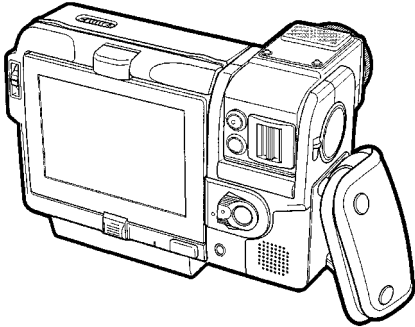


SHARP SERVICE MANUAL

S50A2VL-FD1U/

LIQUID CRYSTAL DIGITAL CAMCORDER NTSC



MODEL VL-FD1U

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.

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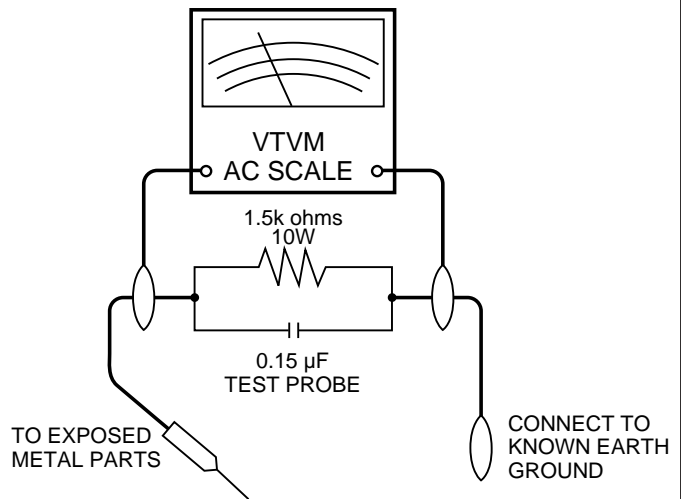
1. IMPORTANT SERVICE NOTES

BEFORE RETURNING THE VIDEO CAMERA RECORDER

Before returning the video camera recorder to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the video camera recorder.
2. Inspect all protective devices such as non-metallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor/capacitor networks, mechanical insulators etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.
 - Plug the AC line cord directly into a 120 volt AC outlet (Do not use an isolation transformer for this test).
 - Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15 μ F capacitor in series with all exposed metal cabinet parts and a known ground, such as a water pipe or conduit.
 - Use a VTVM or VOM with 1000 ohm per volt, or higher sensitivity or measure the AC voltage drop across the resistor (See Diagram).
 - Move the resistor connection to all exposed metal parts having a return path to the chassis (antenna

connections, metal cabinet, screw heads, knobs and control shafts, etc.) and measure the AC voltage drop across the resistor. Reverse the AC plug (a non polarized adaptor plug must be used but only for the purpose of completing these checks) on the set and repeat the AC voltage measurements for each exposed metallic part. Any reading of 0.45V rms (this corresponds to 0.3mA rms AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the video camera recorder to the user.



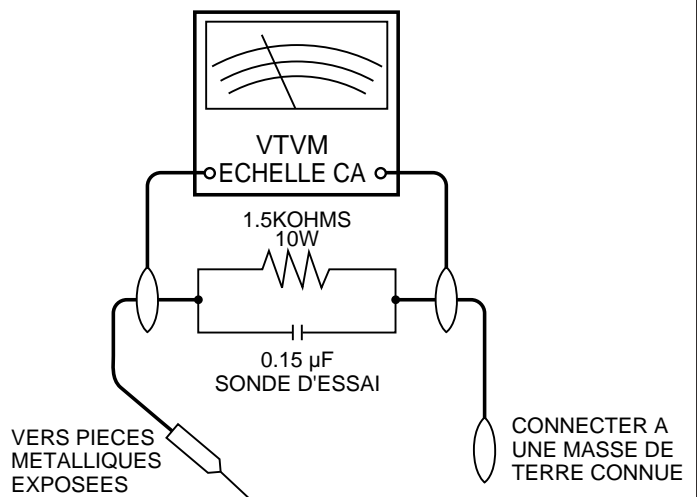
1. NOTES DE SERVICE IMPORTANTES

AVANT DE RENDRE LE MAGNETOSCOPE

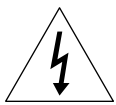
Avant de rendre le magnétoscope à l'utilisateur, effectuer les vérifications de sécurité suivantes.

1. Vérifier toutes les gaines de fil pour être sûr que les fils ne sont pas pincés ou que le matériel n'est pas coincé entre le châssis et les autres pièces métalliques dans le magnétoscope.
2. Vérifier tous les dispositifs de protection tels que les boutons de commande non métalliques, les matériaux d'isolement, le dos du coffret, les couvercles de compartiment et ajustement ou les boucliers, les réseaux de résistance / condensateur d'isolement, les isolateurs mécaniques, etc.
3. Pour être sûr qu'il n'y a aucun risque de choc électrique, vérifier le courant de fuite de la manière suivante.
 - Brancher le cordon d'alimentation secteur directement dans une prise de courant de 120 volts. (Ne pas utiliser de transformateur d'isolement pour cet essai).
 - Utiliser deux fils à pinces et connecter une résistance de 10 watts 1,5 kohm en parallèle avec un condensateur de 0,15 μ F en série avec des pièces du coffret métallique exposées et une masse de terre connue telle qu'un tuyau ou un conduit d'eau.
 - Utiliser un VTVM ou VOM avec une sensibilité de 1000 ohms par volt ou plus ou mesurer la chute de tension CA entre la résistance (voir diagramme).
 - Déposer la connexion de la résistance à toutes les pièces métalliques exposées ayant un parcours de

retour au châssis (connexions d'antenne, coffret métallique, têtes de vis, boutons et arbres de commande, etc.) et mesurer la chute de tension CA entre la résistance. Inverser la fiche CA (une fiche intermédiaire non polarisée doit être utilisée à seule fin de faire ces vérifications.) sur l'appareil et répéter les mesures de tension CA pour chaque pièce métallique exposée. Toute lecture de 0,45 V rms (ceci correspond à 0,3 mA rms CA) ou plus est excessive et signale un danger de choc qui doit être corrigé avant de rendre le magnétoscope à son utilisateur.



WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO WET LOCATIONS.

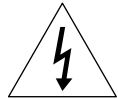


CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol warns the user of uninsulated voltage within the unit that can cause dangerous electric shocks.

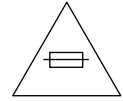


This symbol alerts the user that there are important operating and maintenance instructions in the literature accompanying this unit.

CAUTION

This symbol mark means following. For continued protection against fire hazard, replace only with same type fuse. (CP901; 1.25A 24V, CP902; 1.25A 24V, CP903; 1.25A 24V)

Camcorder only



ATTENTION: POUR REDUIRE LES RESQUES D'INCENDIE OU DE CHOC ELECTRIQUE, NE PAS EXPOSER CET APPAREIL A LA PLUIE OU A L'HUMIDITE.



ATTENTION

RISQUE DE CHOC ELECTRIQUE
NE PAS OUVRIR



ATTENTION: AFIN DE REDUIRE LES RISQUES DE CHOC ELECTRIQUE, NE PAS RETIRER LE COUVERCLE, AUCUN ORGANE INTERNE NE PEUT ETRE REPAIRE PAR L'UTIUSATEUR, CONFIER L'APPAREIL A UN DEPANNEUR QUALIFIE.



Ce symbole signale à l'utilisateur la présence d'une tension non isolée à l'intérieur de l'appareil qui peut être la cause de secousses électriques dangereuses.

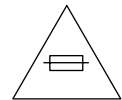


Ce symbole avertit l'utilisateur que des instructions importantes relatives à l'utilisation et à l'entretien se trouvent dans le manuel accompagnant l'appareil.

ATTENTION

Ce symbole signifie que l'on devra utiliser un fusible de même type (CP901; 1,25A 24V, CP902; 1,25A 24V, CP903; 1,25A 24V) pour assurer la sécurité.

Camcorder seulement



 **CAUTION**
BEFORE BATTERY DESTROY

■ NICKEL-CADMIUM BATTERY

The following program is available in the United States. Please consult local environmental authorities concerning the availability of this or other programs in your area.

The RBRC™ Seal

SHARP participates in the RBRC™* Nickel-Cadmium Battery Recycling Program in the United States. The RBRC™ Seal on our battery pack contained in our product indicates that SHARP is voluntarily participating in an industry program to collect and recycle these batteries. The RBRC™ program provides you with a convenient alternative to placing spent Nickel-Cadmium battery packs into the trash or municipal waste stream, which is illegal in some areas. At the end of their useful life, the Nickel-Cadmium battery can be dropped off at the nearest collection center for recycling. For information on the nearest collection center, call 1-800-8-BATTERY or your local recycling center. If you are located outside the United States, contact your local authorities for information concerning proper disposal and/or recycling of this battery. SHARP's involvement in this program is part of our commitment to protecting our environment and conserving natural resources.

[Footnote] *RBRC™ is trademark of the Rechargeable Battery Recycling Corporation.

■ NICKEL-METAL HYDRIDE BATTERY

■ LITHIUM or LITHIUM-ION BATTERY

■ SEALED LEAD BATTERY

Battery disposal

Contains the above (Rechargeable) Battery. must be recycled or disposed of properly.

Remove the Battery from the products and contact Federal or State Environmental Agencies for information on recycling and disposal options.

2. SPECIFICATIONS

Signal System: NTSC 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; 18.812 mm/second
 LP mode; 12.555 mm/second
 Pickup Device: 1/4" (6.4mm, effective size: 4.5 mm) CCD image sensor (with approx. 380,000 pixels including optical black)
 Lens: 10 × optical/200 × digital power zoom lens (F1.4-3.0, f=4.7-47 mm), full-range auto focus
 Lens Filter Diameter: 30 mm
 Monitor: 3.5" (8.9 cm) full-color LCD screen (TFT active matrix)
 Microphone: Electret stereo microphone
 Color Temperature Compensation: Auto white balance with white balance lock
 Minimum Illumination: 7 lux (20 lux measured by EIA standard) (with gain-up, F1.4)
 Video Output Level: 1.0 Vp-p 75-ohm unbalanced
 Audio Output Level: -8 dBs, impedance less than 2.2 kohms
 Speaker Output: 300 mW
 Power Requirement: DC 7.4V
 Power Consumption: 4.8 W (during camera recording in Full Auto mode with zoom motor off and backlight in normal mode)
 Operating Temperature: 32°F to 104°F (0°C to +40°C)
 Operating Humidity: 30% to 80%
 Storage Temperature: -4°F to 140°F (-20°C to +60°C)
 Dimensions (approx.): 6" (W) × 2 7/32" (H) × 3 19/32" (D)
 [152 mm (W) × 56 mm (H) × 91 mm (D)]
 Weight (approx.): 1.23 lbs (560 g)
 (without battery pack, lithium battery and video cassette)

AC Adapter/Battery Charger

UADP-0294TAZZ(FD1U)

UADP-0295TAZZ(FD1UT)

UADP-0296TA01(FD1UK)

UADP-0296TAZZ(FD1UW)

Power Requirement: AC 110-240 V, 50/60 Hz
 DC Output: 7.3 V
 Power Consumption: 10 W
 Dimensions (approx.): 3 5/32" (W) × 1 25/32" (H) × 3 7/8" (D)
 [80 mm (W) × 45 mm (H) × 98 mm (D)]
 Weight (approx.): 0.54 lbs (245 g)

Specifications are subject to change without notice.

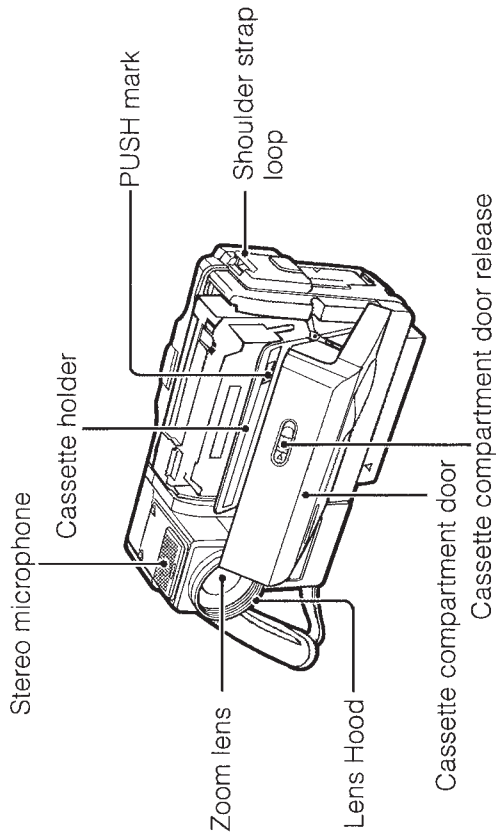
SERVICE INFORMATION (For the U.S.)

For the location of the nearest Sharp Authorized Service, or to obtain product literature, accessories, supplies or customer assistance, please call 1-800-BE SHARP (1-800-237-4277) or visit SHARP's website (<http://www.sharp-usa.com>)

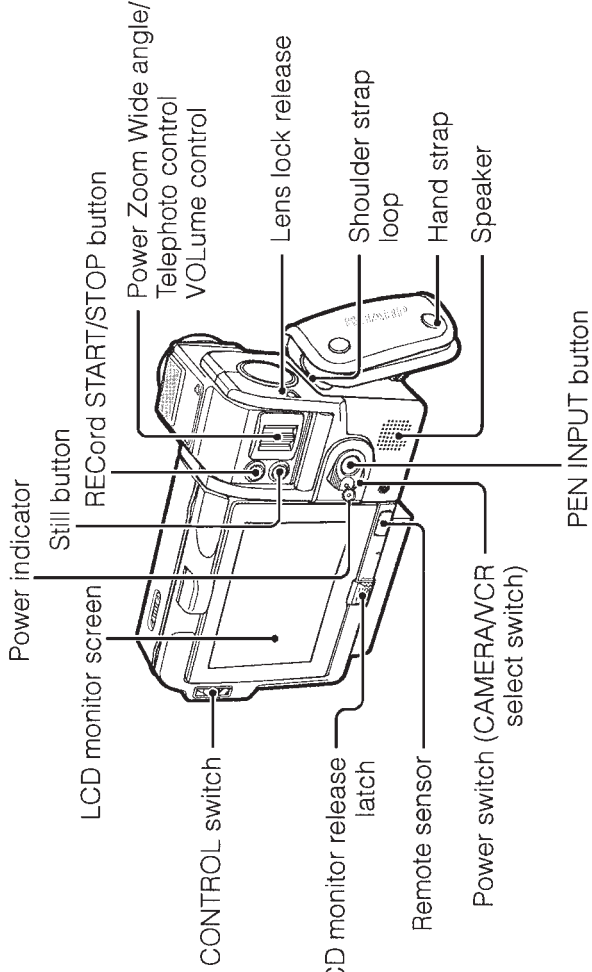
3. PART NAMES AND FUNCTION

For details on the use of each control.

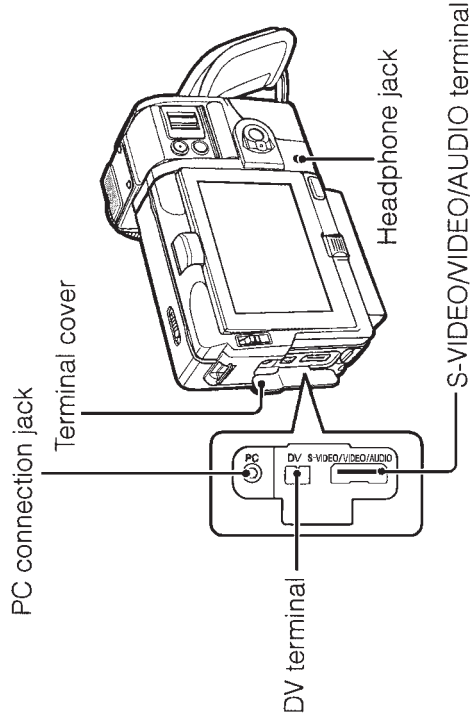
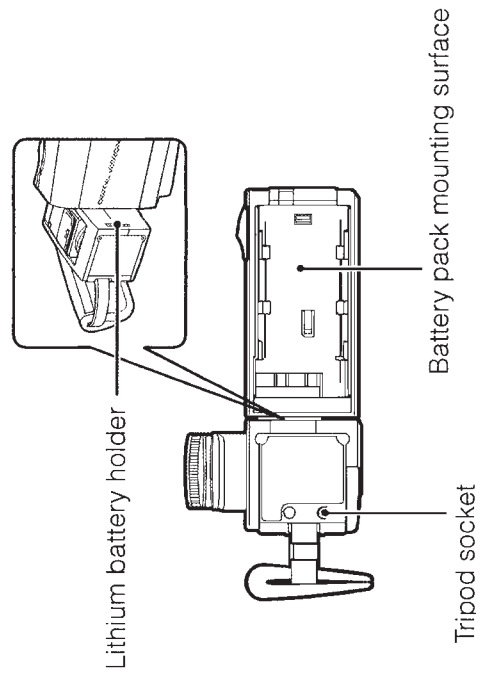
Front view



