1JF273JY	27k	1/16W Metal Oxide	AA
R510	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R512	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R513	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R514	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R523	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R524	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R525	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R526	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R527	VRS-CZ1JF473DY	47k	1/16W Metal Oxide	AA
R528	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R529	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R530	VRS-CZ1JF682JY	6.8k	1/16W Metal Oxide	AA
R531	VRS-CZ1JF272JY	2.7k	1/16W Metal Oxide	AA
R551	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R552	VRS-CZ1JF123JY	12k	1/16W Metal Oxide	AA
R553	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
R554	VRS-CZ1JF5R6JY	5.6	1/16W Metal Oxide	AA
R555	VRS-CZ1JF5R6JY	5.6	1/16W Metal Oxide	AA
R557	VRS-CZ1JF5R6JY	5.6	1/16W Metal Oxide	AA
R559	VRS-CZ1JF5R6JY	5.6	1/16W Metal Oxide	AA
R572	VRS-CZ1JF223JY	22k	1/16W Metal Oxide	AA
R573	VRS-CZ1JF223JY	22k	1/16W Metal Oxide	AA
R578	VRS-CZ1JF181JY	180	1/16W Metal Oxide	AA
R581	VRS-CZ1JF562JY	5.6k	1/16W Metal Oxide	AA
R582	VRS-CZ1JF181JY	180	1/16W Metal Oxide	AA
R600	VRS-CY1JF000JY	0	1/16W Metal Oxide	AA
R601	VRS-CZ1JF682JY	6.8k	1/16W Metal Oxide	AA
R602	VRS-CZ1JF472JY	4.7k	1/16W Metal Oxide	AA
R603	VRS-CZ1JF121JY	120	1/16W Metal Oxide	AA
R604	VRS-CZ1JF121JY	120	1/16W Metal Oxide	AA
R605	VRS-CZ1JF473JY	47k	1/16W Metal Oxide	AA
R632	VRS-CZ1JF683JY	68k	1/16W Metal Oxide	AA
R633	VRS-CZ1JF393JY	39k	1/16W Metal Oxide	AA
R634	VRS-CZ1JF393JY	39k	1/16W Metal Oxide	AA
R635	VRS-CZ1JF682JY	6.8k	1/16W Metal Oxide	AA
R636	VRS-CZ1JF682JY	6.8k	1/16W Metal Oxide	AA
R637	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R638	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R639	VRS-CZ1JF683JY	68k	1/16W Metal Oxide	AA
R643	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R645	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA



**VL-Z7S/E/Z7E-A/Z7E-W  
VL-Z8H**

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
R9808	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA	C1713	VCKY CZ1HB102KY	1000p	50V Ceramic	AB
R9809	VRS-CZ1JF473JY	47k	1/16W Metal Oxide	AA	C1714	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB
R9810	VRS-CY1JFR22JY	0.22	1/16W Metal Oxide	AA	C1715	VCKY CZ1HB102KY	1000p	50V Ceramic	AB
R9811	VRS-CZ1JF102DY	1k	1/16W Metal Oxide	AA	C1716	VCKY CZ1HB102KY	1000p	50V Ceramic	AB
R9812	VRS-CZ1JF153DY	15k	1/16W Metal Oxide	AA	C1717	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB
<b>MISCELLANEOUS PARTS</b>					C1718	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB
SC800	QSOCN1892TAZZY	Socket, 18Pin		AD	C1719	VCKY CY0JF105ZY	1	6.3V Ceramic	AB
SC801	QSOCN1892TAZZY	Socket, 18Pin		AD	C1720	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB
SC802	QSOCN2492TAZZY	Socket, 24Pin		AE	C1721	VCKY CY0JF105ZY	1	6.3V Ceramic	AB
SC803	QCNCW0694TAZZY	Connector, 6Pin		AD	C1722	VCKY CY1CB473KY	0.047	16V Ceramic	AA
SC9800	QSOCN1019TAN1Y	Socket, 10Pin		AG	C1723	VCKY CZ1EB472KY	4700p	25V Ceramic	AB
<b>DUNTKB733QA00 HEAD AMP PWB UNIT</b>					C1724	VCKY CY1AF105ZY	1	10V Ceramic	AC
<b>INTEGRATED CIRCUITS</b>					C1725	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB
IC301	VHILA70050W-1Y	LA70050W		AQ	C1726	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB
IC351	VHiMB88146A-1Y	MB88146A		AH	C1727	VCCCCZ1HH101JY	100p	50V Ceramic	AB
IC1701	VHILB11990F-1Y	LB11990F		AQ	C1728	VCKY CY1AF105ZY	1	10V Ceramic	AC
<b>TRANSISTORS</b>					<b>RESISTORS</b>				
Q301	VS2SC4738Y/-1Y	2SC4738Y		AA	R301	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA
Q302	VS2SC4738Y/-1Y	2SC4738Y		AA	R302	VRS-CZ1JF183JY	18k	1/16W Metal Oxide	AA
Q350	VSF DG312P++-1Y	FDG312P++		AD	R303	VRS-CZ1JF822JY	8.2k	1/16W Metal Oxide	AA
Q351	VSP11111+++1Y	XP11111+++		AB	R304	VRS-CZ1JF222JY	2.2k	1/16W Metal Oxide	AA
Q352	VSP0431N++-1Y	XP0431N++		AB	R305	VRS-CZ1JF272JY	2.7k	1/16W Metal Oxide	AA
Q353	VSKRC404E++-1Y	KRC404E++		AB	R306	VRS-CZ1JF153JY	15k	1/16W Metal Oxide	AA
Q1701	VSP6501///-1Y	XP6501///		AC	R308	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
<b>COILS</b>					R309	VRS-CZ1JF183JY	18k	1/16W Metal Oxide	AA
L301	VPAWM4R7MR70NY	Peaking, 4.7μH		AB	R311	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
L1701	VPD9M100KR86NY	Peaking, 10μH		AC	R312	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
L1702	VPD9M4R7MR53NY	Peaking, 4.7μH		AB	R314	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
<b>CAPACITORS</b>					R316	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
C301	VCCCCZ1HH5R0CY	5p	50V Ceramic	AA	R317	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
C302	VCCCCZ1HH5R0CY	5p	50V Ceramic	AA	R318	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
C303	VCKY CZ1AB104KY	0.1	10V Ceramic	AB	R319	VRS-CZ1JF563JY	56k	1/16W Metal Oxide	AA
C306	VCKY CZ1AB104KY	0.1	10V Ceramic	AB	R350	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
C308	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	R351	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
C309	VCSATE1AJ336MY	33	10V Tantalum	AD	R352	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
C311	VCKY CZ1AB104KY	0.1	10V Ceramic	AB	R353	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
C312	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	R354	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
C313	RC-KZA069WJZZY	4.7	10V Ceramic	AB	R355	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
C314	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	R356	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
C315	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	R357	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
C316	VCKY CZ1HB471KY	470p	50V Ceramic	AB	R358	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
C317	VCKY CZ1HB471KY	470p	50V Ceramic	AB	R359	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
C318	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	R360	VRS-CZ1JF221JY	220	1/16W Metal Oxide	AA
C319	VCKY CZ1AB104KY	0.1	10V Ceramic	AB	R361	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
C320	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	R362	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
C322	VCKY CZ1AB104KY	0.1	10V Ceramic	AB	R363	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
C323	VCKY CZ1CB822KY	8200p	16V Ceramic	AB	R364	VRS-CZ1JF221JY	220	1/16W Metal Oxide	AA
C324	VCKY CZ1CB103KY	0.01	16V Ceramic	AB	R365	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
C350	VCKY CZ1AB104KY	0.1	10V Ceramic	AB	R366	VRS-CZ1JF104JY	100k	1/16W Metal Oxide	AA
C351	VCKY TV1AB105KY	1	10V Ceramic	AC	R367	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
C352	VCCCCZ1HH101JY	100p	50V Ceramic	AB	R1700	VRS-CZ1JF151JY	150	1/16W Metal Oxide	AA
C353	VCCCCZ1HH101JY	100p	50V Ceramic	AB	R1701	VRS-CZ1JF151JY	150	1/16W Metal Oxide	AA
C354	VCKY TV1AB105KY	1	10V Ceramic	AC	R1702	VRS-CZ1JF182JY	1.8k	1/16W Metal Oxide	AA
C1701	VCKY CZ1CB223KY	0.022	16V Ceramic	AC	R1703	VRS-CZ1JF182JY	1.8k	1/16W Metal Oxide	AA
C1702	VCKY CZ1CB223KY	0.022	16V Ceramic	AC	R1704	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
C1703	VCKY TV1AB105KY	1	10V Ceramic	AC	R1705	VRS-CZ1JF393JY	39k	1/16W Metal Oxide	AA
C1704	VCKY CY1AF105ZY	1	10V Ceramic	AC	R1706	VRS-CZ1JF223JY	22k	1/16W Metal Oxide	AA
C1705	VCKY CZ1AB104KY	0.1	10V Ceramic	AB	R1707	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
C1706	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	R1708	VRS-CZ1JF1R0JY	1	1/16W Metal Oxide	AA
C1707	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	R1709	VRS-CZ1JF1R0JY	1	1/16W Metal Oxide	AA
C1708	RC-KZ0083TAZZY	2.2	10V Ceramic	AC	R1710	VRS-CZ1JF1R0JY	1	1/16W Metal Oxide	AA
C1709	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	R1711	VRS-CZ1JF1R0JY	1	1/16W Metal Oxide	AA
C1710	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	R1712	VRS-CZ1JF105JY	1M	1/16W Metal Oxide	AA
C1711	VCKY TV1AB105KY	1	10V Ceramic	AC	R1713	VRS-CZ1JF331JY	330	1/16W Metal Oxide	AA
C1712	VCKY CZ1AF104ZY	0.1	10V Ceramic	AB	R1714	VRS-CZ1JF621JY	620	1/16W Metal Oxide	AA
					R1715	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
					R1716	VRS-CZ1JF223JY	22k	1/16W Metal Oxide	AA
					R1717	VRS-CZ1JF330JY	33	1/16W Metal Oxide	AA
					R1718	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
					R1719	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
					R1720	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
					R1721	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
					R1722	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
					R1723	VRS-CZ1JF182JY	1.8k	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code
R1724	VRS-CZ1JF182JY	1.8k	1/16W Metal Oxide	AA
R1725	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R1726	VRS-CZ1JF330JY	33	1/16W Metal Oxide	AA
R1727	VRS-CZ1JF103JY	10k	1/16W Metal Oxide	AA
R1728	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R1729	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R1731	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA

**MISCELLANEOUS PARTS**

P301	QPLGN0576TAZZY	Plug, 5Pin		AC
SC301	QSOCN1092TAZZY	Socket, 10Pin		AD
SC303	QSOCN1092TAZZY	Socket, 10Pin		AD
SC304	QSOCN0706TAN1Y	Socket, 7Pin		AE
SC305	QCNCWA037WJZZY	Connector, 21Pin		AD
SC306	QCNCWA081WJZZY	Connector, 27Pin		AG
SC307	QCNCWA041WJZZY	Connector, 33Pin		AE
SC308	QCNCWA041WJZZY	Connector, 33Pin		AE
SC310	QSOCN1292TAZZY	Socket, 12Pin		AD
SC311	QSOCN1005TAN1Y	Socket, 10Pin		AE
TP301	QLUGZA001WJZZY	Lug		AB
TP302	QLUGZA001WJZZY	Lug		AB

**DUNTKB731PM00  
LITHIUM PWB UNIT**

**INTEGRATED CIRCUITS**

IC5800	VHiNC7NZ04K-1Y	NC7NZ04K		AD
IC5801	VHiNC7SZ04P-1Y	NC7SZ04P		AD

**DIODE**

D5801	RH-EXA089WJZZY	Zener Diode, EXA089WJ		AB
-------	----------------	-----------------------	--	----

**CAPACITORS**

C5800	VCKYCY1AF104ZY	0.1	10V Ceramic	AB
C5801	VCKYCY0JB105KY	1	6.3V Ceramic	AC
C5802	VCKYCY1AF104ZY	0.1	10V Ceramic	AB
C5803	VCKYCY0JB105KY	1	6.3V Ceramic	AC

**RESISTORS**

R5800	VRS-CZ1JF000JY	0	1/16W Metal Oxide	AA
R5801	VRS-CZ1JF333JY	33k	1/16W Metal Oxide	AA
R5802	VRS-CZ1JF123JY	12k	1/16W Metal Oxide	AA

**MISCELLANEOUS PARTS**

SW5800	QSW-MA001WJZZY	Switch		AD
J5800	QJAKEA014WJZZ	Jack, 5Pin		AE
RDA5800	QTANZA012WJZZY	Terminal		AE
SC5800	QCNCWA039WJZZY	Connector, 25Pin		AE
SC5801	QCNCW2294TAZZY	Connector, 22Pin		AE

**DUNTKB730PM00  
OPERATION SW PWB UNIT**

**CAPACITORS**

C2001	VCKYCY1HB102KY	1000p	50V Ceramic	AB
C2002	VCKYCY1HB102KY	1000p	50V Ceramic	AB
C2003	VCKYCY1HB102KY	1000p	50V Ceramic	AB
C2004	VCKYCY1HB102KY	1000p	50V Ceramic	AB
C2005	VCKYCY1HB102KY	1000p	50V Ceramic	AB
C2006	VCKYCY1HB102KY	1000p	50V Ceramic	AB
C2007	VCKYCY1HB102KY	1000p	50V Ceramic	AB
C2008	VCKYCY1HB102KY	1000p	50V Ceramic	AB
C2009	VCKYCY1HB102KY	1000p	50V Ceramic	AB
C2010	VCKYCY1EB104KY	0.1	25V Ceramic	AB
C2011	VCKYCY1EB104KY	0.1	25V Ceramic	AB

**MISCELLANEOUS PARTS**

SC2002	QSOCN0907REN1Y	Socket, 9Pin		AD
SW2001	QSW-K0100TAZZY	Switch		AC

Ref. No.	Part No.	★	Description	Code
SW2002	QSW-KA013WJZZ		Switch	AL
SW2007	QSW-K0100TAZZY		Switch	AC

**DUNTKB734PM00  
VCR OPERATION PWB UNIT**

**LED'S**

LED2101RH-PXA038WJZZY		PhotoDIODE		AC
LED2102RH-PXA037WJZZY		PhotoDIODE		AB

**CAPACITORS**

C2101	VCKYCY1HB102KY	1000p	50V Ceramic	AB
C2102	VCKYCY1HB102KY	1000p	50V Ceramic	AB

**RESISTORS**

R2101	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA
R2102	VRS-CZ1JF102JY	1k	1/16W Metal Oxide	AA

**MISCELLANEOUS PARTS**

SW2101	QSW-S0212TAZZY	Switch, MEDIA		AD
SW2102	QSW-S0210TAZZY	Switch		AD
SW2103	QSW-MA005WJZZY	Switch, EJECT		AD
SW2104	QSW-K0100TAZZY	Switch, STANBY		AC
SW2105	QSW-K0100TAZZY	Switch, REC		AC
SC2101	QSOCN1292TAZZY	Socket, 12Pin		AD

**DUNTKB735PM00  
ZOOM SW PWB UNIT**

**CONTROL**

VR2201	RVR-VA001WJZZY	Variable Resistor		AG
--------	----------------	-------------------	--	----

**CAPACITORS**

C2201	VCKYCY1HB102KY	1000p	50V Ceramic	AB
C2202	VCKYCY1HB102KY	1000p	50V Ceramic	AB

**MISCELLANEOUS PARTS**

SW2201	QSW-K0097TAZZY	Switch		AD
P2201	QPLGN0276TAZZY	Plug, 2Pin		AD
SC2201	QSOCN1006TAN1Y	Socket, 10Pin		AE
	PSLDM195WJZZ	Shield		AD