Rear view



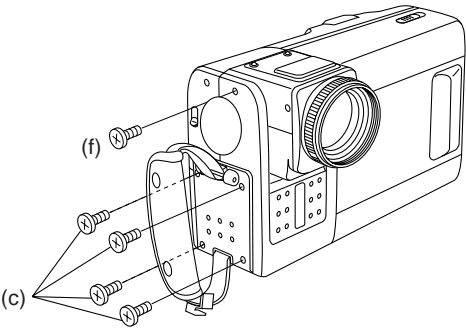
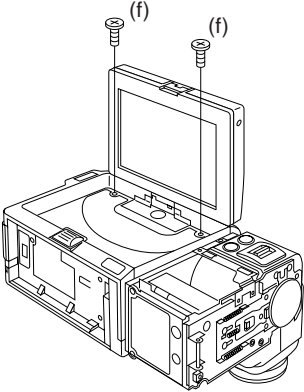
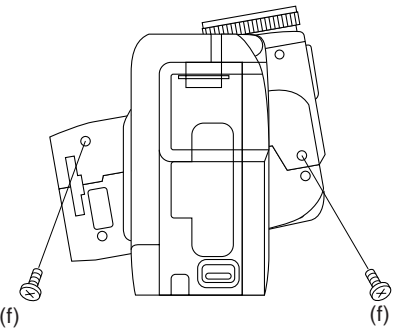
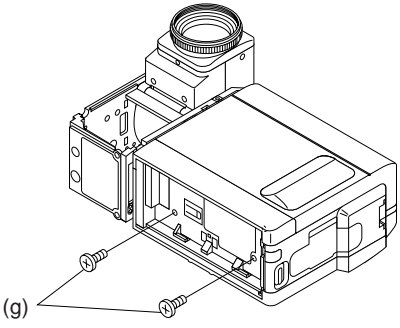
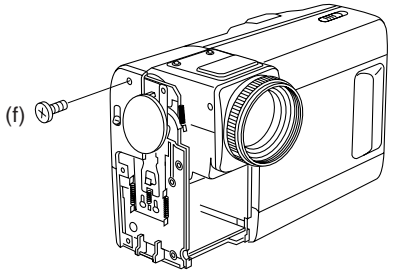
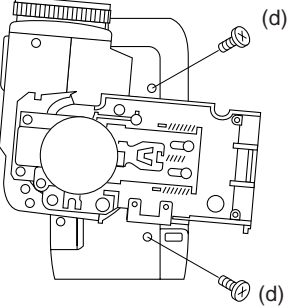
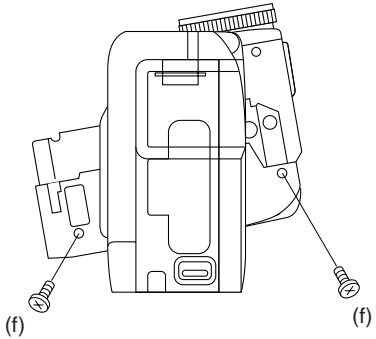
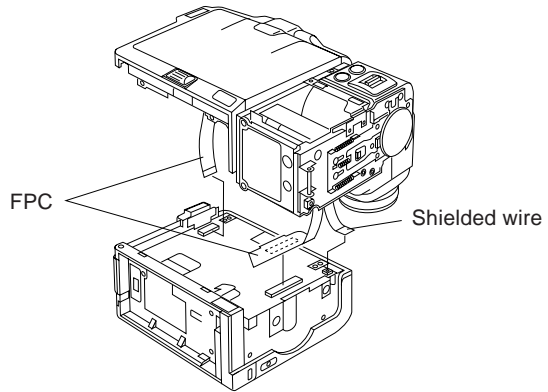
Bottom view



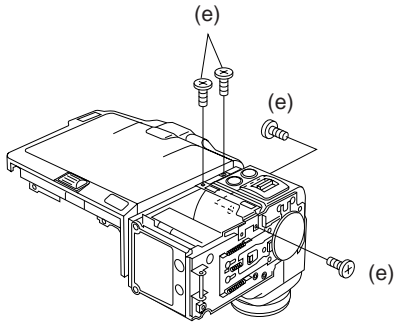
4. DISASSEMBLY OF THE SET

Note:

Before removing the cabinet, turn off the power supply, and ascertain that the battery has been removed.

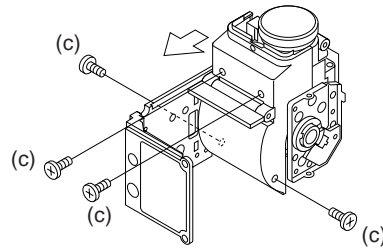
<p>1.</p>  <p>• Remove the screws ((f)LX-BZ0224TAFC)(1 pc.) and ((c)XiPSC17P04000)(4 pcs.) fixing the camera front cabinet and camera side cover.</p>	<p>5.</p>  <p>• Open the LCD section and remove the screws ((f)LX-BZ0224TAFC)(2 pcs.).</p>
<p>2.</p>  <p>• Remove the screws ((f)LX-BZ0224TAFC)(2 pcs.) fixing the camera front cabinet.</p>	<p>6.</p>  <p>• Remove the screws ((g)LX-BZ0222TAFF) fixing the battery holder.</p>
<p>3.</p>  <p>• Remove the screw ((f)LX-BZ0224TAFC)(1 pc.) fixing the camera rear cabinet.</p>	<p>7.</p>  <p>• Turn the camera and remove the screws ((d) XiPSC17P05000) (2 pcs.).</p>
<p>4.</p>  <p>• Remove the screws ((f)LX-BZ0224TAFC)(2 pcs.) fixing the camera rear cabinet.</p>	<p>8.</p>  <p>• Remove the FPCs (2 pcs.) and shielded wire (1 pc.).</p>

9.



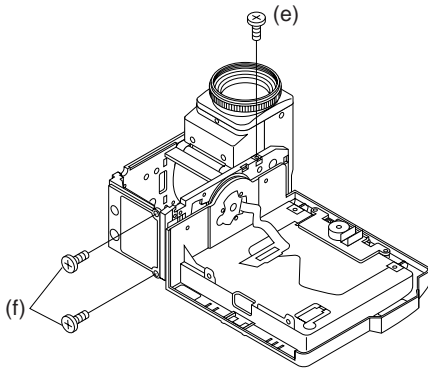
- Remove the screws ((e)XiPSF17P02000)(2 pcs.) fixing the camera frame coupling metal and the screws ((e)XiPSF17P02000)(2 pcs.) fixing the camera frame C to detach the camera section.

13.



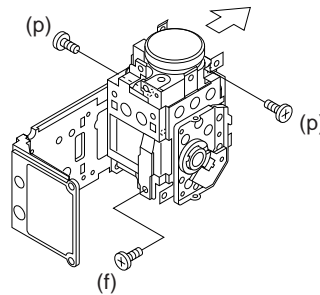
- Remove the screws ((c)XiPSC17P04000)(4 pcs.) fixing the camera lower cabinet.

10.



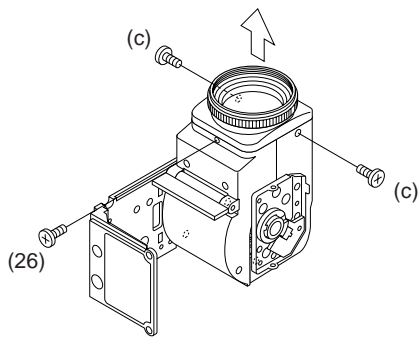
- Remove the screws ((f)LX-BZ0224T AFC)(2 pcs.) fixing the camera frame and the screw ((e)XiPSF17P02000)(1 pc.) fixing the camera frame C.

14.



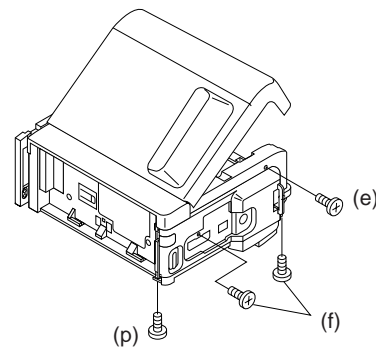
- Remove the screws ((p)LX-HZ0050T AFF)(2 pcs.) and the screw ((f)LX-BZ0224T AFC)(1 pc.) fixing the lens to detach the lens.

11.



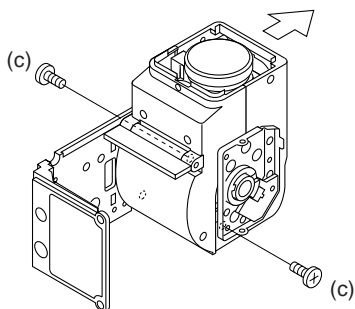
- Remove the screws ((c)XiPSC17P04000)(2 pcs.) and ((26)XASSN17P04000)(1 pc.) fixing the lens front cover.

15.



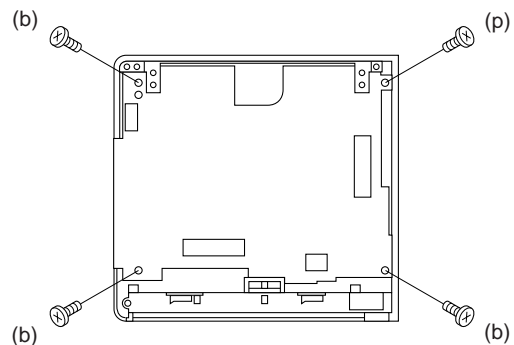
- Remove the screws ((e)XiPSF17P02000)(1 pc.), ((p)LX-HZ0050T AFF)(1 pc.) and ((f)LX-BZ0224T AFC)(2 pcs.) fixing the VCR side cover.

12.



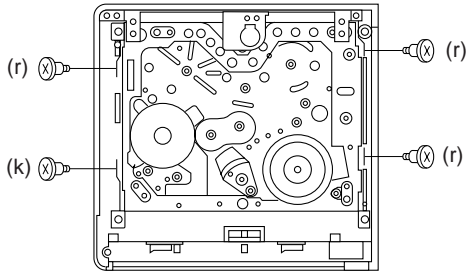
- Remove the screws ((c)XiPSC17P04000)(2 pcs.) fixing the camera upper cabinet.

16.



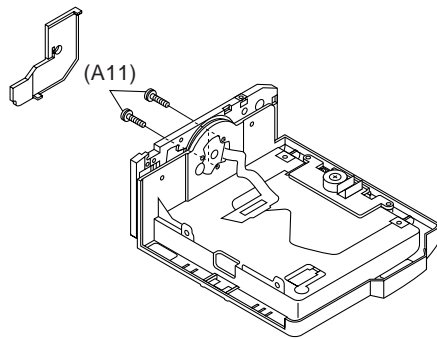
- Remove the screws ((p)LX-HZ0050T AFF)(1 pc.) and ((b)XiPSC17P03000)(3 pcs.) fixing the PWB.

17.



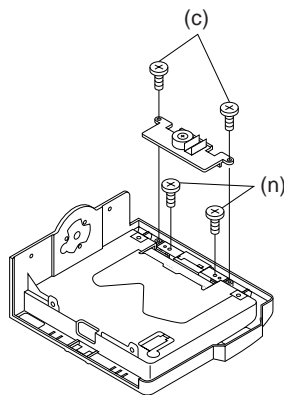
- Remove the floating screw ((k)LX-BZ0231TAFE)(1 pc.) and the screws ((r)LX-BZ0232TAFD)(3 pcs.) fixing the mechanism.

18.



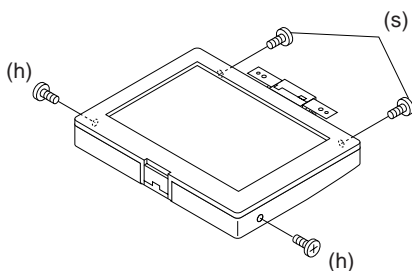
- Detach the FPC holder and remove the screws ((A11)LX-BZ0238TAFD)(3 pcs.) fixing the tilt.

19.



- Remove the screws ((c)XiPSC17P04000)(2 pcs.) fixing the pop-up cover and the screws ((n)XiPSF20P04000)(2 pcs.) fixing the LCD hinge.

20.



- Remove the screws ((h)LX-BZ0221T AFC)(2 pcs.) and ((s)XAPSH17P02000)(2 pcs.) fixing the LCD cover.

<Screws>

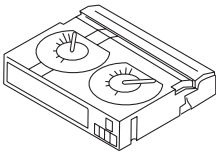
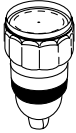
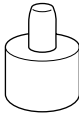
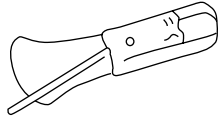
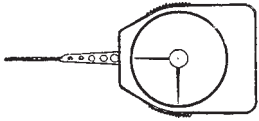
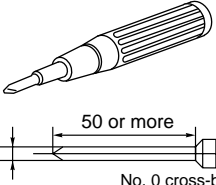
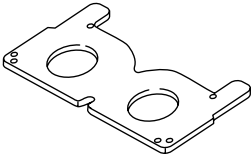
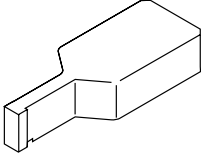
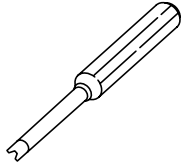
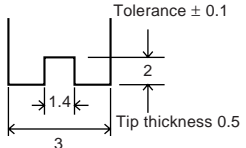
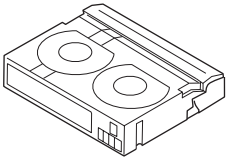
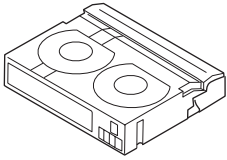
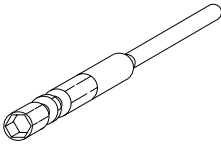
(b)XiPSC17P03000	M1.7×3 Silver Small Screw
(c)XiPSC17P04000	M1.7×4 Silver Small Screw
(d)XiPSC17P05000	M1.7×5 Silver Small Screw
(e)XiPSF17P02000	M1.7×2 Black Small Screw
(f)LX-BZ0224T AFC	M1.7×2.5 Chrome
(g)LX-BZ0222T AFF	M1.7×3 Black
(h)LX-BZ0221T AFC	M1.7×3 Chrome
(k)LX-BZ0231T AFE	Floating Screw
(n)XiPSF20P04000	M2×4 Black Small Screw
(p)LX-HZ0050T AFF	M1.7×4 Black P Tight
(r)LX-BZ0232T AFD	Floating Screw
(s)XAPSH17P02000	M1.7×2 Chrome
(A11)LX-BZ0238T AFD	M1.7×5 Small Screw
(26)XASSN17P04000	M1.7×4 Flat Head Nickel Screw

5. MECHANISM ADJUSTMENT JIGS AND PARTS

5-1. Mechanism check adjustment jigs

Configuration
 1. Name
 2. Part No.
 3. Code
 * Model, Uses Remarks

<Note: The entries of list>

 <p>1. PB-use cassette Torque meter 2. 9DASD-1015 3. DB * SD-1015</p>	 <p>1. Torque gauge 2. JiGTG0045 3. CN * For use in VS-REW winding torque measurement.</p>	 <p>1. Torque gauge head 2. 9EQTGH-DH5000 3. BW * For use with the above torque gauge.</p>	 <p>1. Tension gauge 4N 2. JiGSG0400 3. BK * For measurement of pinch roller pressure.</p>	 <p>1. Dial tension gauge 2. 9DAPTG-10-10W 3. CA * PTG-10</p>
 <p>1. Torque screwdriver 150mN·m 2. JiGTD1500RTDH 3. CB</p>	 <p>1. Master plane 2. 9EQMP-VLPD1 3. CL * For checking reel base height.</p>	 <p>1. Height adjustment jig 2. 9DAHG-PD1 3. BZ * For height adjusting.</p>	 <p>1. Height adjustment screwdriver 2. 9EQDRIVER-DH5 3. BC * For guide roller adjustment.</p>	<p>* For Tu guide adjustment. * For T roller adjustment. * Bit shape (see figure below).</p> 
 <p>1. Alignment tape – (I) 2. VR3-GAZXS 3. CF * For tape running adjustment.</p>	 <p>1. Alignment tape – (II) 2. VR3-GTZQS 3. CG * For SW point adjustment. * 90ADVC-TAPE can use, too. (Code CU)</p>	 <p>1. For hexagon nut opposite side 3mm bit. 2. 95CM22001 3. BL * For S guide hexagon nut installation.</p>	<p><Miscellaneous></p> <p>(1) Slide caliper (2) Precision screwdrivers (Phillips head and slotted) (3) Radio needle-nose pliers (4) Tweezers</p>	

5-2. Parts for regular periodic inspection and maintenance

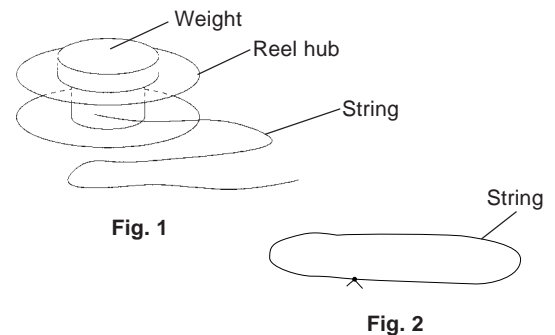
<Note: The entries of list>

Configuration
 1. Name
 2. Part No.
 3. Code
 * Model, Uses Remarks

<p>1. Oil Cosmo Hydro HV22 2. HV22 : 9EQ-Oil-HV22 3. HV22 : AE * Cosmo Petroleum K.K.</p>	<p>1. Cleaning paper 2. JiGDUSPER 3. AP * DUSPER Σ (SIGMA) (ozu Co., LTD.)</p>	<p>1. Grease: Moly Coat YM-103 2. 99FGREASE-YM103 * Dow coating 1. Screw lock (1401B) * Three Bond</p>	<p>1. Cleaning liquid: industrial-use ethyl alcohol * Commercially available item 1. Extremely thin cotton swab * Commercially available item</p>
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<How to make jigs for mechanism checking and adjustment>

- (1) Reel hub for back tension measurement (Fig. 1)
- 1) Obtain a commercially available cassette tape reel hub. (Disassemble the cassette tape and remove the tape from the reel hub.)
 - 2) Paste one end of a string (about 20cm long) to the reel hub with (for example) cellophane tape.
 - 3) Paste the weight of about 0.21N on the upper side reel hub.
- (2) String for use in pinch roller snap-fit force measurement (Fig. 2)
- 1) Obtain an approximately 20cm length of commercially available string.
 - 2) Tie the 2 ends together to form a loop.



6. INSPECTION AND MAINTENANCE ITEMS AND INTERVALS

In order to keep the mechanical section always in good condition, perform the following inspection and maintenance at regular intervals. In addition, after repair, perform the following maintenance items regardless of how long the user has been using the unit.

6-1. List of inspection and maintenance items

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

	Inspection and maintenance location	Time of use (h)					Symptoms that indicate need for maintenance	Remarks
		500	1,000	1,500	2,000	3,000		
Tape running system	Tape running section (see section 8-3)	□	□	□	□	□	<ul style="list-style-type: none"> Block-type noise Head hole clogging Tape damage 	Note: Replace the drum ass'y if the video head is cleaned but the envelope still does not appear. (When the envelope is normal, refer to "11. USEFUL TIPS".)
	Drum section, Video head (see section 8-3)	□	□	□	□	□		
		<Rollers> • Replace if there is anything abnormal in the rotation, or if there is run-out (that becomes large). <Other than the above> • Clean the section that contacts the tape (especially the lower drum helical section). Use the specified cleaning liquid.						
Drive system	Timing belt	—	★○	—	★○	★○	<ul style="list-style-type: none"> The tape fails to run. The tape becomes slack. Block-type noise Abnormal noise 	<ul style="list-style-type: none"> Replace if there is anything abnormal.
	Pinch roller	□	□	□	□○	□		
	Capstan motor	—	○	—	○	○		
	Swing arm S reel base, Tu reel base	—	★○	—	★○	★○		
	Center pulley shaft Intermediate pulley shaft Swing arm boss Intermediate gear A shaft, Intermediate gear B shaft	—	△	—	△	△	<ul style="list-style-type: none"> Abnormal noise 	<ul style="list-style-type: none"> Lubricate with oil. [Oil] Cosmo Hydro HV22 Note: Apply oil to the shaft, then wipe lightly with a cloth.
	Loading motor Mode switch	—	★○	—	★○	★○	<ul style="list-style-type: none"> Cannot eject. Fails to enter a mode. 	<ul style="list-style-type: none"> Replace if anything is abnormal (including the noise).
Performance checks	Abnormal noise	★	★	★	★	★	<ul style="list-style-type: none"> The tape fails to run. The tape becomes slack. Tape damage The play-back image is abnormal. 	<ul style="list-style-type: none"> Replace any part that fails to perform within the standard.
	PB · VS/REW winding torque	—	★	—	★	★		
	PB · VS/R · loading back tension Tu reel base ratchet torque	—	★	—	★	★		
	S reel base no-load torque	—	★	—	★	★		

[Oil] Cosmo Hydro HV22

[Grease] Moly Coat YM-103

[Screw lock] Three Bond 1401B

[Cleaning liquid] Industrial-use ethyl alcohol

6-2. Precautions

- When replacing any part, always replace the cut washer that was removed with a new one.
- This mechanism does not have control adjustment. If the control cannot be set as required, clean and or replace parts.
- On the oil
 - Always use the specified oil. (Using another kind of oil can cause various kinds of trouble.)
 - Always use clean oil, without any mixed-in dirt, to lubricate bearings. (Using oil with dirt mixed in can cause the bearings to wear or to stick.)
 - One drop of oil is the amount shown in the Fig. 1, on the point of a pin.
- Perform circuit repair, tape running adjustment, etc. with the cassette controller assembly attached to the mechanism.
- When operating the mechanism separately, apply voltage to the loading motor. However, the terminal voltage must be DC3V or less. (When the mechanism is connected to the main PWB, do not apply external voltage to the loading motor. It may cause a trouble.) (Forcing the gears to turn by hand entails danger of breakage.) If the mechanism is separated from the unit, the capstan motor may rub and be damaged if spacing under the mechanism is inadequate.
- To install the cassette controller, push section A in the Fig. 2. Do not push anything else.
- Do not deform any of the mechanical parts.

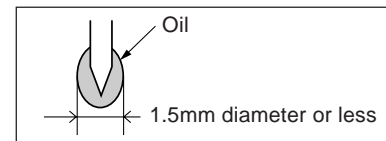


Fig. 1

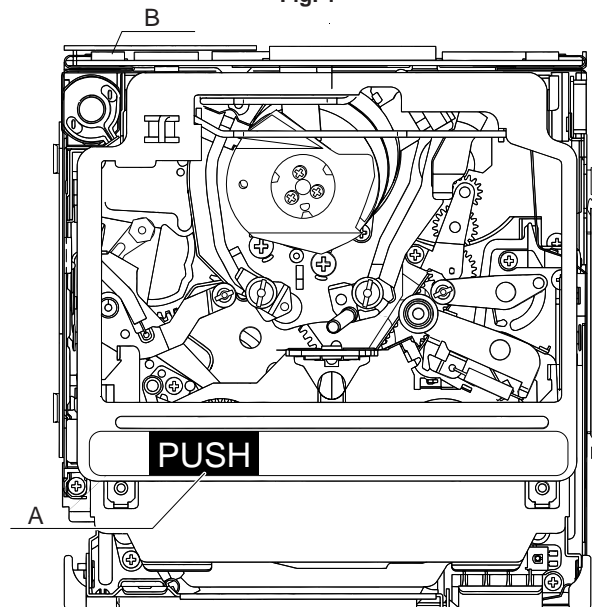


Fig. 2

7. MECHANICAL ADJUSTMENTS AND CHECKS

The items discussed here relate to general on-site servicing (field servicing). Adjustments and replacements that require sophisticated facilities, jigs and technology are omitted.

In addition, in order to maintain the characteristics that the unit has when it is new, not only are inspection and maintenance necessary, but it is absolutely necessary that, for example, the tape not be damaged, and always use jigs for adjustments that require them.

<Precautions>

(1) Always set the power supply and state of the unit as follows Notes for mechanism adjustments and checks.

AC adapter used, with cassette controller assembly

AC adapter used, without cassette controller assembly (Independent Mechanism)

DC3V, without cassette controller assembly (Independent Mechanism)

(2) When the mechanism is connected to the main PWB, do not apply external voltage to the loading motor. It may cause a trouble.

(3) Always run the tape with the cassette controller assembly attached.

7-1. Checking the playback (recording) winding torque AC adapter used, with cassette controller assembly

(1) Set the torque cassette with the cassette controller assembly attached, then, in SP recording mode (playback mode if a signal has already been recorded in SP mode on the tape), confirm that the torque on the winding side is within the standard.

<Winding torque standard in record (playback) mode>

(If there is torque ripple, read the center value.)

$0.70 \pm 0.4 / -0.3 \text{ mN}\cdot\text{m}$, ripple $0.4 \text{ mN}\cdot\text{m}$ or less

7-2. Checking the rewinding playback (VS-REW) winding torque

AC adapter used, without cassette controller assembly (Independent Mechanism)

(1) Remove the cassette controller assembly, press the DOWN switch, using the adhesive tape and referring to 9-3, operate in the TEST mode (T01) to rewind, and set the rewinding playback (VS-REW) mode.

(2) Set the torque gauge on the S reel base, press the front end of tension post with your finger in the arrow A direction so as to ascertain that the winding torque is as specified. (Check without rotating the torque gauge.)

<Rewinding playback (VS-REW) winding torque standard>

(If torque ripple exists, read its center value.)

$1.6 \pm 0.6 \text{ mN}\cdot\text{m}$, ripple $0.5 \text{ mN}\cdot\text{m}$ or less

(3) After checking the winding torque remove the torque gauge, and remove the adhesive tape used in item (1) above (refer to 9-3). The STANDBY mode is set automatically.

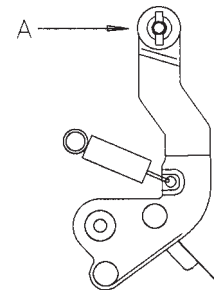


Fig. 1. Removal of tension band when measuring the rewinding playback (VS-REW) winding torque

7-3. Checking of reel base height DC3V, without cassette controller assembly (Independent Mechanism)

(1) Remove the cassette controller assembly (refer to 9-2).

(2) Referring to 9-1, apply DC3V to the loading motor and put the system into playback mode.

(3) Taking adequate care so that the master plane does not contact drum, running parts (guide roller, etc.), or the MIC contacts. Fit the master plane holes to the 2 guides (A and B) in Fig. 2.

(4) Confirm that the heights of the S reel base reel receiving surface and the Tu reel base reel receiving surface below the master plane top surface are within the set values, using, for example, a slide calliper (Fig. 3).

When checking the S reel base height, press the front end of tension post in the arrow A direction with your finger to release the tension band, and then check the height in this state (Fig. 1).

(5) If the height is not within set values, replace the washer under the reel base, and adjust as specified.

Note: After the adjustment, make sure that the reel bases rotate smoothly.

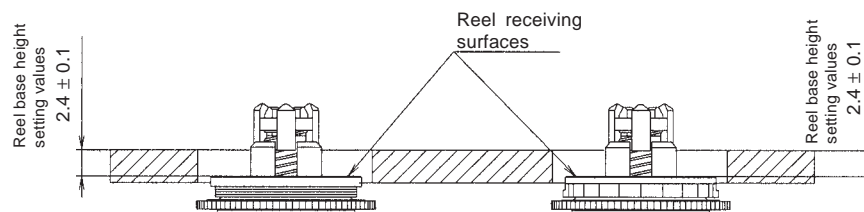


Fig. 3

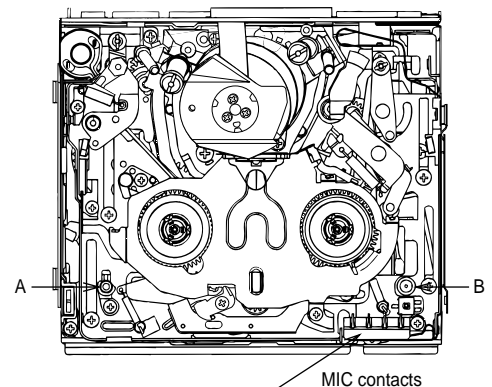


Fig. 2

7-4. Back tension torque check and adjustment in record (playback) mode

AC adapter used, with cassette controller assembly

(1) Checking

Set the torque cassette (SD-1015), and make sure in the SP record mode that the supply side torque is within the standard shown below (or in the playback mode for the tape on which the signal has been SP-recorded).

<Standard>

(If torque ripple exists, read its center value.)

$0.7 \pm 0.1\text{mN}\cdot\text{m}$

(2) Adjustment (Fig. 4)

If the value is out of standard range, adjust, using the screw 1 shown in Fig. 4.

1. Loosen the screw 2 slightly.

2. Adjust to turning the screw 1. When back tension is too high, turn the screw 1 counterclockwise (CCW).

When back tension is too low, turn the screw 1 clockwise (CW).

3. After adjustment fix the angle with the screw 2. (At this time take care so as to prevent excessive tightening.) Apply Screw Lock to the screw 1.

<Caution>

Screw tightening torque: $0.04\text{N}\cdot\text{m}$

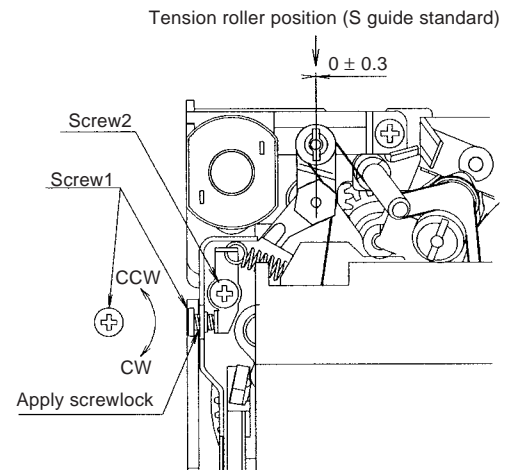


Fig. 4. Check (tape exists)

7-5. Checking and adjustment of tension roller position in record (playback) mode

DC3V, without cassette controller assembly (Independent Mechanism)

(1) Checking

Before winding the 60-min tape make sure that the tension roller is in the same position as S guide as shown in Fig. 4.

If not, take out the tape and adjust in the following procedure.

(2) Adjustment (Fig. 5)

1. Set the playback mode without loading the tape.

2. Loosen the screw 3 slightly (to such an extent that the tension band holder 4 can be moved).

3. If the tension roller is inside from the specified position, shift the tension band holder 4 in the arrow (A) direction. If the tension roller is outside, shift the tension band holder in the arrow (B) direction, and fix with the screw 3. (Proper shift must be 0.2 to 0.6mm outside from the specified position.)

4. Check the position by the procedure described in item (1) Checking above.

5. If the position is not specified position, adjust again.

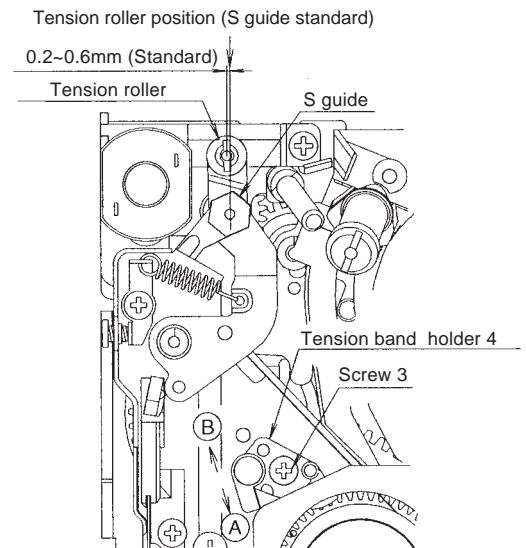


Fig. 5. Position adjustment (tape does not exist)

7-6. Checking of supply S reel base no-load torque

DC3V, without cassette controller assembly (Independent Mechanism)

(1) Remove the cassette controller assembly, then apply DC3V to the loading motor and put the system into L. start mode (refer to 9-1).

(2) Move the swing arm toward the Tu reel base side.

Be careful not to cause damage to the gears and other parts in the process. (Fig. 6)

(3) Set a back tension measurement reel hub on the S reel base.

(4) Using a dial tension gauge, pull the string in the A direction, then confirm that the tension is within the standard.

<FF back tension standard>

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

30mN or less

7-7. Checking of loading back tension

DC3V, without cassette controller assembly (Independent Mechanism)

(1) Remove the cassette controller assembly, then apply DC3V to the loading motor and put the system into L. start mode. (refer to 9-1)

(2) Move the swing arm toward the S reel base side. Be careful not to cause damage to the gears and other parts in the process. (Fig. 7)

(3) Set a back tension measurement reel hub on the Tu reel base.

(4) Using a dial tension gauge, pull the string in the A direction, then confirm that the tension is within the standard.

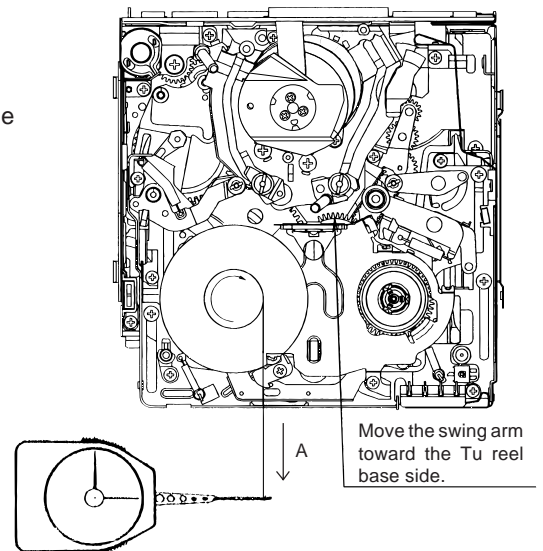


Fig. 6. S reel base no-load torque measurement method

<REW back tension standard>

(If the tension fluctuates, read its center value.)
 $15 \pm 12\text{mN}$

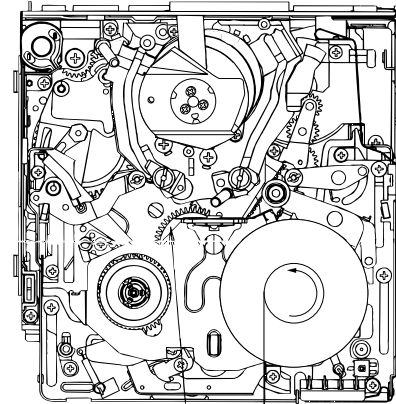
7-8. Checking of winding Tu reel base ratchet torque

DC3V, without cassette controller assembly (Independent Mechanism)

- (1) Remove the cassette controller assembly, then apply DC3V to the loading motor and put the system into standby mode. (refer to 9-1)
- (2) Move the swing arm toward the S reel base side.
 Be careful not to cause damage to the gears and other parts in the process. (Fig. 8)
- (3) Set a back tension measurement reel hub on the Tu reel base.
- (4) Using a dial tension gauge, pull the string in the A direction, then confirm that the tension is within the standard.

<Winding Tu reel base ratchet torque standard >

(If the tension fluctuates, read its center value.)
 100mN or less



Move the swing arm toward the S reel base side.

Fig. 7. Loading back tension measurement method

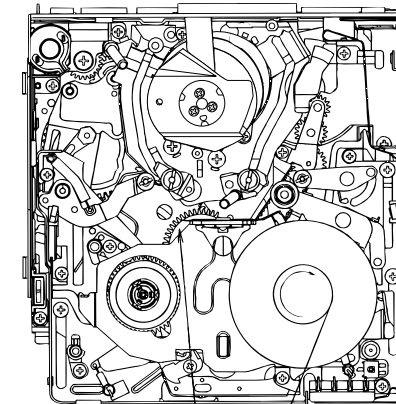
7-9. Checking of rewinding playback (VS-REW) back tension

DC3V, without cassette controller assembly (Independent Mechanism)

- (1) Remove the cassette controller assembly, then apply DC3V to the loading motor and put the system into rewinding playback (VS-REW) mode. (refer to 9-1)
- (2) Move the swing arm toward the S reel base side.
 Be careful not to cause damage to the gears and other parts in the process.
- (3) Set a torque gauge on the Tu reel base.
- (4) Turning the torque gauge to counterclockwise (1 turn for 3 seconds), then confirm that the torque is within the standard.

<Rewinding playback (VS-REW) back tension standard value>

(If the tension fluctuates, read its center value.)
 $0.70 +0.6/-0.3\text{mN}\cdot\text{m}$



Move the swing arm toward the S reel base side.