**DUNTKB732PM00  
MECHA REVERSION DETECTION PWB UNIT**

**MISCELLANEOUS PART**

SW2300	QSW-M0018TAZZY	Switch		AC
--------	----------------	--------	--	----

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
<b>MECHANISM PARTS</b>									
300	CCHSMA013WJ01		Mecha Chassis Service	BQ	410	XWHJZ21-02040		W ø 2.1 ø 4.0t0.25	AA
301	LCHSMA013WJZZ		Main Chassis Ass'y	AQ	<b>CASSETTE CONTROL PARTS</b>				
302	QSW-RA002WJZZ		Mode SW	AF	200	CHLDXA002WJ01		Cassette Control Ass'y	AQ
303	QPWBHB546WJZZ		LM/Mode FPC	AG	201	LHLDXA002WJZZ		Housing Ass'y	AN
304	NGERHA001WJFW		Main Cam	AD	202	MSPRTA005WJFJ		UP-SPR-R	AC
305	MLEVFA007WJFW		Ejection Lever	AD	203	MSPRTA008WJFJ		UP-SPR-L	AC
306	NGERHA002WJFW		Sub Cam	AD					
307	MLEVFA002WJFW		SL Drive Lever	AD					
308	MLEVFA004WJFW		S brake Operating Lever	AC					
309	MLEVFA003WJFW		T arm Operating Lever	AE					
310	PGiDMA003WJZZ		SLA Support	AC					
311	RMOTMA002WJZZ		L Motor Ass'y	AN					
312	RDTCH0039GEZZ		Dew Sensor	AD					
313	PGiDMA002WJZZ		TLA Support	AC					
314	NGERHA007WJZZ		Center Gear	AE					
315	RMOTVA001WJZZ		Capstan Motor Ass'y	AY					
316	NPLYVA001WJZZ		Relay Pulley	AD					
317	CGiDMA005WJ01		Drum Base Ass'y	AN					
318	CARMMA003WJ01		Tu Pole Base Loading Arm Ass'y	AP					
319	NGERHA005WJZZ		Tu Loading Gear	AC					
320	MSPRDA009WJFJ		Tu Press SPR	AC					
321	CARMMA001WJ01		S Pole Base Loading Arm Ass'y	AQ					
322	NGERHA004WJZZ		S Loading Gear	AC					
323	MSPRDA008WJFJ		S Press SPR	AC					
324	NGERHA006WJZZ		Loading Drive Gear	AD					
325	PGiDMA001WJZZ		Guide Rail	AC					
326	MLEVFA005WJZZ		Pinch Press Lever Ass'y	AG					
327	MSPRTA002WJFJ		Pinch Press SPR	AC					
328	MSPRDA007WJFJ		Pinch Lever Return SPR	AC					
329	MLEVFA015WJZZ		Pinch Lever Ass'y	AQ					
341	CCHSSA001WJ01		Sensor FPC Affixing Slide Chassis Ass'y	BC					
342	LANGGA012WJFW		Slide Adjustment ANG	AC					
343	LANGJA001WJFW		T-SPR Adjustment ANG	AC					
344	MSPRDA010WJFJ		Tu guide Arm SPR	AC					
345	MLEVFA012WJZZ		Tu guide Arm Ass'y	AG					
346	MSPRCA022WJFJ		Guide Adjustment SPR	AC					
347	PGiDSA003WJFW		Tu Guide Flange	AC					
348	PGiDPA001WJFW		Tu Guide	AD					
349	LX-NZ0102GEFW		Guide Nut	AC					
350	MLEVFA011WJFW		VSR Brake Lever	AE					
351	NGERHA008WJZZ		T Brake Gear	AE					
352	MLEVPA003WJZZ		T Main Brake	AC					
353	NDAiVA001WJZZ		S Reel Table Ass'y	AL					
354	NDAiVA002WJZZ		Tu Reel Table Ass'y	AL					
355	MLEVPA002WJZZ		S Main Brake	AE					
356	MSPRTA004WJFJ		S Brake SPR	AC					
357	CLEVFA009WJ01		Tension Arm Ass'y	AK					
358	LBNDKA001WJZZ		Tension Band Ass'y	AE					
359	MSPRTA003WJFJ		T Arm SPR	AC					
371	MARMMA005WJZZ		Swing Arm Ass'y	AG					
372	LANGFA011WJZZ		Reel Cover Ass'y	AG					
373	LANGGA013WJFW		Down Guide	AF					
374	PCOVPA009WJZZ		Cassette Lid	AC					
375	TLABHA012WJZZ		Cassette Control Caution Label	AC					
376	TLABHA015WJZZ		Cassette Control Lock Label	AC					
377	DDRMVA001WJ01		Drum Ass'y	BN					
400	LX-BZ3131GEFN		Special Screw M1.4 x L1.6	AA					
401	LX-HZ3089GEFF		S Tight M1.4 x 2	AA					
402	LX-HZ3076GEFF		S Tight M1.4 x 3	AA					
403	LX-BZA016WJFF		Special Screw M1.4 x L2.0	AC					
404	LX-BZA015WJFF		Special Screw M1.4 x L1.5	AC					
405	LX-BZ3135GEFF		Precision Type2 M1.4 x L1	AA					
406	LX-BZA017WJFF		L Motor Installation Screw	AC					
407	LX-BZ3159GEFF		Precision Type2 M1.7 x L2.5	AA					
408	LX-WZ1029GE00		CW ø 1.2 ø 3t0.25	AA					
409	LX-WZ1052GE00		CW ø 0.7 ø 1.8t0.2	AA					

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
<b>CABINET PARTS LIST</b>					5-4	HDECAA012WJSA		Microphone Grill (Z7S/SA/R/E/EW/X/Z7EEW/EWW/ Z8H)	AH
1	CCOVHA030WJK1		KS Adjusting Cover (Z7S/SA/R/E/EW/X/Z8H)	AH	5-4	HDECAA012WJSC		Microphone Grill (Z7EEEA/EWA)	AH
1	CCOVHA030WJK2		KS Adjusting Cover (Z7EEEW/EWW)	AK	5-5	HiNDPA432WJSA		Lens Cover Nameplate	AD
1	CCOVHA030WJK3		KS Adjusting Cover (Z7EEEA/EWA)	AH	5-6	LHLDZA148WJZZ		Microphone Holder	AD
1-2	GFTAUA001WJSA		Card Lid	AD	5-7	PCOVPA016WJZZ		Microphone Sheet	AC
1-3	NSFTZA023WJFW		Card Lid Shaft	AA	5-8	QEARPA062WJFJ		Microphone Earth	AC
2	CCABAA246WJK1		KS Camera R Cabinet (Z7S/SA/R/E/EW/X/Z8H)	AP	5-9	RMiCC0108TAZZ		Microphone Unit	AP
2	CCABAA246WJK2		KS Camera R Cabinet (Z7EEEW/EWW)	AQ	5-10	ZTAPEZ800020E		Microphone Lead Sheet	AA
2	CCABAA246WJK3		KS Camera R Cabinet (Z7EEEA/EWA)	AQ	6	CCOVAA370WJK1		KS Camera Top Face Cover AX (Z7S/SA/R/E/EW/X/Z8H)	AX
2-2	LANGKA120WJFW		PWB mounting Angle	AG	6	CCOVAA370WJK2		KS Camera Top Face Cover AX (Z7EEW/EWW)	AX
3	CCABBA165WJK2		KS Camera L Cabinet (Z7S/SA/R/E/EW/X)	AX	6	CCOVAA370WJK3		KS Camera Top Face Cover AS (Z7EEEA/EWA)	AS
3	CCABBA165WJK3		KS Camera L Cabinet (Z7EEEW/EWW)	AY	6-2	LANGKA123WJFW		Shoe Fixing Bracket	AF
3	CCABBA165WJK4		KS Camera L Cabinet (Z7EEEA/EWA)	AW	6-3	LANGKA151WJFW		Top Face Cover Fitting	AF
3	CCABBA182WJK1		KS Camera L Cabinet (Z8H)	AX	6-4	LANGTA048WJFW		Shoe Fitting	AE
3-2	GCOVAA319WJSA		Pop-up Cover	AC	6-5	QJAKE0083TAZZ		Hot Shoe Unit	AM
3-3	HBDGB3137CESD		SHARP Badge (Z7S/SA/R/E/EW/X/Z7EEW/EWW/ Z8H)	AG	6-6	QPWBHB739WJZZ		Hot Shoe FPC	AH
3-3	HBDGB3137CESF		SHARP Badge (Z7EEEA/EWA)	AG	7	CCOVAA326WJ01		KS Camera Bottom Cover (Z7S/SA/R/E/EW/X/Z8H)	AR
3-4	JBTN-A129WJSA		Display Button	AE	7	CCOVAA326WJ02		KS Camera Bottom Cover (Z7EEW/EWW)	AS
3-5	JKNBPA010WJSA		Battery Lock Knob (Z7S/SA/R/E/EW/X/Z8H)	AE	7	CCOVAA326WJ03		KS Camera Bottom Cover (Z7EEEA/EWA)	AS
3-5	JKNBPA010WJSB		Battery Lock Knob (Z7EEEW/EWW)	AC	7-2	LANGKA152WJFW		Bottom Cover Fitting A	AE
3-5	JKNBPA010WJSD		Battery Lock Knob (Z7EEEA/EWA)	AE	8-1	DHLDZA154WJ01		Slide Support Holder Ass'y	AZ
3-6	LANGKA156WJFW		Pop-up Cover Fitting	AD	8-1-1	GCOVAA328WJSA		VF Eye Cap	AH
3-7	LHLDZA147WJSA		Battery Lock Holder	AD	8-1-2	GCOVAA330WJSA		VF Dust Removing Window Cover	AC
3-8	MSPRCA019WJFJ		Battery Lock Spring	AA	8-1-3	JKNBPA011WJSA		VF Diopter Scale Control	AC
3-9	MSPRCA025WJFJ		Pop-up Cover Spring	AA	8-1-4	LANGGA017WJ00		VF Slide Cover	AM
3-10	PSHEPA095WJZZ		Battery Blind Sheet	AC	8-1-5	LANGKA128WJZZ		VF Diopter Scale Fixing Bracket Ass'y	AM
3-11	PSPAZA185WJZZ		LCD Spacer	AB	8-1-6	LHLDZA151WJZZ		VF Eye Cap Fixing Holder	AD
3-12	TLABHA020WJZZ		Lithium Label	AC	8-1-7	LHLDZA152WJKA		VF Diopter Scale Holder	AD
3-14	PSLDMA196WJZZ		Electrostatic Spacer	AD	8-1-9	LHLDZA181WJSA		VF Diopter Scale Control Holder	AC
3-15	PSPAHA138WJZZ		Top Face Sliding Spacer	AB	8-1-10	MSPRPA021WJFJ		Diopter Scale Control Rotary Spring	AC
3-16	PSPAZA259WJZZ		Top Face Sliding Spacer B	AB	8-1-11	PLNSVA001WJNA		VF Lens Unit	AG
4	CCABCA007WJK1		KS Terminal Cabinet (Z7S/SA/R/E/EW/X/Z8H)	AR	8-2	LANGKA133WJFW		VF Fixing Bracket	AF
4	CCABCA007WJK2		KS Terminal Cabinet (Z7EEEW/EWW)	AU	8-3	LHLDZA155WJZZ		VF LCD Holder	AC
4	CCABCA007WJK3		KS Terminal Cabinet (Z7EEEA/EWA)	AR	8-4	LHLDZA156WJZZ		VF LCD Support Holder	AC
4-2	GCOVAA315WJSA		Terminal Cover (Z7S/SA/R/E/EW/X/Z8H)	AL	8-5	PSHEPA093WJZZ		VF Side Blind Sheet	AB
4-2	GCOVAA315WJSB		Terminal Cover (Z7EEEW/EWW)	AN	8-6	PSPAGA069WJZZ		VF LCD Spacer	AD
4-2	GCOVAA315WJSD		Terminal Cover (Z7EEEA/EWA)	AM	8-7	QEARPA068WJFW		VF Relay PWB Earth Plate	AD
4-3	GCOVAA317WJSA		DC Terminal Cover (Z7S/SA/R/E/EW/X/ Z7EEW/EWW/Z8H)	AD	8-8	QEARPA070WJFW		VF Side Operation PWB Earth Plate	AD
4-3	GCOVAA317WJSD		DC Terminal Cover (Z7EEEA/EWA)	AD	8-9	RLCUCA003WJZZ		Backlight Unit	BH
4-4	PSLDMA195WJZZ		Electrostatic Sheet	AD	9-1-2	LANGKA125WJFW		Lens Fixing Bracket A	AF
5	CCOVAA321WJK1		KS Camera Front Cover (Z7S/SA/R/E/EW/X/Z8H)	AY	10-1	CANGKA117WJ01		KS LCD Shield Case (Rear)	AL
5	CCOVAA321WJK2		KS Camera Front Cover (Z7EEEW/EWW)	AY	10-1-2	PSHEPA072WJZZ		Lightproof Sheet	AF
5	CCOVAA321WJK9		KS Camera Front Cover (Z7EEEA/EWA)	AW	10-1-3	PTPEHA017WJZZ		LCD Fixing Tape	AC
5-2	GCOVAA322WJKA		Lens Cover	AF	10-2	CCABDA013WJ10		KS LCD Cabinet (Z7EEEA/EWA)	AN
5-3	GCOVAA324WJSA		Remote Control Cover	AM	10-2	CCABDA013WJK8		KS LCD Cabinet (Z7S/SA/R/E/EW/X/Z8H)	AM
					10-2	CCABDA013WJK9		KS LCD Cabinet (Z7EEW/EWW)	AQ
					10-2-2	TLABZA213WJZZ		Feature Label	AE
					10-2-3	PSHEPA099WJZZ		LCD Cabinet Attachment (KS Attachment)	AB
					10-3	CCOVAA314WJK1		LCD Tilt Unit Ass'y (Z7S/SA/R/E/EW/X/Z8H)	BA
					10-3	CCOVAA314WJK2		LCD Tilt Unit Ass'y (Z7EEW/EWW)	BB
					10-3	CCOVAA314WJK3		LCD Tilt Unit Ass'y (Z7EEEA/EWA)	BB
					10-3-3	LANGKA119WJZZ		LCD Tilt Unit	AX
					10-3-4	QPWBHB736WJZZ		LCD Tilt FPC	AR