Fig. 8. Winding Tu reel base ratchet torque measurement method

7-10. Checking of pinch pressing force

DC3V, without cassette controller assembly (Independent Mechanism)

- (1) Set the pinch roller pressing force measuring thread on the pinch lever (position A, Fig. 9).
- (2) Set the mechanism to the playback mode, press the pinch roller against the capstan axis.
- (3) Fit the tension gauge to the pinch roller pressing force measuring thread, pull in the arrow B direction shown in Fig. 11 to separate a little the pinch roller from the capstan axis.
- (4) Gradually return the pinch roller, and when the pinch roller contacts parallel the capstan axis, read the value (see Fig. 10) to make sure that the value conforms to the standard shown below.

<Standard>

$1.8 +0.3/-0.5\text{N}$

<Caution>

After making this measurement, quickly release the system from playback mode and remove the pinch roller from the capstan shaft. (If the pinch roller is left fitted onto the capstan shaft for a long time, the pinch roller will be deformed.)

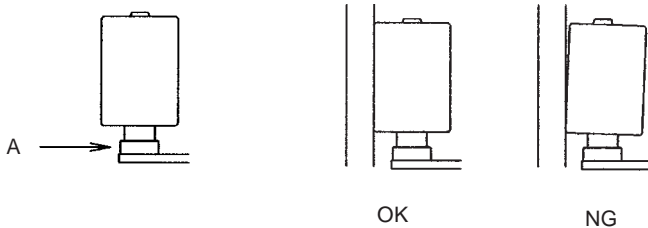


Fig. 9

Fig. 10

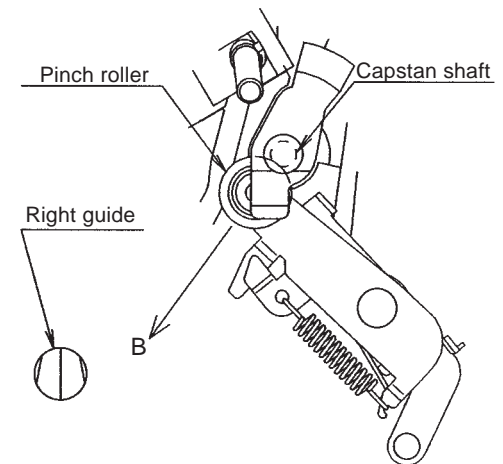
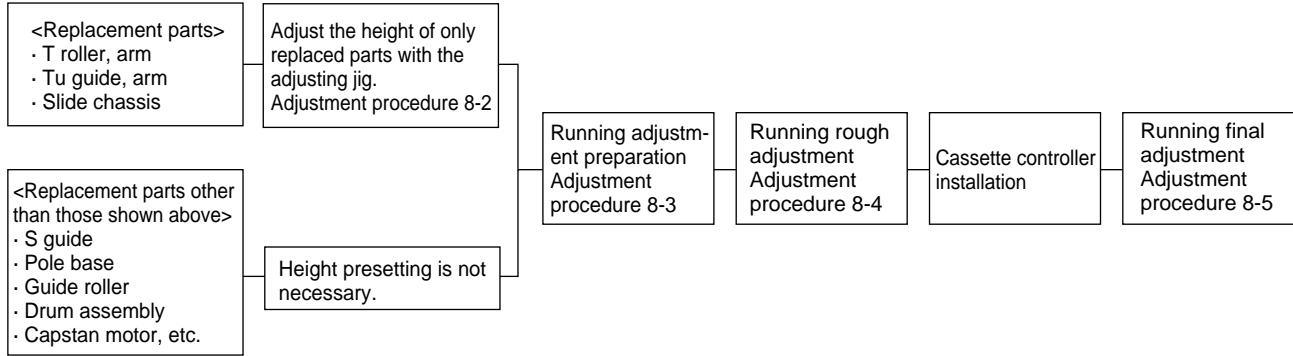


Fig. 11

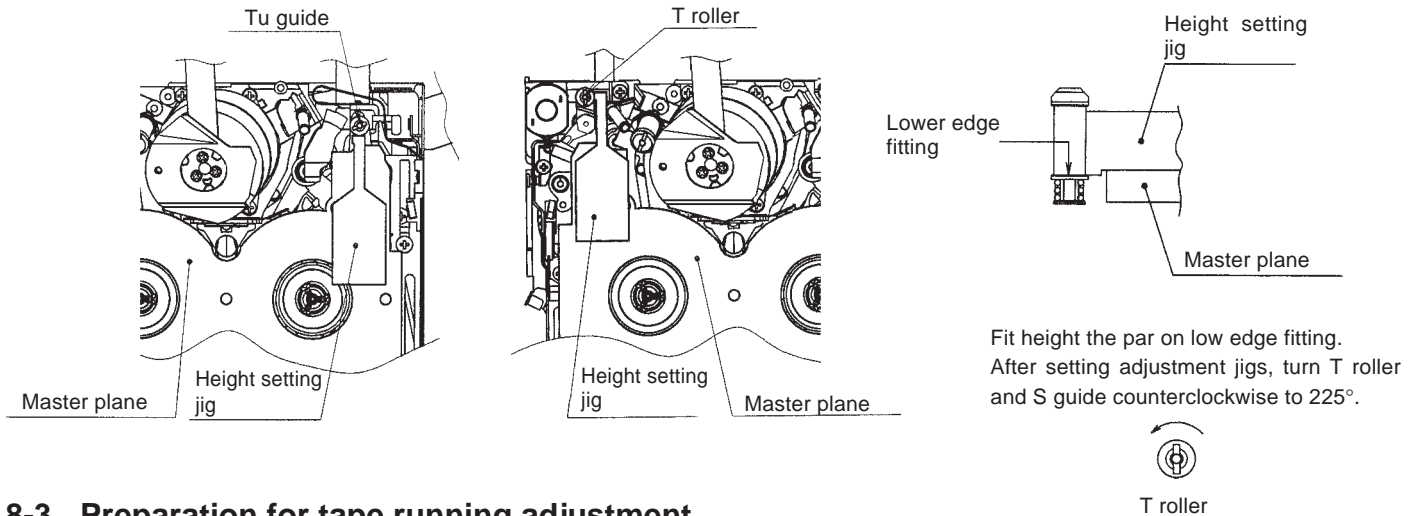
8. TAPE RUNNING ADJUSTMENT

8-1. Adjustment locations



8-2. Running height adjustment

- After replacement of T roller or Tu guide adjust the height. (Adjust only the replaced parts.)
- After height adjustment do not turn the T roller. If crease is found on the tape of Tu guide, remove the crease by rotating. (As for details refer to the “running rough adjustment”.)
- After height adjustment of T roller or Tu guide, apply Screw lock to an end of shaft. (After replacement of S guide apply Screw lock to same point, too.)

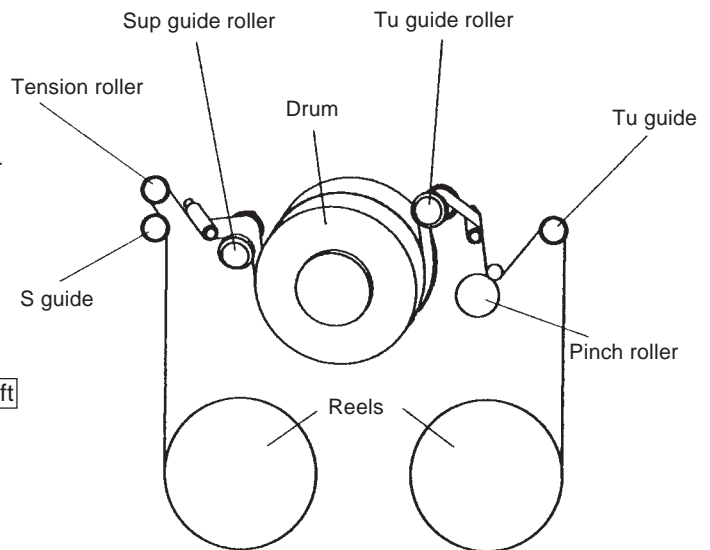


8-3. Preparation for tape running adjustment

Meters, jig... Oscilloscope, Adjustment remote control, Height adjustment screw driver, Alignment tape (for tape running adjustment, for switch point adjustment), Master plane, Height adjustment jig.

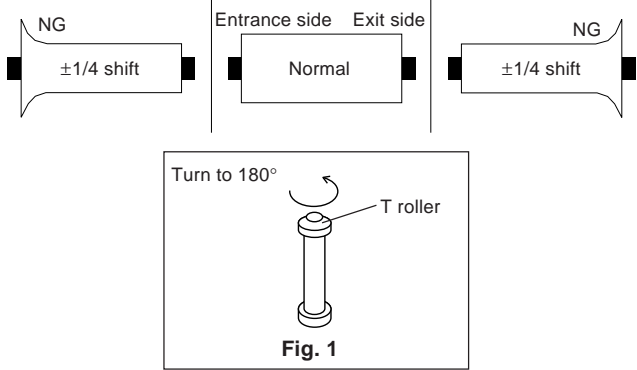
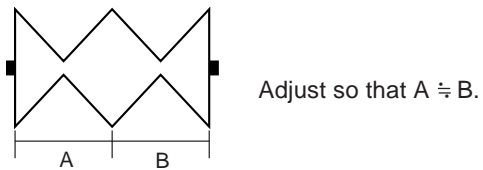
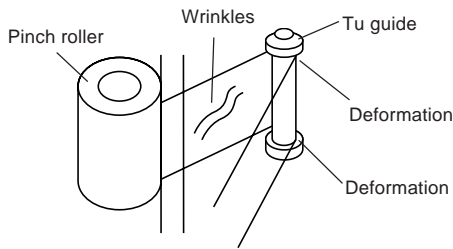
<Method and description>

- (1) Remove the cassette controller assembly.
- (2) Clean the tape running surface (especially, adequately clean the drum surface and the lower drum helicam surface).
- (3) Connect an oscilloscope to each TP on the relay circuit board.
- (4) Turn the AC adapter power ON.
- (5) Using the adjustment remote control unit, put the system TEST mode T-05.
- (6) Replay the alignment tape for running adjustment, and make sure that the tape is running in the SP mode.
- (7) Check the oscilloscope playback envelope, then, at +1/4 shift and -1/4 shift, check whether all of it is flat. If it is not, perform the following adjustment so that it becomes flat. (Each time you push the PLAY key, the shift will change; +1/4 shift → Normal → -1/4 shift → Normal, in order.)



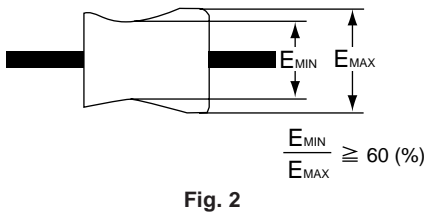
8-4. Running rough adjustment

(Since this adjustment is performed without cassette controller, put a proper weight so that the cassette does not rise, and make an adjustment.)

<p>1) Su, Tu guide roller height adjustment</p>	
<p><Method and description> (1) Loosen the guide roller lock screw, then tighten loosely so that the roller turns easily. (2) Replay an alignment tape, and adjust the Sup, Tu guide roller so that the envelope sides of entrance and exit are flat. (3) Perform $\pm 1/4$ shift, then, as in the above case, adjust until the envelope becomes flat. * If running is difficult for the entrance changed, turn the T roller to counter clockwise 180°. (refer to Fig. 1)</p>	
<p>2) Check of V/SR envelope wave form</p>	
<p><Method and description> (1) Confirm that the envelope waveform peaks in V/SR mode are uniform. (2) If they are not uniform, fine-adjust the guide roller and the Tu guide.</p>	
<p>3) Check of tape wrinkles</p>	
<p><Method and description> (1) Check that the tape is not distorted between the Tu guide and pinch in the PB mode and the V/SR mode. ⇨ If crease is found, make an adjustment in the range of $\pm 180^\circ$. ⇨ After adjustment apply Screw Lock.</p>	
<p>4) Check the rising time of the envelope wave form</p>	
<p><Method and description> (1) Check the rising time of the envelope when switching from V/SR mode to PB mode. (Within 5 sec) (2) Check the rising time of the envelope when switching from STOP mode to PB mode. (Within 5 sec)</p>	

8-5. Final running adjustment

(Perform adjustment without removing the cassette controller.)

<p>1) Adjustment of Sup and Tu guide roller height</p>	
<p><Method and description> (1) Perform $\pm 1/4$ shift, then if the envelope wave's ratio of MAX. to MIN. are 60% or less, adjust again the height of guide roller. (Refer to Fig. 2) (2) Finally adjust the lock screw of Sup and Tu guide roller. (3) Once perform unloading and then loading to set the PB mode, and make sure that the envelope waveform does not change.</p>	
<p>2) Adjustment of playback SWP</p>	
<p><Method and description> (1) Playback the alignment tape for switch point adjustment. (2) Perform SWP automatic adjustment with adjustment remote control.</p>	

* When replacing the mechanism and drum, adjust the phase and equalizer using the adjustment remote control. (Refer to "10. ADJUSTMENT THE ELECTRICAL CIRCUIT".)

9. MECHANICAL SECTION ASSEMBLY AND PARTS REPLACEMENT (DISASSEMBLY AND REASSEMBLY)

Mechanical section disassembly and reassembly are explained in this section.
For removal of the cabinet, etc., refer to 4. DISASSEMBLY OF THE SET.

<Precautions>

1. Always replace cut washers that have been removed, for example in parts replacement, with new ones.
2. When reassembling, be careful not to allow screws, washers or foreign matter to enter. They can cause mechanical misoperation.
3. Use the cleaning liquid, oil, grease and screw lock that are specified below. Use of any other kind can cause mechanical misoperation.

Oil: Cosmo Petroleum : Cosmo Hydro HV22

Screw lock: Three Bond :1401B

Grease: Dow Corning : Moly Coat YM-103

Cleaning liquid: Industrial-use ethyl alcohol

4. Turn the mechanical section over, do not place it on, for example, a desk. Deformation and scratching of mechanical parts can cause trouble.

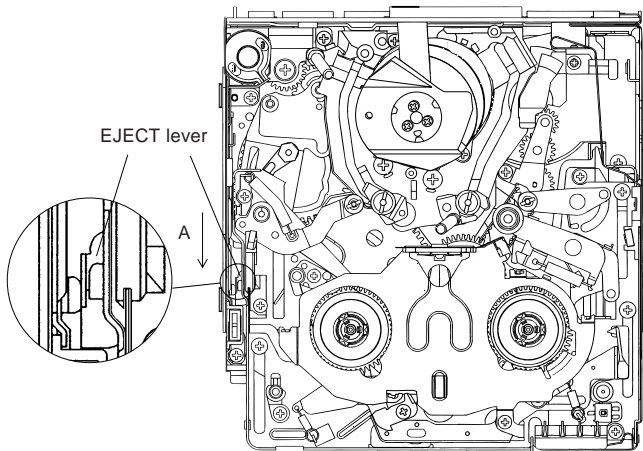
9-1. On the mechanical modes

When operating the mechanism separately, apply DC3~4V to the loading motor.

(When the mechanism is connected to the main PWB, do not apply external voltage to the loading motor. It may cause operational problems.)

(1) EJECT mode

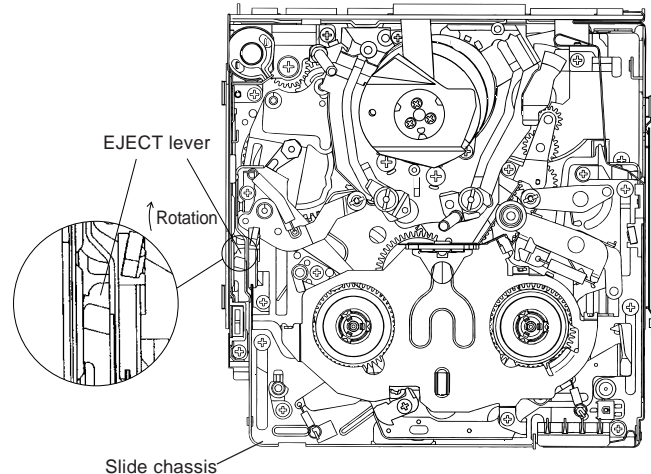
The mechanism position to take out the cassette where the EJECT lever is extremely shifted in the A direction. (It is impossible to lock the cassette controller assembly in this mode.)



EJECT mode diagram

(2) STANDBY mode

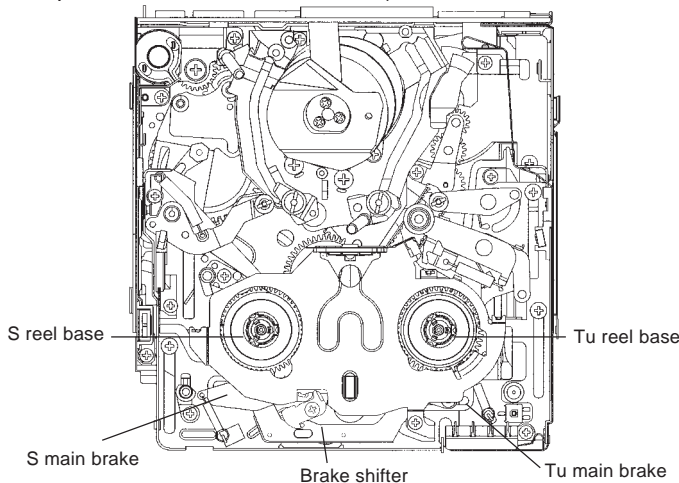
The mechanism position to set the cassette where the slide chassis is at the farthest position from the drum and the EJECT lever is in clockwise rotated position (position where the cassette controller assembly can be locked).