**VL-Z7S/E/Z7E-A/Z7E-W  
VL-Z8H**

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
10-3-5	TMAGTA001WJZZ		Magnet	AD	e	XiPSF17P03000		Screw M1.7 x 3	AA
10-4	CLMPVA002WJ01		Lamp Unit	AR	f	XiPSF17P04000		Screw M1.7 x 4	AA
10-6	DUNTKB726QA00		LCD PWB Unit	—	n	LX-HZ0050TAF		Screw M1.7-4 TAP	AA
10-7	GCOVAA313WJKA		LCD Front Cover (Z7S/SA/R/E/EW/X/Z8H)	AL	m	XiPSF17P06000		Screw M1.7-6	AA
10-7	GCOVAA313WJKB		LCD Front Cover (Z7EEW/EWW)	AN	o	LX-HZA009WJFD		Screw	AA
10-7	GCOVAA313WJKD		LCD Front Cover (Z7EEA/EWA)	AD	p	LX-HZ0063TAFN		Screw M1.7-6 TAP GIN	AA
10-8	LANGKA118WJFW		LCD Shield Case (Front)	AF	q	XiPSN17P06000		Screw M1.7 x 6	AA
10-9	PGiDM0036TAZZ		Optical Waveguide	AG	r	XiPSN20P08000		Screw M2.0 x 8	AA
10-10	PMiR-A022WJZZ		Reflection Sheet	AC	s	XiPSF14P06000		Screw M1.4 x 6	AA
10-11	PSHEPA076WJZZ		DBEF Sheet	AG	x	LX-HZ0050TAFN		Screw M1.7 x 4 TAP	AA
10-12	PSHEPA087WJZZ		Prism Sheet	AF	z	LX-HZ0063TAF		Screw M1.7-6 TAP	AA
10-13	PSHEPA092WJZZ		Diffusion Sheet	AD	<b>CABINET MECHANISM PARTS LIST</b>				
10-14	PSLDMA167WJZZ		Shield Sheet	AC	101	CANGKA141WJ01		KS Camera Tilt	BA
10-15	RLCDVA002WJZZ		LCD Panel	BN	101-2	LANGKA143WJFW		Tilt Ring Fitting	AH
10-16	PSHEPA098WJZZ		Lightproof Sheet A	AE	101-3	LANGKA144WJFW		Tilt FPC Fitting	AF
10-17	PSHEPA105WJZZ		Creak-preventive Sheet	AB	101-4	LANGKA145WJFW		Tilt Holding Ring	AF
10-18	PSPAZA272WJZZ		LCD PWB Spacer A	AB	101-5	LHLDZA165WJZZ		Tilt FPC Fixing Holder	AD
10-19	PSPAZA273WJZZ		LCD PWB Spacer B	AB	101-6	PSHEPA079WJZZ		Tilt FPC Sheet A	AB
11	DUNTKB721QA05		MAIN PWB Unit (Z7S/SA/R)	—	101-7	PSHEPA080WJZZ		Tilt FPC Sheet B	AB
11	DUNTKB721QA08		MAIN PWB Unit (Z7E/EW/X/Z7EEA/EWA/ Z7EEW/EWW)	—	101-8	PSPAZA170WJZZ		Norglide Ring	AG
11	DUNTKB721QA09		MAIN PWB Unit(Z8H)	—	101-9	PSPAZA172WJZZ		Tilt Ring Epacer	AE
11-2	LHLDZA173WJZZ		R/C Element Holder	AC	101-10	QCNW-B171WJZZ		Tilt Ring Wire	AF
11-3	RRMCUA012WJZZ		R/C	AF	101-11	QEARPA063WJFN		Tilt Earth Ring	AE
12	DUNTKB728QA05		SUB PWB Unit	—	101-12	QPWBHB737WJZZ		Tilt FPC	AN
13	DUNTKB730PM00		Operation PWB Unit	—	103	CCOVAA353WJK3		KS Preparation Cover (Z7S/SA/R/E/EW/X/Z8H)	AS
14	DUNTKB731PM00		Lithium PWB Unit	—	103	CCOVAA353WJK8		KS Preparation Cover (Z7EEW/EWW)	AU
15	GCOVAA334WJSA		Shoe Terminal Cover	AD	103	CCOVAA353WJK9		KS Preparation Cover (Z7EEA/EWA)	AT
16	GCOVAA335WJSA		Lens Hood A	AQ	103-2	JBTN-A130WJSA		Snap Button	AG
17	KLMPWA005WJZZ		Strobe Unit	AZ	103-3	JKNBPA013WJSA		Zoom Knob	AE
18	LANGKA130WJFW		LCD Tilt Reinforcing Fitting	AF	103-4	LHLDZA160WJZZ		Zoom Knob Holder	AC
19	LANGKA131WJFW		Radiating Angle	AE	103-5	LHLDZA163WJZZ		Zoom Base Holder	AC
20	LHLDZA172WJSA		Operation PWB Fixing Holder	AD	103-6	MSPRCA020WJFJ		Zoom Knob Spring	AA
21	MLEVPA005WJSA		LCD Lock Lever	AC	103-7	PSPAZA217WJZZ		Zoom Spacer	AB
22	MSPRCA026WJFJ		LCD Lock Spring	AA	104	GCOVAA338WJKA		Tilt Cover (Z7S/SA/R/E/EW/X/Z8H)	AK
23	PSPAZA189WJZZ		Leakproof Sheet	AD	104	GCOVAA338WJKB		Tilt Cover(Z7EEW/EWW)	AM
24	QEARPA061WJFW		Operation Unit Earth Plate	AC	104	GCOVAA338WJKD		Tilt Cover(Z7EEA/EWA)	AL
25	QPWBHB740WJZZ		Strobe FPC	AD	105	CCOVAA354WJK1		KS VCR Operation	AT
26	QPWBHB742WJZZ		Lithium PWB FPC	AE	105-2	GCOVAA344WJZZ		LED Cover	AC
27	GCOVA1815TASB		Shoe Cover	AD	105-3	GCOVAA345WJSA		Power Knob Cover	AE
27	GCOVA1815TASB		Shoe Cover (Z7S/SA/R/E/EW/X/ Z7EEW/EWW/Z8H)	AD	105-4	JBTN-A132WJSA		Power Lock Button	AC
27	GCOVA1815TASD		Shoe Cover (Z7EEA/EWA)	AD	105-5	JBTN-A133WJSA		S/S Button	AH
28	GFTABA004WJSA		Lithium Lid (Z7S/SA/R/E/EW/X/Z8H)	AE	105-6	JBTN-A134WJSC		Standby Button	AD
28	GFTABA004WJSB		Lithium Lid (Z7EEW/EWW)	AG	105-7	JKNBPA015WJSC		Power Knob	AD
28	GFTABA004WJSD		Lithium Lid (Z7EEA/EWA)	AE	105-8	MSPRCA023WJFJ		Lock Button Spring	AA
29	TLABMA401WJZZ		Model Label(Z7S)	AC	106	GCOVAA340WJKA		VCR Front Cover (Z7S/SA/R/E/EW/X/Z8H)	AK
29	TLABMA419WJZZ		Model Label(Z7R)	AD	106	GCOVAA340WJKB		VCR Front Cover (Z7EEW/EWW)	AM
29	TLABMA421WJZZ		Model Label(Z7E)	AD	106	GCOVAA340WJKD		VCR Front Cover (Z7EEA/EWA)	AL
29	TLABMA422WJZZ		Model Label(Z7EW)	AD	108	DUNTKB732PM00		Mechanism Reversion Detection PWB Unit	—
29	TLABMA423WJZZ		Model Label(Z7X)	AD	109	DUNTKB733QA00		Head Amp PWB Unit	—
29	TLABMA427WJZZ		Model Label(Z8H)	AD	110	DUNTKB734PM00		VCR Operation PWB Unit	—
29	TLABMA515WJZZ		Model Label(Z7EWA)	AD	111	DUNTKB735PM00		Zoom SW PWB Unit	—
29	TLABMA516WJZZ		Model Label(Z7EWW)	AD	112	GCOVAA337WJSA		Lock Support Cover (Z7EEA/EWA)	AD
29	TLABMA517WJZZ		Model Label(Z7EEA)	AD	112	GCOVAA337WJSB		Lock Support Cover (Z7S/SA/R/E/EW/X/ Z7EEW/EWW/Z8H)	AD
29	TLABMA518WJZZ		Model Label(Z7EEW)	AD	113	GCOVAA341WJKA		VCR Bottom Cover (Z7S/SA/R/E/EW/X/Z8H)	AK
29	TLABMA519WJZZ		Model Label(Z7SA)	AD	113	GCOVAA341WJKB		VCR Bottom Cover (Z7EEW/Z7EWW)	AM
30	HiNDPA390WJSA		Lens Nameplate	AD	113	GCOVAA341WJKD		VCR Bottom Cover (Z7EEA/EWA)	AL
31	QPWBHB744WJZZ		QPWBHB PWB	AB					
32	VHiEW6671+++1Y		Hole Sensor	AE					
a	XiPSN17P02000		Screw M1.7 x 2	AA					
b	XiPSN17P03000		Screw M1.7 x 3	AA					
c	XiPSN17P04000		Screw M1.7 x 4	AA					
d	XiPSF17P02000		Screw M1.7 x 2	AA					

Ref. No.	Part No.	★	Description	Code
114	GCOVAA386WJKA		Strap Cover (Z7S/SA/R/E/EW/X/Z8H)	AF
114	GCOVAA386WJKB		Strap Cover (Z7EEW/EWW)	AH
114	GCOVAA386WJKD		Strap Cover (Z7EEA/EWA)	AG
115	GFTACA021WJKA		Cassette Lid (Z7S/SA/R/E/EW/X/Z8H)	AH ▲
115	GFTACA021WJKB		Cassette Lid (Z7EEW/EWW)	AM ▲
115	GFTACA021WJKD		Cassette Lid (Z7EEA/EWA)	AL ▲
116	JKNBPA012WJSA		Lid Opening Knob (Z7S/SA/R/E/EW/X/ Z7EEW/EWW/Z8H)	AE ▲
116	JKNBPA017WJSA		Lid Opening Knob (Z7EEA/EWA)	AE
117	JKNBPA014WJSC		Media Selector Knob	AE
118	LANGKA138WJ01		Chassis Frame	AY
119	LHLDZA162WJZZ		Lid Lock	AD
120	LHLDZA164WJZZ		Selector Knob Holder	AC
121	LHLDZA178WJZZ		Lid lock Holder	AD
122	MSPRTA007WJFJ		VCR Lid Lock Spring	AB
123	PSHEPA085WJZZ		Cassette Lid Backside Sheet	AB
125	QCNW-B167WJZZ		Operation PWB FFC	AC
126	QEARPA065WJFW		Zoom SW PWB Earth Plate	AC
127	QEARPA066WJFW		Power Knob Earth Plate	AC
128	QPWBHB746WJZZ		Zoom PWB FPC	AE
129	VSP0020P-B2WN		Speaker	AK
132	LHLDE1004TASA		Fixture	AC
133	GCOVAA420WJSA		Strap Front Angle Cover	AD
134	GCOVAA421WJSA		Strap Rear Angle Cover	AD
a	XiPSN17P02000		Screw M1.7 x 2	AA
b	XiPSN17P03000		Screw M1.7 x 3	AA
d	XiPSF17P02000		Screw M1.7 x 2	AA
e	XiPSF17P03000		Screw M1.7 x 3	AA
f	XiPSF17P04000		Screw M1.7 x 4	AA
g	LX-BZA024WJFD		Tilt Screw	AA
h	LX-BZ0220TAFB		Screw M1.7 x 2	AB
k	LX-BZA023WJFD		Floating Screw B	AA
u	LX-BZ0221TAFB		Screw M1.7 x 3	AB
w	LX-BZA022WJFN		Floating Screw A	AA
x	LX-HZ0050TAFN		Screw M1.7 x 4 TAP	AA
y	LX-HZ0081TAFN		Screw M1.7 x 5	AA

**LENS UNIT PARTS LIST**

2	DUNTKB723QA01		CCD PWB Unit	—
3	CLNS-A005RMA5		CCD Service	BQ
4	PCOVMA006WJ00		Dustproof Rubber	AD
5	PFIWA017WJZZ		Crystal LFO	AL
6	PLNSAA005WJN1		Lens	BT
7	PSHEGA015WJZZ		Radiating Sheet A	AD
8	PSHEGA016WJZZ		Radiating Sheet B	AE
9	PSHEGA017WJZZ		Radiating Sheet C	AF
10	PSLDMA141WJFW		CCD Shield Case	AC
11	QPWBHB738WJZZ		CCD—Main FPC	AD
13	XiPSN17P02000		Screw M1.7 x 2	AA
14	LX-HZ0073TAFD		Screw M1.7 x 5	AA

Ref. No.	Part No.	★	Description	Code
<b>SUPPLIED ACCESSORIES</b>				
<b>ACCESSORIES</b>				
	QCNW-B173WJZZ		A/V S Cable	AR
	QCNW-A703WJZZ		USB Cable	AH
	QACCCA004WJPZ		AC Cable (Z7EW/Z7EWA/Z7EWW/Z8H)	AR
	QACCKA004WJPZ		AC Cable (Z7S/SA/R/E/Z7EEA/Z7EEW)	AM
	QACCL0026TAZZ		AC Cable(Z7X)	AN
	RRMCGA149WJSA		Remote Control	AM
	UADP-A016WJZZ		AC Adapter	AZ
	CDSKA0080TA01		8MB SD Memory Card	BE
	GCOVHA002WJZZ		Lens Cap	AH
	UBATiA008WJZZ		Battery Pack(BT-L226)	BE
	UBATL0011TAZZ		Lithium Battery(CR2025)	AE
	UBATLA001WJZZ		Lithium Battery(CR1216)	AE
	TiNS-A029WJZZ		Operation Manual(Z7R)	AQ
	TiNS-A735WJZZ		Operation Manual(Z7SA)	AP
	TiNSE0154TAZZ		Service Guide(Z8H)	AA
	TiNSEA049WJZZ		Operation Manual(Z8H)	AN
	TiNSLA048WJZZ		Operation Manual (Z7E/X/Z7EEA/Z7EEW)	AT
	TiNSLA049WJZZ		Operation Manual (Z7EW/Z7EWA/Z7EWW)	AT
	TiNSLA050WJZZ		Operation Manual (German/French)(Z7S)	AT
	TiNSLA051WJZZ		Operation Manual (Dutch/Italian/Spanish)(Z7S)	AT
	TiNSLA052WJZZ		Operation Manual (Swedish/Portuguese/English) (Z7S)	AT
	TiNSLA063WJZZ		Operation Manual (Z7S/SA)	AT
	TiNSLA067WJZZ		Operation Manual (Z7E/Z7EEA/Z7EEW)	AN
	QPLGA0010GEZZ		Plug Converter (Z7E/Z7EEA/Z7EEW)	AF
<b>ACCESSORIES</b>				
<b>(NOT REPLACEMENT ITEM)</b>				
	TGAN-A077WJZZ		Guarantee Card(Z7R)	—
	TGANE0004TAZZ		Guarantee Card (Z7EW/Z7EWA/Z7EWW/Z8H)	—
	TGANEA004WJZZ		Guarantee Card(Z8H)	—
	TGANEA005WJZZ		Guarantee Card(Z7X)	—
	TGANLA003WJZZ		Guarantee Card (Z7S/Z8H)	—
	TLABK0001TAZZ		No. Card(x2)	—



**VL-Z7S/E/Z7E-A/Z7E-W  
VL-Z8H**

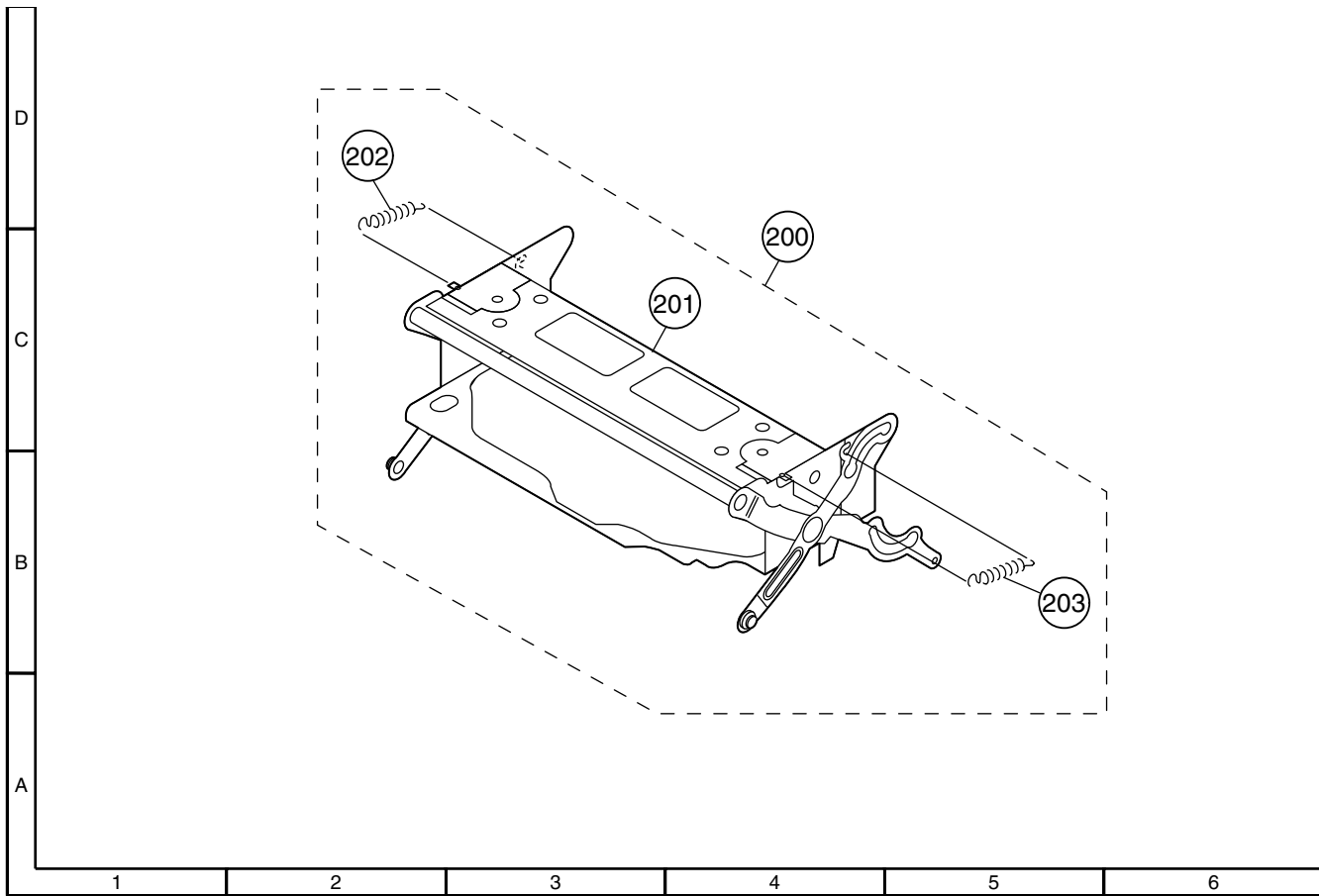
Ref. No.	Part No.	★	Description	Code
<b>PACKING PARTS (NOT REPLACEMENT ITEM)</b>				
	SPAKCA770WJZZ		Packing Case(Z7SA)	—
	SPAKCA551WJZZ		Packing Case(Z7R/S)	—
	SPAKCA579WJZZ		Packing Case(Z8H)	—
	SPAKCA581WJZZ		Packing Case(Z7E/EW/X)	—
	SPAKCA707WJZZ		Packing Case (Z7EEA/EWA)	—
	SPAKCA708WJZZ		Packing Case (Z7EEW/EWW)	—
	SPAKAA084WJZZ		Packing Add. (Bottom)	—
	SPAKFA195WJZZ		Operation Manual Pad (Z7R/S)	—
	SPAKFA196WJZZ		Operation Manual Pad (Z8H)	—
	SPAKFA197WJZZ		Operation Manual Pad (Z7E/EW/X/EEAZ7/EWA/ Z7EEW/EWW)	—
	SPAKFA226WJZZ		Operation Manual Pad (Z7SA)	—
	SPAKCA530WJZZ		Packing Case	—
	SPAKPA088WJZZ		Wrapping Paper	—
	SSAKA0087TAZZ		Polyethylene Bag (Z7SA/R/E/EW/X/ Z7EEA/EWA/Z7EEW/EWW)	—
	SSAKA0109TAZZ		Polyethylene Bag(Z7S)	—
	SSAKAA008WJZZ		Polyethylene Bag(Z8H)	—
	SPAKP6108TAZZ		Side Pad	—