STANDBY mode diagram

(3) LOADING START mode

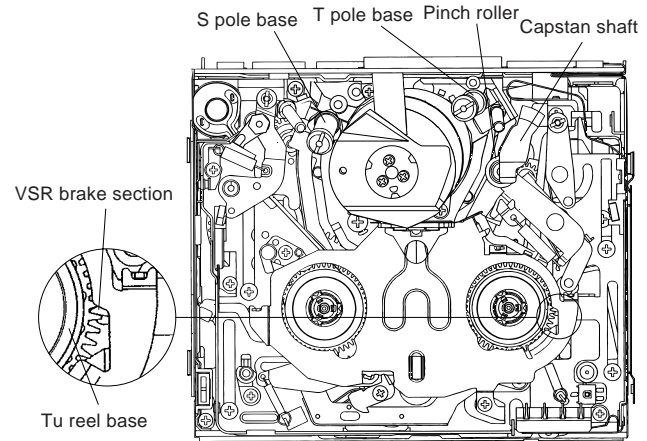
This is the mode where the tape is wound around the winding reel when a cassette with visible wind start leader tape is loaded. (The brake shifter moves to the left, the S main brake is separated from the S reel base and the Tu main brake is separated from the Tu reel base.)



LOADING START mode diagram

(4) REWINDING (VSR) mode

The mechanism position to rewind the tape (fast rewinding playback). The S and T pole base is pressed, the pinch roller is pressed to the capstan axis, the brake shifter VSR brake section engages with the Tu reel base gear.

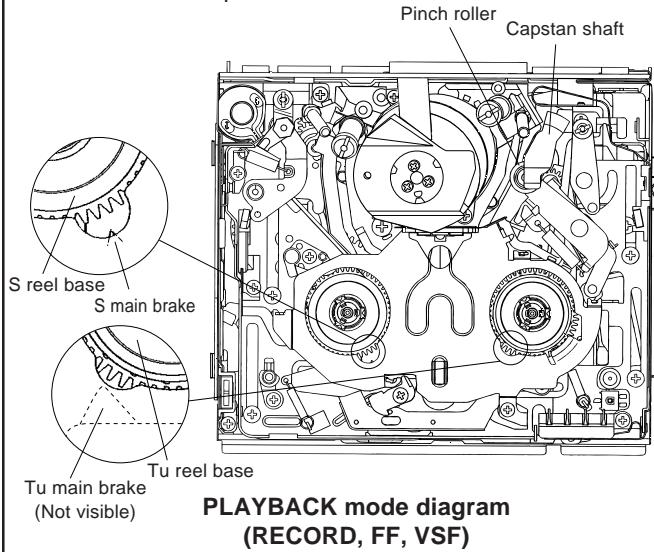


REWINDING (VSR) mode diagram

(5) **PLAYBACK (RECORD, FF, VSF) mode**

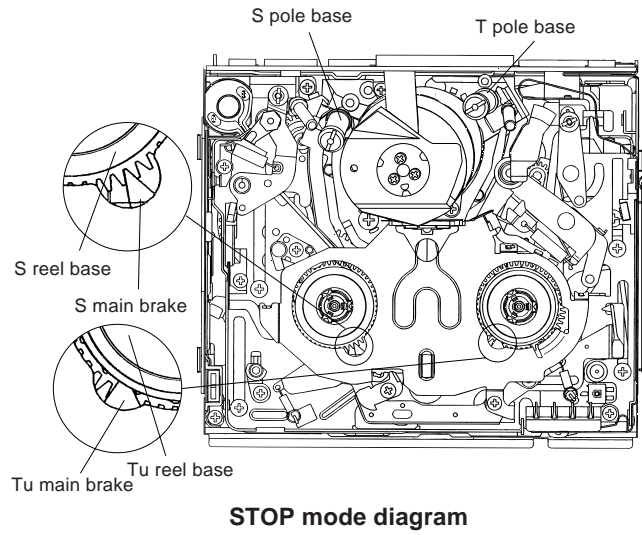
The mechanism position for playback, record, FF and fast feed playback.

The pinch roller is pressed to the capstan axis, and the S/Tu main brake is separated from the S/Tu reel base.



(6) **STOP mode**

The system is in the STOP (Rec Lock in CAMERA mode) position; the S and the T pole bases are snap-fitted to the drum base, the S brake is in contact with the S reel base, and the Tu brake is in contact with the Tu reel base.



9-2. Cassette controller assembly

<Removing>

- (1) Remove the CAP FPC cover. (Remove the Head amplifier PWB unit and tighten screw together.)
- (2) Apply DC3V to the loading motor to set the standby mode. Press the lock lever in the arrow direction to move up the cassette controller. (See Fig. 1, direction (A) or (B))
(When the lever is pressed in the direction (A), gently raise the cassette controller to release.)
- (3) Remove the screws (C) and (E) shown in Fig. 2 and Fig. 3, and remove the Down guide (I).
- (4) Remove the screws (D), (F), (G), and (H) shown in Fig. 2, 3 and 4, raise the side plate (J) in the direction K to remove it.

Note) When removing the cassette controller, take care so that the drum motor FPC provided between the side plate (J) and the top cover (R) is not damaged and so that the drum is not damaged.

<Installing>

- (1) Apply DC3V to the loading motor to set the standby mode.
- (2) Install the side plate (J).
 - 1) Lower the cassette controller assembly in the direction contrary to K in Fig. 4, and fit the screws (G) and (H) as shown in Fig. 4.
Tightening torque $40 \pm 4\text{mN}\cdot\text{m}$
Before fitting the screws (G) and (H) make sure that the side plate positioning section (L) engages with the down switch angle in Fig. 2.
- Note) When lowering the cassette controller assembly in the direction contrary to K, place the drum motor FPC between the side plate (J) and the top cover (R). At this time be careful so that FPC is not damaged. Take care so that the drum is not damaged.
- (2) In Fig. 2 fit the screws (D).
Tightening torque $40 \pm 4\text{mN}\cdot\text{m}$
- (3) In Fig. 3 fit the screw (F).
Tightening torque $40 \pm 4\text{mN}\cdot\text{m}$
- (3) Install the down guide (I).
 - 1) In Fig. 2 and Fig. 3 engage the slide chassis down guide positioning sections (N) and (O) with the down guide, install with the screws (C) and (E).
Tightening torque $40 \pm 4\text{mN}\cdot\text{m}$
- (4) Attach the CAP FPC cover.
 - 1) Attach the Head amplifier PWB unit and tighten screw together.
Tightening torque $40 \pm 4\text{mN}\cdot\text{m}$

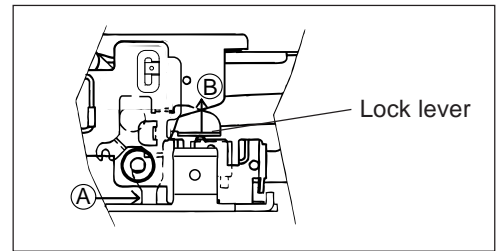


Fig. 1. Lock lever

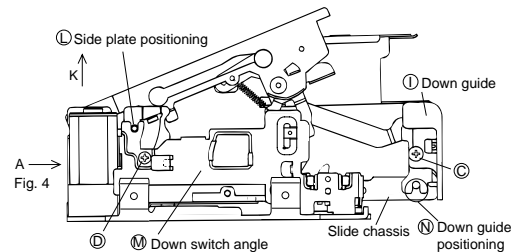


Fig. 2

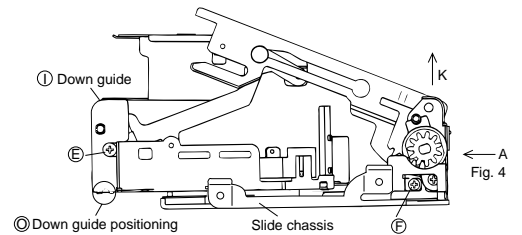


Fig. 3

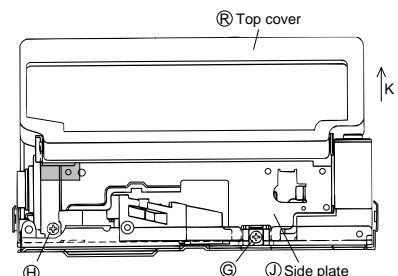


Fig. 4. (Fig. from direction A)

9-3. How to operate with the circuit board without the cassette controller assembly.

In this method, if the procedure is followed incorrectly there is danger of damaging the mechanism and the tape, so except in special cases, such as when measuring the VSR torque, do not perform this procedure. Normally operate this unit with the cassette controller assembly attached.
Be sure to follow each caution mentioned.

- (1) Apply DC3V to the loading motor to set the EJECT mode.
- (2) Remove the down switch angle.
 - 1) In Fig. 5 remove the screws (P) and (Q).
- Note) The loading motor solder joint (part T, Fig. 5) of DEW sensor FPC applied to the down switch angle is not removed. After the down switch angle is removed, take care so that the DEW sensor FPC is not broken.
- (3) Surely secure the moving piece (R) of down switch as shown in Fig. 6 with the aid of adhesive tape so that the switch is turned on.
- (4) Install the down switch angle.
- Note) To set the REC mode, press the pin of recognition switch (S) (not required in other modes).
- (5) Set the test mode (T-01) with the adjustment remote controller without loading the tape. Thereby the mechanism operation is enabled with the mode key.
- (6) To eject, remove the tape (3).

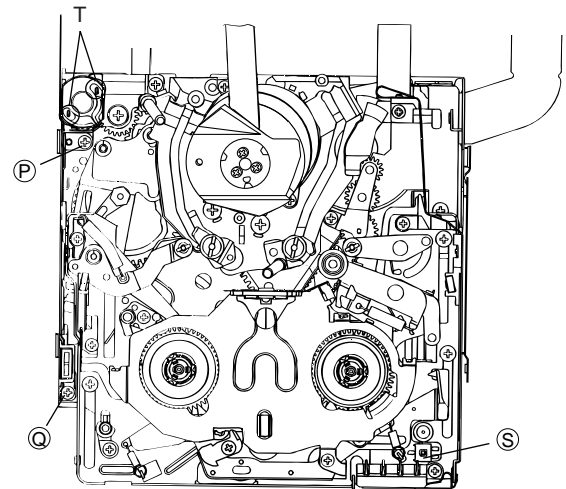


Fig. 5. STANDBY mode

9-4. Phase matching

For the parts listed below, match the phases as shown in Fig. 7.

- (1) AHC cam (2) MODE switch (3) Main cam (4) Sub cam

- Note) Before disassembling, check the marker positions carefully.
 Note) When installing the engagement gear, make sure that the main cam and sub cam phase matching hole aligns with the chassis hole.
 Note) After phase matching, turn the MODE switch by hand and confirm that it turns almost one complete turn. (After checking, return it to its original position.)

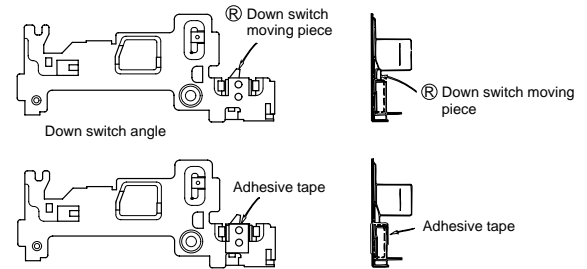


Fig. 6

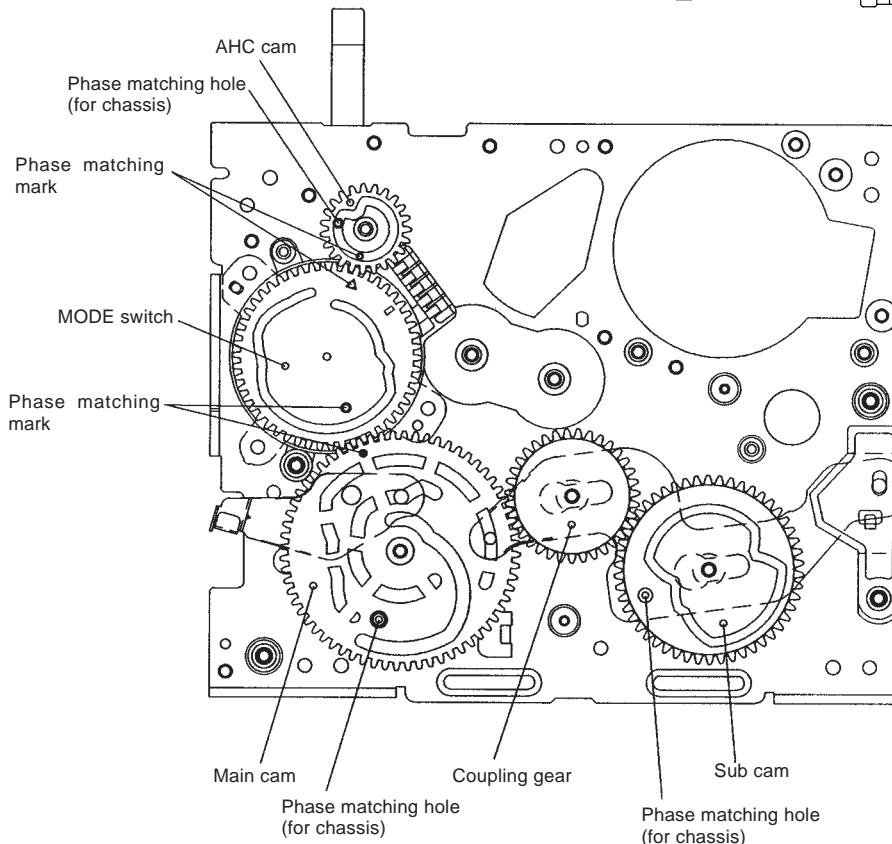


Fig. 7

9-5. Reassembly

9-5-1. Reassembly in side of the main chassis.

Note) Numbers before part names are given as a guide to the order of assembly.

As for greasing/oiling/cleaning places refer to the attached drawings (Grease/Oil application Fig. 1, 2).

1.

(1) Pinch control lever (303)
 (2) Pinch drive lever (361)
 Main chassis assembly (Front surface) (301)
 Groove grease

2.

(2) Mechanism fixing angle assembly (Rear surface)
 Mode FPC (441)
 (1) Mode switch (463)
 Main chassis assembly (Rear surface) (301)
 Note) The numbers following A and B indicate the screw tightening order.

Item	Tightening torque	Quantity
A S Tight · M1.4 x L3	70mN·m	3
B S Tight · M1.4 x L2	70mN·m	6

3.

(3) Main cam (304)
 (1) EJECT lever (302)
 (7) T arm control lever (309)
 (8) AHC control lever (310)
 (6) AHC cam (369)
 (2) Lock lever guide (379)
 (5) Coupling gear (370)
 (4) Sub cam (371)
 Cam groove grease
 Groove grease
 To cam groove

Item	Tightening torque	Quantity
B S Tight · M1.4 x L2	70mN·m	1
C CW∅1.2-∅3.0-t0.25		2

4.

(5) Capstan motor (462)
 (1) Slide chassis guide (386)
 (3) Loading lever (306)
 (2) Shifter drive lever assembly (305)
 (4) Tu guide cam (311)
 Mechanism fixing angle (314)
 Groove grease
 Drawing part grease
 To cam groove

Item	Tightening torque	Quantity
B S Tight · M1.4 x L2	70mN·m	2
C CW∅1.2-∅3.0-t0.25		1
D Special screw · M1.4 x L1.6	40mN·m	4

5.

(3) Timing belt (459)
 (4) Intermediate gear angle sub assembly (312, 364, 365, 421)
 (1) Intermediate pulley assembly (368)
 (2) Center pulley assembly (367)

Item	Tightening torque	Quantity
B S Tight · M1.4 x L2	70mN·m	1

6. Phase match check

Phase match check
 Enter part of convexity rear surface
 (1) Guide rail sub assembly
 Guide rail sub assembly (Rear surface)

Item	Tightening torque	Quantity
E Special screw · M1.4 x L1.5	40mN·m	2

7.

	Item	Tightening torque	Quantity
F	⊙ CW ϕ 0.7- ϕ 2.2-t0.25		2
G	⌘ Special screw · M1.2 x L1.8	5mN·m (Tentative tightening)	2

9.

	Item	Tightening torque	Quantity
A	⌘ S Tight · M1.4 x L3	70mN·m	1
P	⊙ S Tight · M1.4 x L4	70mN·m	1

8.

(3) Loading motor assembly

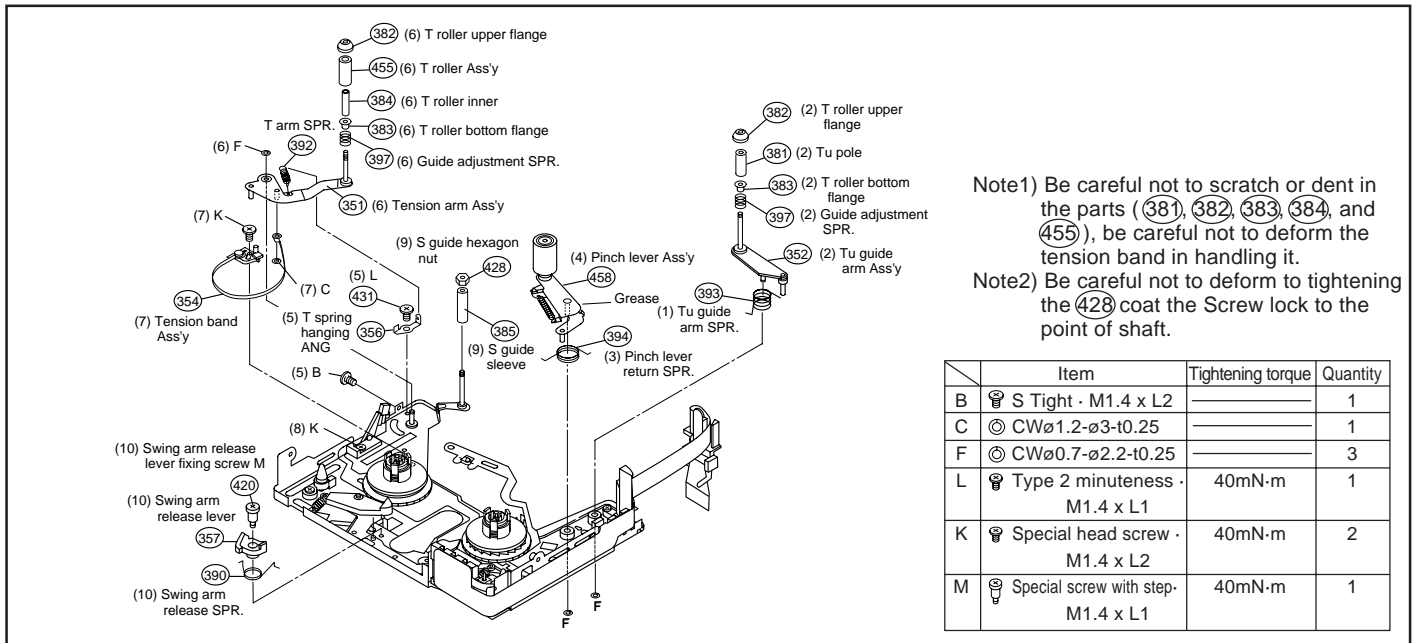
	Item	Tightening torque	Quantity
A	⌘ S Tight · M1.4 x L3	70mN·m	4
H	⌘ Special screw with step · M1.4 x L6.25	70mN·m	1

9-5-2. Reassembly in side of the Slide chassis.