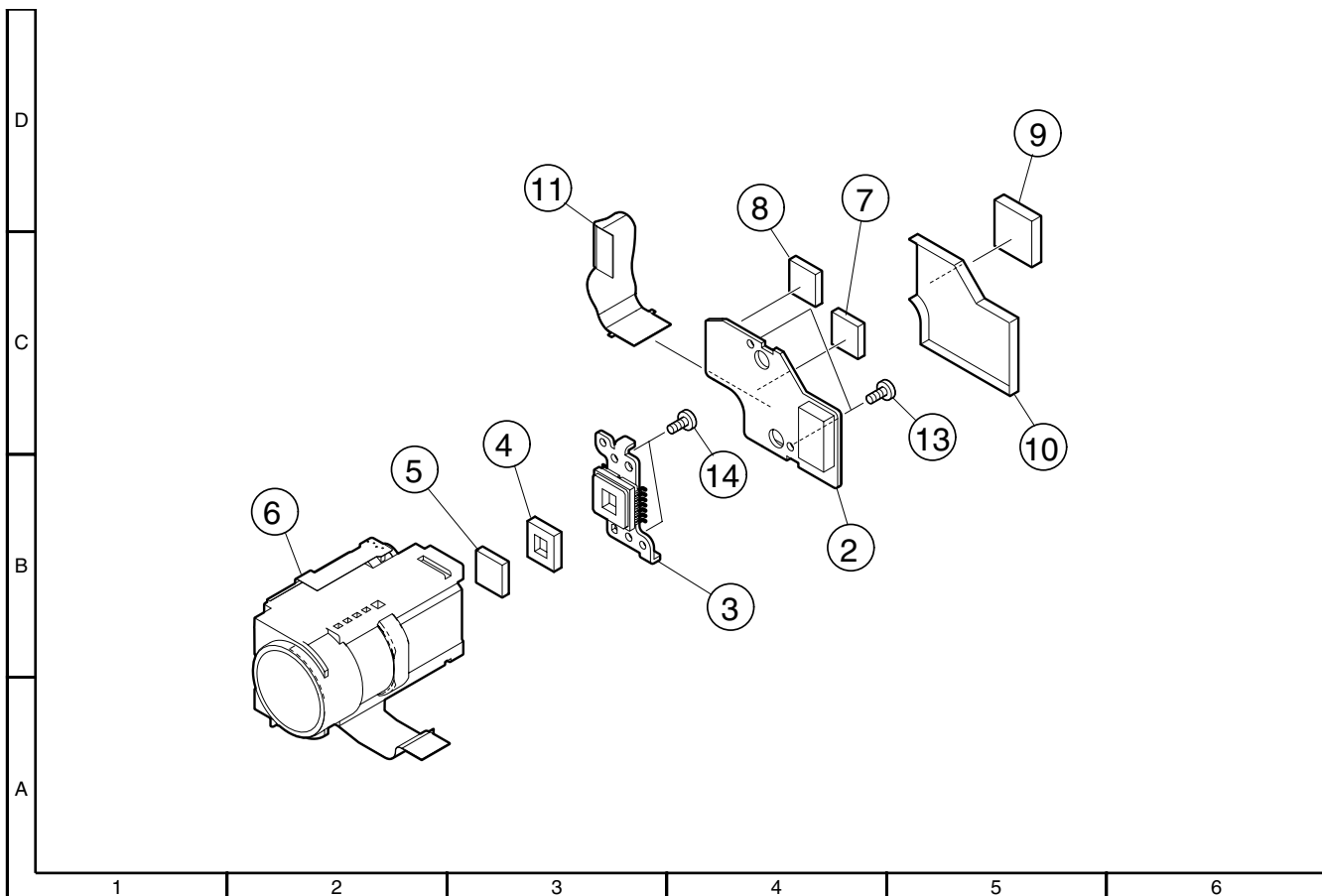




### CASSETTE CONTROL EXPLOOD VIEW



### LENS UNIT EXPLOOD VIEW



## VL-Z7S/E/Z7E-A/Z7E-W/Z8H SERVICE JIG SPECIFICATIONS

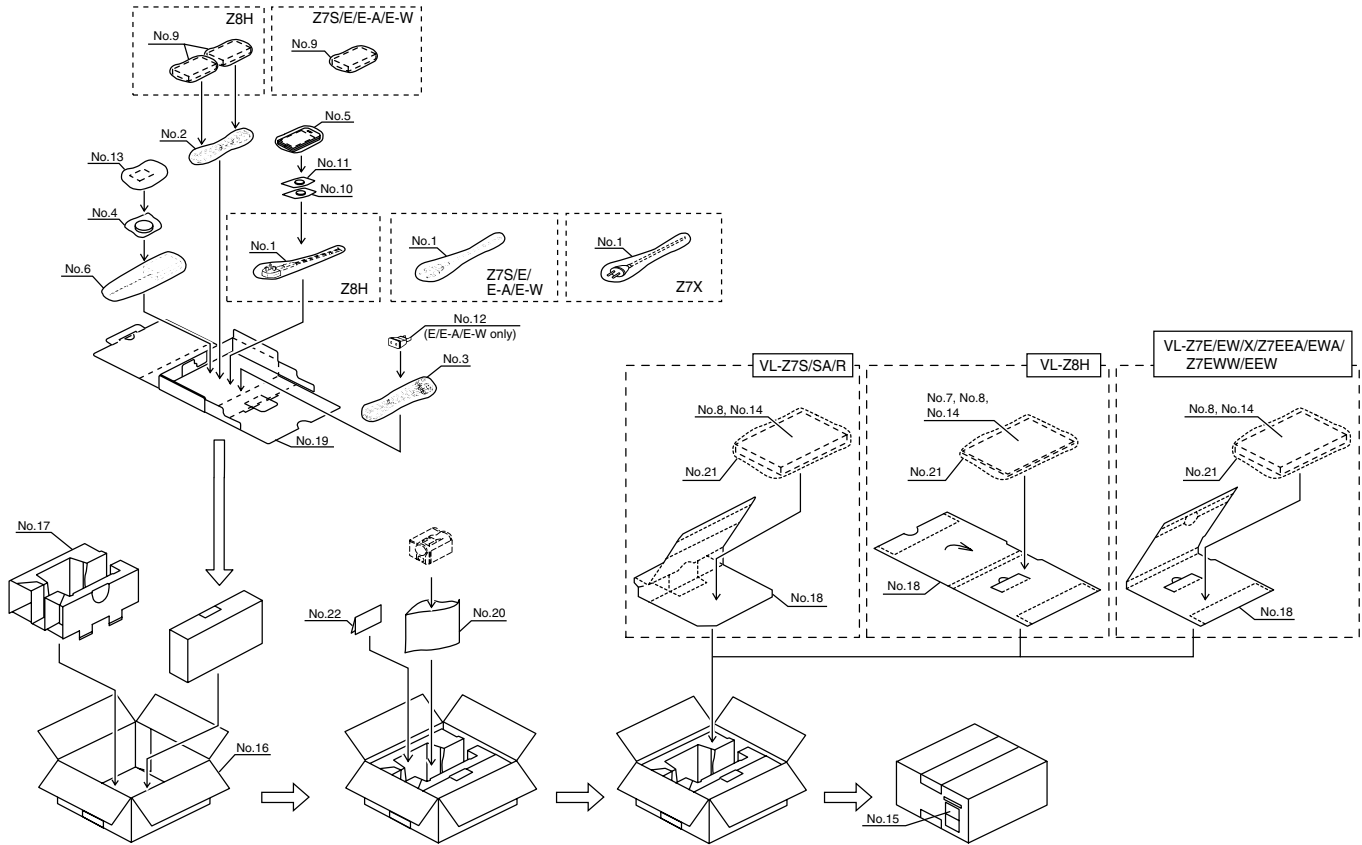
## 1-1. Adjusting jigs for checking the mechanism