Note) Numbers before part names are given as a guide to the order of assembly.

As for greasing/oiling/cleaning places refer to the attached drawings (Grease/Oil application Fig. 3, 4).

	Item	Tightening torque	Quantity
B	⌘ S Tight · M1.4 x L2	40mN·m	1
I	⊙ CW ϕ 0.7- ϕ 1.8-t0.1		2
J	⊙ W ϕ 1.2- ϕ 2.5-t0.3		2



Note1) Be careful not to scratch or dent in the parts (381, 382, 383, 384, and 455), be careful not to deform the tension band in handling it.

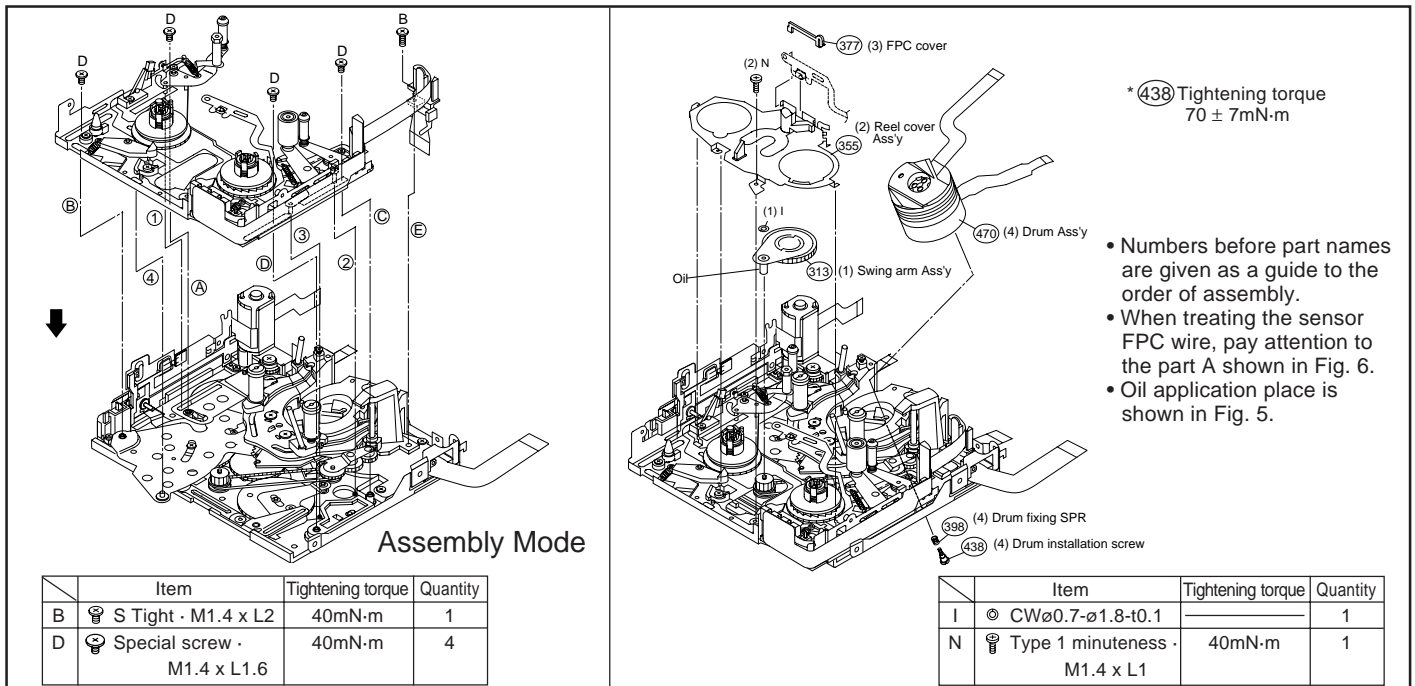
Note2) Be careful not to deform to tightening the 428 coat the Screw lock to the point of shaft.

Item	Tightening torque	Quantity
B S Tight · M1.4 x L2		1
C CWø1.2-ø3-t0.25		1
F CWø0.7-ø2.2-t0.25		3
L Type 2 minuteness · M1.4 x L1	40mN·m	1
K Special head screw · M1.4 x L2	40mN·m	2
M Special screw with step · M1.4 x L1	40mN·m	1

9-5-3. Main chassis assembly and slide chassis assembly assembling method

(1) Set the L/S mode (see the figure below).

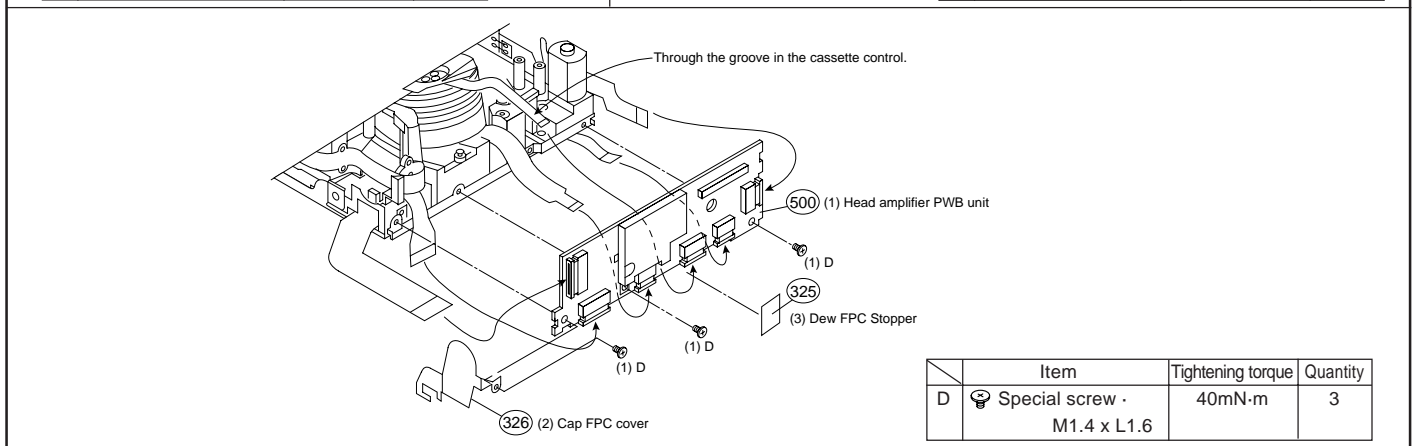
(2) Insert the slide chassis side operation pins (1 tension arm, 2 Tu guide arm, 3 pinch lever) in the position shown below at the main chassis side, move the slide chassis in the arrow direction, using (A) to (E) as guides, insert the loading lever operation pin into the groove of slide chassis, and install with the 4 screws.



* 438 Tightening torque
70 ± 7mN·m

- Numbers before part names are given as a guide to the order of assembly.
- When treating the sensor FPC wire, pay attention to the part A shown in Fig. 6.
- Oil application place is shown in Fig. 5.

Item	Tightening torque	Quantity
I CWø0.7-ø1.8-t0.1		1
N Type 1 minuteness · M1.4 x L1	40mN·m	1



GREASE/OIL APPLICATION

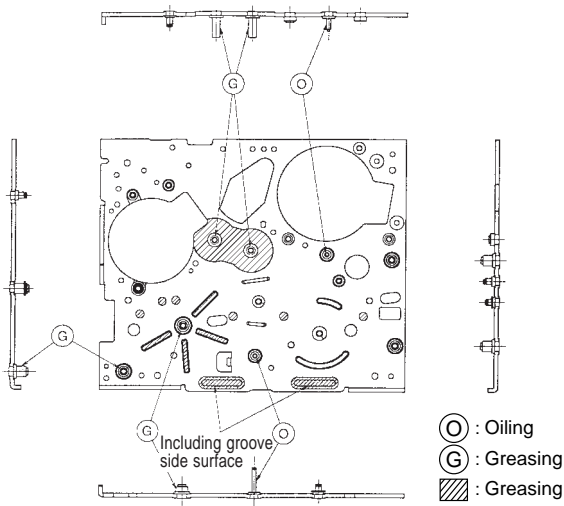


Fig. 1. Side of the main chassis

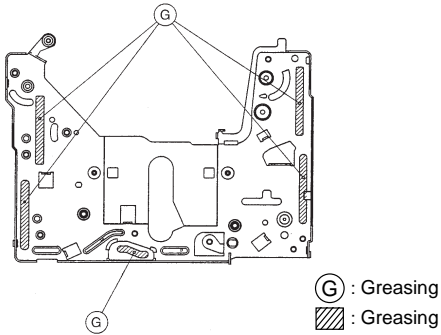


Fig. 3. Side of the slide chassis

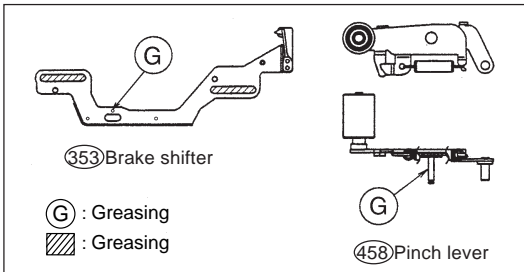


Fig. 4. Side of the slide chassis

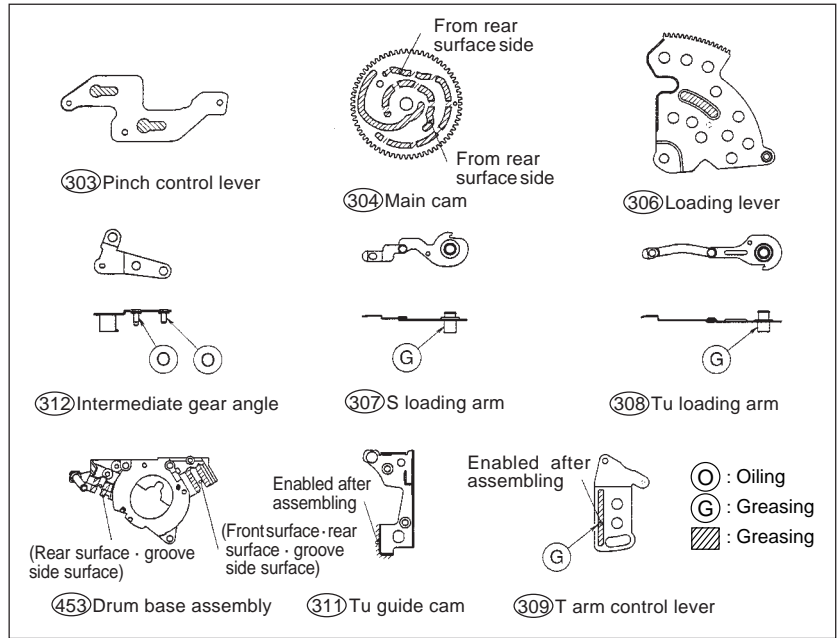


Fig. 2. Side of the main chassis

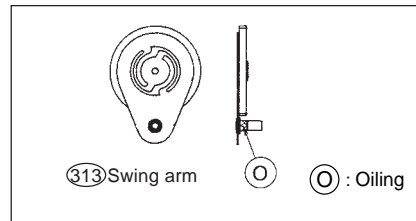


Fig. 5. After joining the main chassis and slide chassis

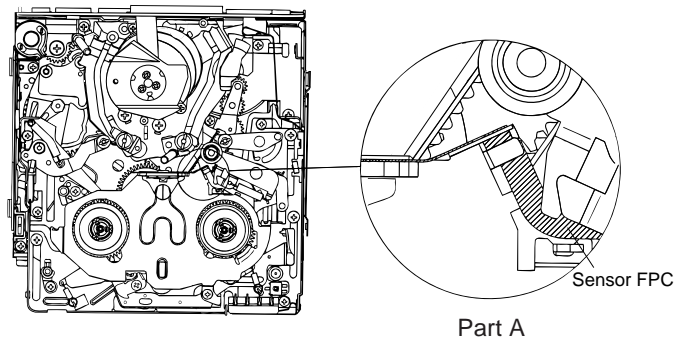


Fig. 6. Sensor FPC wiring

9-6. Removing the cassette

- (1) Apply DC3V to the loading motor unload slightly.
- (2) After the tape is slackened, turn the rotor (lower side of mechanism) of capstan motor to tighten the tape. (Arrow direction, Fig. 1)
- (3) Repeat the operations (1) and (2). After the pole base has been completely unloaded, ascertain that the tape is not loose.
- (4) Finally apply again DC3V to the loading motor, so that the cassette controller ejects.
- (5) Take out the cassette.

Note) DC3V is applied to the loading motor as shown Fig. 1. Then, the mechanism moves in the unloading direction.

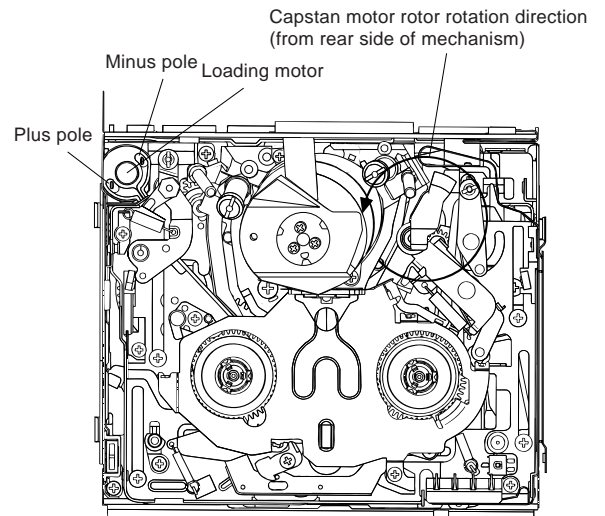


Fig. 1

10. ADJUSTING THE ELECTRICAL CIRCUITS

Before starting the electric circuit adjustment

- The adjustment methods described herein are used, in most cases, when the expendable mechanical parts, including the video head, have been replaced, at which time the electrical circuits need to be readjusted. Before adjusting the electrical circuits, make sure that the mechanism works properly (i.e., the mechanism is properly adjusted). In case of the occurrence of any problem to the electrical circuits, be sure to use the specified measuring instruments to locate the area to which the problem is occurring, and then take the necessary action, including repair, replacement or adjustment, exactly as instructed in the electrical adjustment methods that will follow.

Do not attempt to make adjustments without using the proper measuring instruments.

- This machine is configured so that the electrical circuits inside its PWB unit are composed, for the most part, of high-density, small surface-mounted component parts for downsized machine body.

To perform repair service or parts replacement, do so using a soldering iron, but in as short a time as possible; this is because surface-mounted component parts are generally so small in size and susceptible to heat, as compared with the large discrete parts used in TV sets, desk-top video decks, etc., that attempting to heat their electrodes for a longer time than is necessary with a soldering iron may result in their becoming defective.

This applies particularly when replacing the laminated chip capacitors.

For this purpose, ceramic soldering irons with a temperature regulator are recommended (iron tip temperature 250°C and soldering time 5 seconds or shorter).

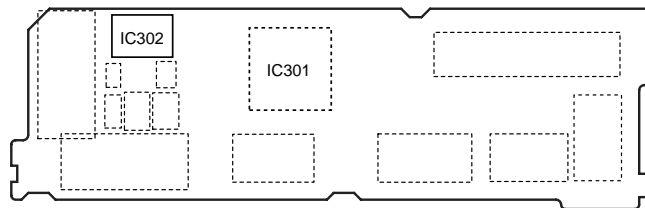
Chip ID as per Digital Interface IEEE1394 Standard

The VL-FD1U and other models that follow are newly equipped with the digital interface function. The Digital Interface IEEE1394 Standard stipulates that each set with the digital interface function be given its specific ID number. The ID number is written on the E²PROM of the set while it is manufactured. If the E²PROM alone or the PWB having this E²PROM on it has been replaced for repair purpose, it is necessary to write a new ID number again. (Note that any replacement part does not have an ID number yet.)

Accordingly, the repair engineer must obtain the new ID number.

Writing a Chip ID number as per Digital Interface IEEE1394 Standard

Head amplifier PWB



If the IC302 (E²PROM) or the head amplifier PWB has been replaced, it is necessary to write a new ID number. (Note that any replacement part does not have an ID number yet.)

Obtain a new ID number from the service department of sales company. Take the following steps to write the ID number on the E²PROM.

■ Manual for obtaining and handling IEEE1394 ID number

1. Access the intranet URL for the number below.
URL: http://www.rog.kami.sharp.co.jp/quics/e_index.html
 2. Now enter User ID and Password, then click .
- *ID and Password should be same as for "PARTS PEICE LIST".

■ ID code is acquired

1. Connect with the EUI48/64 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/e_index.html)

Select the "EUI48/64 ID code control system" from the "Service" item.

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

The login screen will appear.

EUI 48 / 64 ID code control system

Please enter user ID and password

User ID

Password

Login

Usage precautions

1. Those who have acquired ID numbers must manage the acquired ID codes on their own responsibility. Their names and departments or section to which they belong are stored as history data in the memory.
2. JavaScript is used for display selection handing. Therefore, the system may not operate properly on some browsers. To operate the system, use any of the following browsers.
Internet Explorer 4.01SP1 or higher versions/Netscape Navigator 4.04 or higher versions
3. Do not click the back button displayed on the above browser screen. If you click it, the system may not operate properly.
4. If the search results are displayed at a personal computer terminal with the Japanese fonts not installed, the Japanese characters are not displayed correctly.

If you have any question, please contact to below
Reliability Control Group
E-mail : eui@cmn.hirano.sharp.co.jp

Home

(3) For the [User ID], input the [Password].
Click on [Login].

EUI 48 / 64 ID code control system

Please enter user ID and password

User ID

Password

Login

Usage precautions

1. Those who have acquired ID numbers must manage the acquired ID codes on their own responsibility. Their names and departments or section to which they belong are stored as history data in the memory.
2. JavaScript is used for display selection handing. Therefore, the system may not operate properly on some browsers. To operate the system, use any of the following browsers.
Internet Explorer 4.01SP1 or higher versions/Netscape Navigator 4.04 or higher versions
3. Do not click the back button displayed on the above browser screen. If you click it, the system may not operate properly.
4. If the search results are displayed at a personal computer terminal with the Japanese fonts not installed, the Japanese characters are not displayed correctly.

If you have any question, please contact to below
Reliability Control Group
E-mail : eui@cmn.hirano.sharp.co.jp

Home

(4) Click on [EUI 64 (IEEE 1394)] from the [1. Application for acquisition of ID].

EUI 48 / 64 ID code control system

Click the button.

1. Application for acquisition of ID

EUI 48

EUI 64 (IEEE1394)

EUI 64 (IrDA)

2. Inquiry/search

EUI 48

EUI 64

Home

(5) Click on [Repair use].

EUI 64 (IEEE1394) Application for acquisition of ID

Click the button.

Trial production use

Repair use

Back to menu

- (6) Input the necessary information for the application.
 For the indispensable input items, be sure to input them.
 Select the [Group/company] and [Kind name] from the list.
 Input the [Model name].
 Input the [Serial number].
 Input the [Site/department of repair].
 For the input items when making each application, refer to the "Input item list for the ID acquisition application".

EUI 64 (IEEE1394) Application for acquisition of ID / Repair use	
Input the following items.	
Input date	08-MAY-00
User ID code	101652
Name	<input type="text"/>
Group/company	Audio-Visual Systems Group <input type="button" value="v"/>
Kind name	ViewCam with LCD <input type="button" value="v"/>
Model name	<input type="text"/>
Serial number	<input type="text"/>
site/department of repair	<input type="text"/>
<input type="button" value="motion"/>	
<input type="button" value="back to select menu"/> <input type="button" value="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	08-MAY-00
User ID code	101652
Name	TaroYamada
Group/company	Audio-Visual Systems Group <input type="button" value="v"/>
Kind name	ViewCam with LCD <input type="button" value="v"/>
Model name	A3VLF1U
Serial number	111112
site/department of repair	SHARP
<input type="button" value="motion"/>	
<input type="button" value="back to select menu"/> <input type="button" value="Back to menu"/>	

- (8) Click on [Yes].

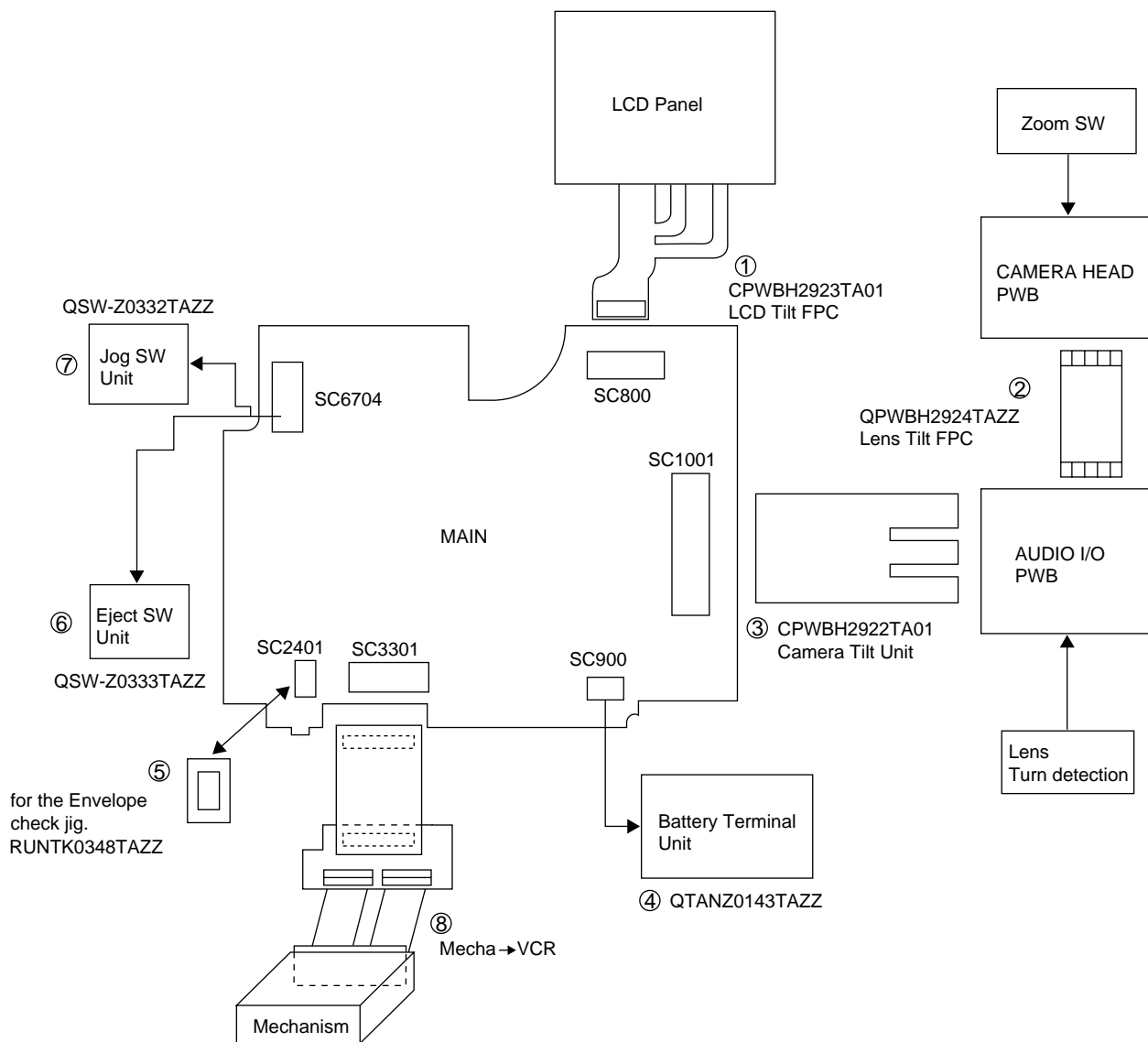
EUI 64 (IEEE1394) Application for acquisition of ID/Repair use	
Input date	08-MAY-00
User ID code	101652
Name	TaroYamada
Group/company	Audio-Visual Systems Group
Kind name	ViewCam with LCD
Model name	A3VLF1U
serial number	111112
The site/department of repair	SHARP
<p>EUI 64 (IEEE1394) Application for acquisition of ID/Repair use You will acquire an ID code based on the above information. Are you sure?</p> <input type="button" value="Yes"/> <input type="button" value="No"/>	

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

VL-FD1U Specifications of service jigs

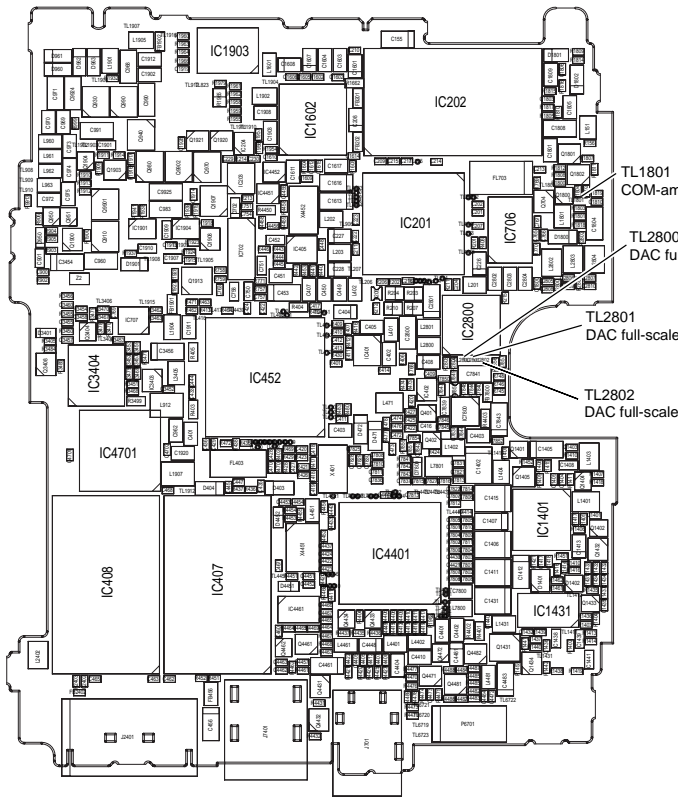
No.	Connection section	Part cord	Price code
1	Main-LCD Panel	CPWBH2923TA01	AS
2	Camera Head-Audio I/O PWB	QPWBH2924TAZZ	AL
3	Main-Audio I/O PWB	CPWBH2922TA01	AX
4	Main-Battery Terminal	QTANZ0143TAZZ	AU
5	Main-Envelope Check	RUNTK0348TAZZ	BE
6	Main-Eject SW Unit	QSW-Z0333TAZZ	AK
7	Main-Jog SW Unit	QSW-Z0332TAZZ	AM
8	Main-Mechanism	QCNW-1832TAZZ	BV

VL-FD1U Service jig configuration

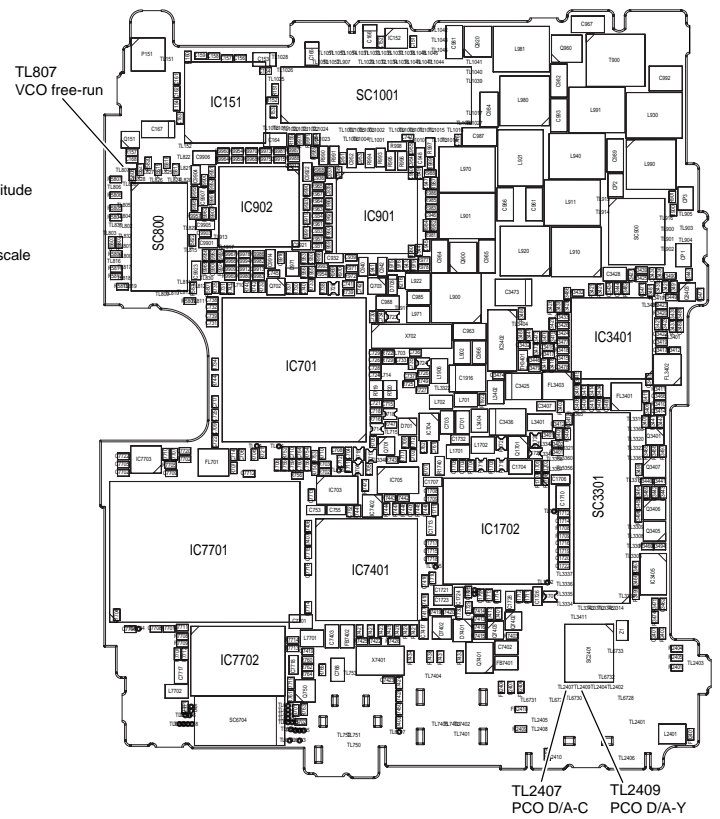


[TEST POINT]

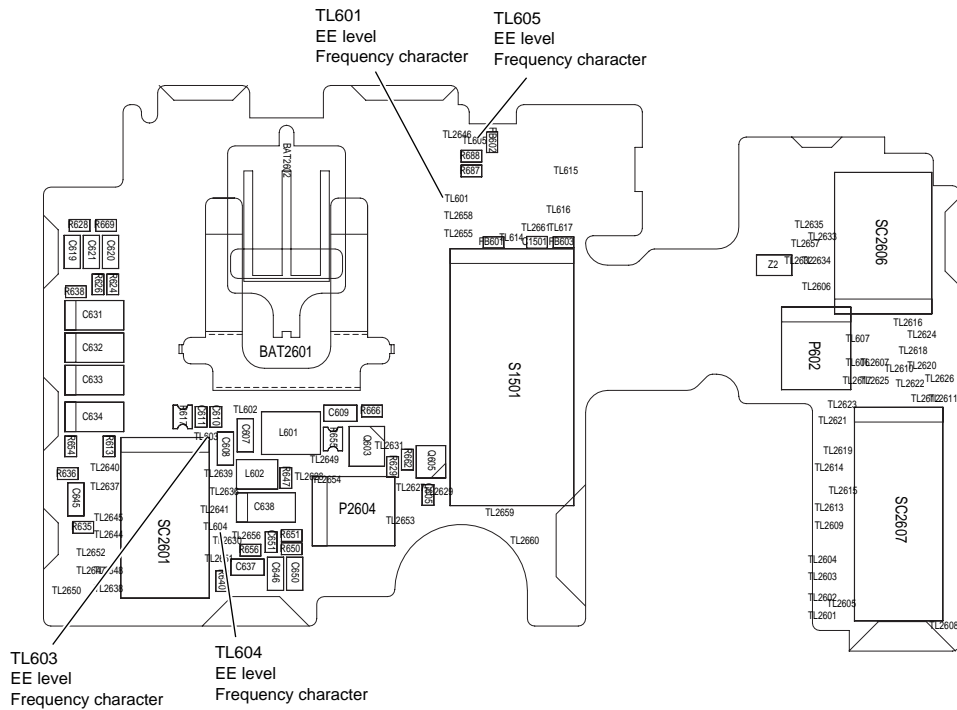
(Wiring board diagram: Main Side A)



(Wiring board diagram: Main Side B)



(Wiring board diagram: Audio I/O Side B)



[Making adjustments]

Adjusting the servo system controller and related parts

1. Setting the system codes

Replacement of IC7702 (FLASH MEMORY) requires the following data to be set in this order.

[Procedure]

Set the unit to the VCR mode and set the data for each address.

Code	1. Model code		2. Destination code		3. Specifications code		4. Menu selection code		5. Software switching code		6. Calendar switching code	
Address	01	09	02	0A	03	0B	04	0C	05	0D	07	0F
Data	00	FF	01	FE	04	FB	00	FF	00	FF	00	FF

When replacing the IC7702 (FLASH MEMORY), first make the following settings and then start the adjustments.

<E²PROM DATA>

(1) Electromagnetic conversion

(2) LCD Circuit

Address	27	28	2B	*105	25	26
Data	40	90	90	80	40	90

Address	8B	B6	B7	B8	B9
Data	64	7B	7B	10	10

* The address uses only when replacing the IC302.

• Adjustment with automatic machine

Mode	VCR ADJ mode
Procedure	<ol style="list-style-type: none"> Using the 12 command, set the VCR adjustment mode. Using the 20 command, give the E²PROM Write permission. Set the system code with the 22 command for each type. Using the command, set write inhibition. Using the command, cancel the adjustment mode.
Examples	• During FLASH MEMORY (IC7702) replacement.

• Manual adjustment

Mode	VCR ADJ mode
Procedure	<ol style="list-style-type: none"> Set the CAM/OFF/VCR selection switch to VCR. Press "CONTINUE" → "VCR adjustment" on the remote controller to set the VCR adjustment mode. (At this time an indication "VCR ADJ" appears at the left upper side.) Enter a setting corresponding to the address. <Setting method> Adjust the address by moving up and down the blinking numeral with the FF and REW key, and fix the address by pressing the PB key. Adjust to the setting by moving up and down the blinking numeral with the FF or REW key, and set data by pressing the PB key. Press the STOP key to set the address set state. Repeat the operations 3), 4) and 5) as much as input addresses. After completion of input of all items hold down the "CONTINUE" key to cancel the VCR adjustment mode. Set the CAM/OFF/VCR selection switch to OFF.
Examples	• During FLASH MEMORY (IC7702) replacement.

2. HSWP adjustment

Mode	VCR ADJ mode
Procedure	<ol style="list-style-type: none"> Play back the alignment tape in the video mode. Press the "CONTINUE" and "HSWP ADJ" keys on the adjustment remote control in this order. → This executes the HSWP adjustment. When the adjustment is successful, the blue LCD lights up and the cassette is automatically ejected. If not properly adjusted, the red LCD lights up.
Examples	<ul style="list-style-type: none"> During mechanism replacement. During E²PROM replacement (IC302 inside the head amplifier circuit board).

ADJUSTING THE ELECTROMAGNETIC CONVERSION CIRCUIT SYSTEM

1. PLL VCO adjustment

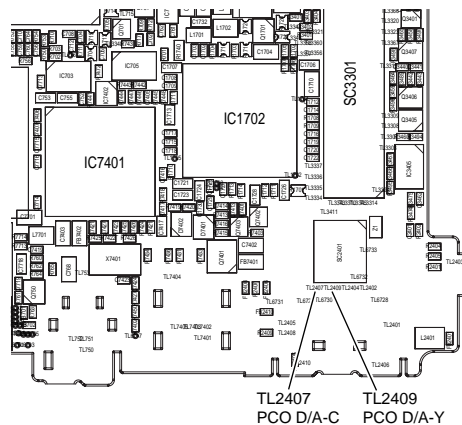
Mode	VCR ADJ mode
Procedure	<ol style="list-style-type: none"> 1) Playback the alignment tape (or a self-recorded tape). 2) Call the adjustment mode (V-ADJ). 3) Set the address "2A" and call the data. 4) Set the called data with the FF/REW key to the point where the playback screen appears. (At this time, the screen full of block noise is OK.)
Examples	<ul style="list-style-type: none"> • During E²PROM replacement. • During circuit board (Main) replacement.