No.	Name	New part	Type number, Application	Part code	Code
1	Cassette torque meter for PB		1mN·m/1.5mN·m	9DASD-1015	DB
2	Torque gauge		For measurement of VS-REW winding torque.	JiGTG0045	CN
3	Torque gauge head		For torque gauge shown left.	9EQTGH-DH5000	BW
4	Tension gauge 4N		For measurement of pinch roller press force.	JiGSG0400	BK
5	Dial tension gauge		PTG-10	9DAPTG-10-10W	CA
6	Torque driver 150mN·m		No. 0 cross bit, No. 00 cross bit	JiGTD1500RTDH	CB
7	Master plane		For checking of height of reel table0.	9EQMP-VLPD1	CL
8	Height adjustment jig		For height adjustment.	9DAHG-PD1	BZ
9	Driver for height adjustment		For adjustment of guide roller. Bit shape.	9EQDRIVER-DH5	BC
10	Alignment tape - (I)		Adjustment of running system(Linear signal)	VR3-GAZXS	CF
11	Alignment tape - (II)		For adjustment of SW point(Color bar signal)	VR3-JPZQS	CG
12	Bit for hexagon nut with opposite side distance of 3 mm		For installation of Tu guide nut.	95CM22001	BL
13	Reel hub for back tension measurement		Refer to Service Manual.	Prepared in the service station.	-
14	String for measuring the pinch roller pressure		Refer to Service Manual.	Prepared in the service station.	-

## 1-2. Parts for periodical inspection and maintenance

No.	Name	New part	Type number, Application	Part code	Code
1	Oil		Cosmo Hydro HV22	9EQ-Oil-HV22	AE
2	Cleaning paper		Dusper Σ (SIGMA) ozu Co., LTD	JiGDUSPER	AP
3	Grease: Moly Coat YM-103		Dow corning	99FGREASE-YM103	AH
4	Dry greace CFD-409Z		Sankei Chemical	_____	-
5	Loctite adhesive (1401B)		Three Bond	_____	-

## 17. PACKING OF THE SET



### ACCESSORIES

No.	Model	Parts Code	Description	Remarks
1	Z7EW/Z7EWA/ Z7EWW/Z8H	QACCBAA004WJPZ	AC Cable	⚠
	Z7S/SA/R/E/ Z7EEA/Z7EEW	QACCKA004WJPZ	AC Cable	⚠
	Z7X	QACCL0026TAZZ	AC Cable	⚠
2	- Common parts -	QCNW-A703WJZZ	USB Cable	
3	- Common parts -	QCNW-B173WJZZ	A/V S Cable	
4	- Common parts -	GCOVHA002WJZZ	Lens Cap	
5	- Common parts -	RRMCGA149WJSA	Remote Control	
6	- Common parts -	UADP-A016WJZZ	AC Adapter	⚠
7	Z8H	TiNSE0154TAZZ	Service Guide	
	Z7R	TiNS-A029WJZZ	Operation Manual	
	Z7SA	TiNS-A735WJZZ	Operation Manual	
	Z8H	TiNSEA049WJZZ	Operation Manual	
	Z7S/SA	TiNSLA063WJZZ	Operation Manual	
	Z7E/Z7EEA/Z7EEW	TiNSLA067WJZZ	Operation Manual	
	Z7E/X/Z7EEA/Z7EEW	TiNSLA048WJZZ	Operation Manual	
	Z7EW/Z7EWA/Z7EWW	TiNSLA049WJZZ	Operation Manual	
	Z7S	TiNSLA050WJZZ	Operation Manual (German/French)	
	Z7S	TiNSLA051WJZZ	Operation Manual (Dutch/Italian/Spanish)	
Z7S	TiNSLA052WJZZ	Operation Manual (Swedish/Portuguese/English)		
9	- Common parts -	UBATI008WJZZ	Battery Pack (BT-L226)	
10	- Common parts -	UBATL0011TAZZ	Lithium Battery (CR2025)	
11	- Common parts -	UBATLA001WJZZ	Lithium Battery (CR1216)	
12	Z7E/Z7EEA/Z7EEW	QLPLGA0010GEZZ	Plug Converter	
13	- Common parts -	CDSKA0080TA01	8MB SD Memory Card	

### ACCESSORIES (NOT REPLACEMENT ITEM)

No.	Model	Parts Code	Description	Remarks
14	Z7R	TGAN-A077WJZZ	Guarantee Card	★
	Z7EW/Z7EWA/ Z7EWW/Z8H	TGANE0004TAZZ	Guarantee Card	★
	Z8H	TGANEA004WJZZ	Guarantee Card	★
	Z7X	TGANEA005WJZZ	Guarantee Card	★
	Z7S/Z8H	TGANLA003WJZZ	Guarantee Card	★
	15	- Common parts -	TLABK0001TAZZ	No. Card(x2)

### PACKING PARTS (NOT REPLACEMENT ITEM)

No.	Model	Parts Code	Description	Remarks
16	Z7SA	SPAKCA770WJZZ	Packing Case	★
	Z7R/S	SPAKCA551WJZZ	Packing Case	★
	Z8H	SPAKCA579WJZZ	Packing Case	★
	Z7E/EW/X	SPAKCA581WJZZ	Packing Case	★
	Z7EEA/EWA	SPAKCA707WJZZ	Packing Case	★
	Z7EEW/EWW	SPAKCA708WJZZ	Packing Case	★
	17	- Common parts -	SPAKAA084WJZZ	Packing Add.(Bottom)
18	Z7S/R	SPAKFA195WJZZ	Operation Manual Pad	★
	Z8H	SPAKFA196WJZZ	Operation Manual Pad	★
	Z7E/EW/X/Z7EEA/EWA/ Z7EEW/EWW	SPAKFA197WJZZ	Operation Manual Pad	★
	Z7SA	SPAKFA226WJZZ	Operation Manual Pad	★
	19	- Common parts -	SPAKCA530WJZZ	Packing Case
20	- Common parts -	SPAKPA088WJZZ	Wrapping Paper	★
21	Z7S/R/E/EW/X/Z7EEA/ EWA/Z7EEW/EWW	SSAKA0087TAZZ	Polyethylene Bag	★
	Z7S	SSAKA0109TAZZ	Polyethylene Bag	★
	Z8H	SSAKA008WJZZ	Polyethylene Bag	★
22	- Common parts -	SPAKP6108TAZZ	Side Pad	★

MARK ★ Not Replacement Item





# SHARP

**COPYRIGHT © 2003 BY SHARP CORPORATION**

ALL RIGHTS RESERVED.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior written permission of the publisher.

TQ1542-S  
Jul. 2003 Printed in Japan  
In Japan gedruckt

Design and Production Information
-----------------------------------

Design : Japan
Production : Japan

SA. DS

SHARP CORPORATION  
AV Systems Group  
Quality & Reliability Control Center  
Yaita, Tochigi 329-2193, Japan