2. Phase and equalizer adjustment → (Performed in the VCR mode)

Mode	VCR ADJ mode													
Procedure	<ol style="list-style-type: none"> 1) Load a self-recorded tape into the deck. 2) After playback for 3 minutes, select the test mode 0F using the remote control for adjustment to start the automatic adjustment. (The following sequence is automatically performed.) <div style="text-align: center;"> </div> <ol style="list-style-type: none"> 3) Error rate check Select and fix the TEST MODE 0B on the adjustment remote control. 4) Manual adjustment method (video adjustment mode) * Perform this adjustment with the self-recording/playback in the LP mode. For phase, vary the data for the address 26 and 2B, and for equalizer, vary the data for the address 25 and 27, to set the error rate is made as small as possible. <div style="display: flex; align-items: center; justify-content: center;"> <table border="1" style="margin-right: 20px;"> <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;"> </div> <table style="margin-left: 20px;"> <tr> <td>Synchronization error</td> <td>20 or less</td> </tr> <tr> <td>Error rate</td> <td>200 or less (SP Mode) 330 or less (LP Mode)</td> </tr> </table> </div>		Phase	Equalizer	H ch side	2B	27	L ch side	26	25	Synchronization 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												
Synchronization error	20 or less													
Error rate	200 or less (SP Mode) 330 or less (LP Mode)													
Examples	<ul style="list-style-type: none"> • During mechanism replacement. • During circuit board (Main) replacement. • During E²PROM replacement. 													

ADJUSTING THE VIDEO I/O CIRCUIT SYSTEM

(Wiring board diagram: Main Side B)

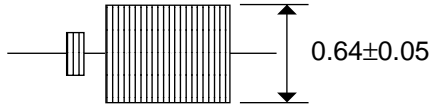


1. PCO D/A-Y adjustment

Test point	TL2409 (connected to oscilloscope)	Mode	EE mode
Procedure	<ol style="list-style-type: none"> 1) Connect the AVS cable and then connect it to the monitor (TO). 2) Call the adjustment mode (V-ADJ). 3) Set the address to "22", and call the date. (100% white signal is output.) 4) Vary the date with the FF and REW keys to set the signal appearing at TL2409 to 1.0Vp-p ± 0.05. 		
Examples	<ul style="list-style-type: none"> • During E²PROM replacement. • During IC4401 replacement. • During IC1401 replacement. 		

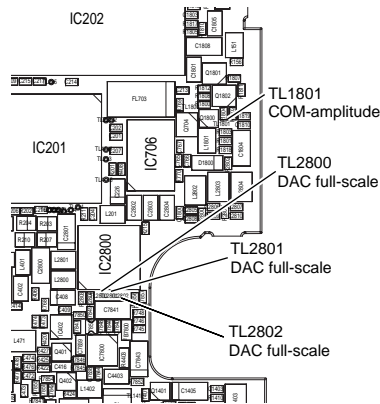
2. PCO D/A-C adjustment

Test point	TL2407	Mode	EE mode
Procedure	<ol style="list-style-type: none"> 1) Connect the AVS cable and then connect it to the monitor (TO). 2) Call the adjustment mode (V-ADJ). 3) Set the address to "23", and call the data. 4) Vary the data with the FF and REW keys to set the signal appearing at TL2407 to $0.64V_{p-p} \pm 0.05$. 		
Examples	<ul style="list-style-type: none"> • During E²PROM replacement. • During IC4401 replacement. • During IC1401 replacement. 		

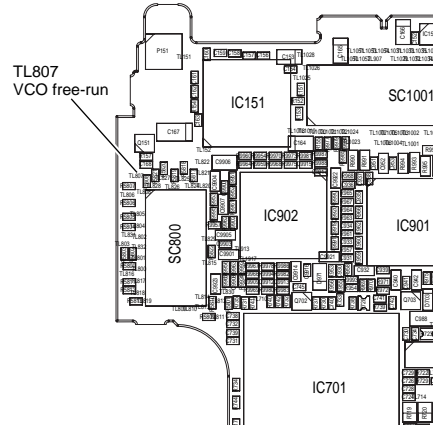


ADJUSTING THE LCD CIRCUIT

* To make this adjustment, set the backlight switch to the "NORMAL" position.



(Wiring board diagram: Main Side A)



(Wiring board diagram: Main Side B)

Adjustment procedure and connecting same as the VCR section.

1. VCO free-run adjustment

Test point	TL807	Address	VCR ADJ 32
Mode	CAM		
Procedure	<ol style="list-style-type: none"> 1) Change the VCR ADJ address 93 to DF. 2) Connect the Frequency counter to TL807 and adjust it to the specified with the VCR ADJ address 32. 3) Set the VCR ADJ address 93 to FF. <p>Note: When the LCD screen disappears during the data setting at the address 93, keep changing the data. In this case, you can check the address and data by the OSD display of monitor output.</p>		
Adjustment rating	$15.734kHz \pm 100Hz$		
Examples	<ul style="list-style-type: none"> • During IC7702 (FLASH MEMORY) replacement. • During IC4401 replacement. 		

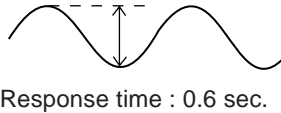
2. DAC full-scale adjustment

Test point	TL2800 (R OUT), TL2801 (G OUT), TL2802 (B OUT)		
Address	VCR ADJ 3D (R), VCR ADJ 3E (G), VCR ADJ 3F (B)		
Mode	CAM		
Procedure	<ol style="list-style-type: none"> 1) Output the picture to the monitor in the CAM mode. (While adjusting, no picture appears on the LCD screen. Check the address and data by the OSD display of monitor output.) 2) Change the VCR ADJ addresses 83, C0 and 93 to 00, 00 and 77, respectively. 3) Adjust the output voltage of TL2800 with the VCR ADJ address 3D and the DC voltage with a digital voltmeter to the adjustment standard value. At this time, adjust them so that the average of both TP voltage values corresponds to the standard center value. 4) Adjust the output voltage of TL2801/TL2802 with the VCR ADJ address 3E/3F and the DC voltage with a digital voltmeter to the adjustment standard value. (The same as (2)) 5) Set all the data of changed addresses to FF. 		
Adjustment rating	$0.780V_{p-p} \pm 10mVDC$		
Examples	<ul style="list-style-type: none"> • During IC7702 (FLASH MEMORY) replacement. • During IC4401 replacement. 		

3. COM-Amplitude adjustment

Test point	TL1801	Address	VCR ADJ 29
Mode	CAM		
Procedure	1) Set TL1801 to GND. 2) Adjust the output voltage of TL1801 with the address 29 and the DC voltage with a digital voltmeter to the adjustment standard value.		
Adjustment rating	6.55V ± 50mV		
Examples	_____		

4. COM-Bias adjustment

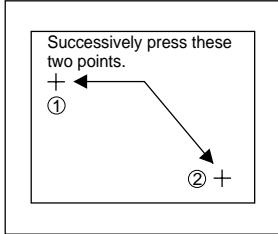
Test point	LCD panel display area	Address	VCR ADJ 33
Mode	VCR AV input	Input Signal	40% White (or gray scale) signal
Procedure	1) Input white 40% signal as AV input. 2) Set the illuminometer (TOPCON IM-3) on the LCD panel surface. (Shut off the external light.) 3) Minimize the ripple of output waveform of illuminometer.		
Adjustment rating	Minimum Set the point to make the black portion blackest.		
Examples	<ul style="list-style-type: none"> • During IC7702 (FLASH MEMORY) replacement. • During circuit board (MAIN) replacement. • During LCD panel replacement. 		

5. White Balance adjustment

Test point	LCD panel display area	Address	VCR ADJ 30 (R), VCR ADJ 31 (B)
Mode	VCR AV input		
Procedure	1) Feed 40% white signal to the AV input jacks and the standard monitor. 2) Set the Color luminance meter (TOPCON BM-5) on the LCD panel surface. (Shut off the external light.) 3) Adjust the VCR ADJ addresses 30 and 31 until it became the same as that of the standard monitor.		
Adjustment rating	Set of the standard W=VF-HL3-136 Set of the limit R=VF-HL1-048 G=VF-HL1-050 B=VF-HL1-052		
Remark	Make this adjustment after 5-minute or longer aging.		
Examples	<ul style="list-style-type: none"> • During IC7702 (FLASH MEMORY) replacement. • During circuit board (MAIN) replacement. • During LCD panel replacement. 		

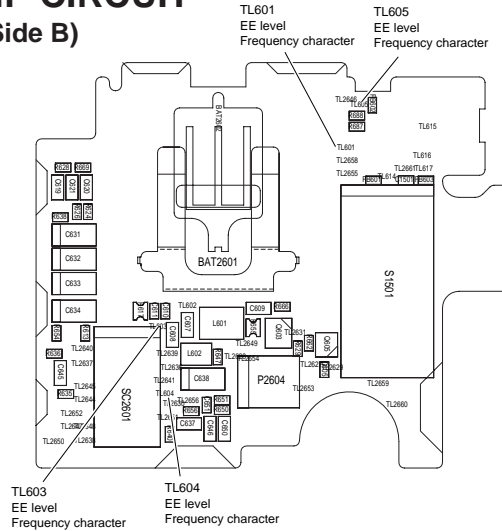
ADJUSTING THE TOUCH PANEL CIRCUIT

1. Touch panel position detection adjustment

Test point	LCD panel display area	Mode	VCR AV input
Procedure	1) Enter the adjustment of touch panel adjustment mode. 2) Press successively the two-point OSD indication which appears on the LCD indication surface. Note: To set the touch panel adjustment mode, press "CONTINUE" → "TEST" on the remote control for adjustment, adjust the address to "0E" with FF/REW, and press the PB key.		
			
Examples	_____		

ADJUSTING THE MIC AMP CIRCUIT

(Wiring board diagram: Audio I/O Side B)



1. EE level check

Measuring instrument	Valve voltmeter	Test point	TL605, TL604
Mode	P-ON (CAM)	Adjustment rating	-13.5dBs ± 3dB
Test signal	1kHz -54dBs sine wave		
Procedure	1) Input 1kHz, -54dBs sine wave into TL603(INT MIC L), TL601(INT MIC R). 2) Make sure that the signal level of TL605 Audio-L out and TL604 Audio-R out is within the standard limits.		

2. Frequency character check

Measuring instrument	Valve voltmeter	Test point	TL605, TL604
Mode	P-ON (CAM)		
Adjustment rating	(1kHz standard) 100Hz : -6dB ± 3dB 10kHz : +2B ± 3dB		
Test signal	100Hz, 10kHz -54dBs sine wave		
Procedure	1) Input 100Hz, -54dBs sine wave and then 10kHz, -54dBs sine wave into TL603 (INT MIC L) and TL601 (INT MIC R). 2) At this time make sure that the signal level of TL605 Audio-L out and TL604 Audio-R out is within the standard limit (1kHz standard).		

DV INTERFACE (IEEE1394) ID SETTING

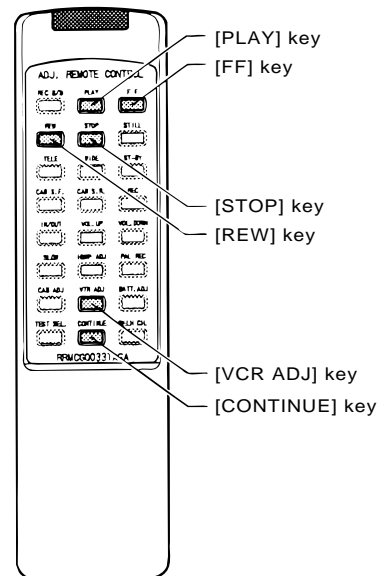
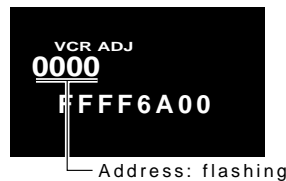
If ID code is acquired, it is written by the following point.

Example) Acquisition code : 08001F0100123456

Address	180	17F	17E
Data(ID code)	12	34	56

Procedures for Entering IEEE1394 Numbers

- Set the power switch to the "VCR" position.
- Press "CONTINUE" on the adjustment remote control, then press "VCR ADJ" and the address you chose will appear on the LCD monitor.
- With "FF" or "REW" the desired address will appear. Set with "PLAY" and data entry will show.
- With "FF" or "REW" the ID number (obtained through the Intranet) for any address will appear. Set with "PLAY".
- Press "STOP" and the address selection will appear. Then you can enter your ID number in order under the given address digits (180, 17F, 17E).
- Set the power switch to the "OFF" position. Now the writing is complete.



ADJ. REMOTE CONTROL
RRMCG 0033 TASA

10-2. Camera Section Adjustments

10-2-1. Camera section service

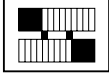


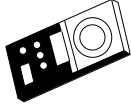
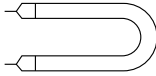
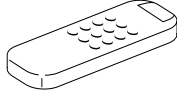
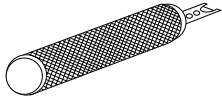
- (1) Camera adjustment is performed after the set has been completed.
- (2) Subjects, measuring instruments and jigs needed for camera section service and adjustments

<ul style="list-style-type: none"> • Gray scale chart • Color bar chart • Oscilloscope • Digital voltmeter • Vector scope • Halogen lamp: 2 pcs. 	<ul style="list-style-type: none"> • Frequency counter • Illumination meter • Color temperature meter • Color temperature conversion filter HOYA "LB-165" 	<ul style="list-style-type: none"> • Color video monitor • Video output cable • AC adapter • Extension cables • Remote control unit for servicing
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10-2-2. List of camera jigs and tools

Configuration

<Note: The entries of list> 1. Name 2. Part No. 3. Code

			
<ol style="list-style-type: none"> 1. Gray scale chart (390 x 520 mm) 2. JiGCHART-1 3. CP 	<ol style="list-style-type: none"> 1. Color bar chart (240 x 320 mm) 2. JiGCHART-4 3. DA 	<ol style="list-style-type: none"> 1. Illumination meter (0 to 3000 lux) 2. JiGMETER-1 3. CT 	<ol style="list-style-type: none"> 1. Color temperature meter (1600 to 400000 degrees K) 2. JiGMETER-2 3. EL
<ol style="list-style-type: none"> 1. Color temperature conversion filter (3200 degrees K ⇒ 6800 degrees K) 2. JiGHOYA-LB165 3. BN 			
	<ol style="list-style-type: none"> 1. PC plate connector drawer 2. JiGTH-SS10 3. AW 	<ol style="list-style-type: none"> 1. Remote control until for servicing 2. RRMCG0033TASA 3. BT 	<ol style="list-style-type: none"> 1. Put/pullet out jig 2. 95CM22001 3. BL * For the QCNW-1931TAZZ removal.

10-2-3. Adjusting the camera unit

- (1) Preparations for adjustments and items to be checked
 - 1) Set up the light box so that the entire pattern is evenly lit. Set the color temperature to 3200°K.
 - 2) Use test patterns that are not dirty nor discoloured.
 - 3) If the electrical circuitry gets in trouble, be sure to pinpoint the trouble spot with a measuring instrument and repair or replace the defective part.
- (2) Remote control for servicing RRMCG0033TASA

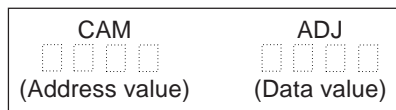
To adjust the camera section of this machine, the remote control for servicing (RRMCG0033TASA) is used. The adjustment is made in such a manner that the remote control writes necessary data by way of the microprocessor to the specific addresses on the FLASH MEMORY (IC7702), E²PROM (IC1001).

- 1) To adjust the camera:
Press the "CONTINUE" key first and then the "CAM ADJ" key.
This will show



on the LCD screen, thereby having the camera unit ready for the adjustments.

- 2) Descriptions of the displays



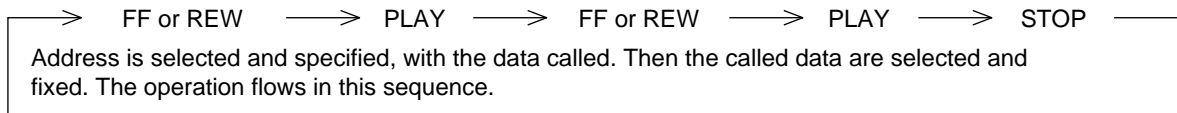
(Indicates the camera adjustment mode.)

- * The address values for this machine range from 0000 to 05FF.
- * The data include byte data (the last two digits are effective) and 2-byte data (the last three digits are effective).

- 3) Descriptions of the remote control keys

- "FF" key: Increases the address and data values.
- "REW" key: Decreases the address and data values.
- "PLAY" key: Specifies addresses and calls the data.
This key also fixes the data values.
- "STOP" key: Clears the data to enable the selection of address.

4) Operation flow



5) When the adjustment is complete:

Press the "CONTINUE" key to let the "CAM ADJ" display disappear from the screen.

Note: Before terminating the adjustments, make sure that the adjustment mode is neither the auto-focus function adjustment mode nor the camera signal system adjustment mode (these modes are mentioned later).

- Camera unit adjustment modes

The camera unit is adjusted in two types of modes: the auto-focus function adjustment mode and the camera signal system adjustment mode.

Note: Each E²PROM contains the adjustment item data as shown below. If it is changed, data rewriting and confirmation of latest data must be performed.

1) E²PROM (IC1001) of camera head section

Lens data, LCD drive timing data

2) FLASH MEMORY (IC7702) on main unit

Signal system adjustment data

(3) Auto-focus function adjustment mode

- The camera unit uses a microprocessor-controlled auto-focus zoom lens.

The auto-focus circuit incorporated in this unit is designed to execute the image processing where the focusing action is done by taking advantage of the fact that the high-frequency components in the image signals increase as the focus intensifies. Moreover, to achieve high magnifying power with a small lens, the camera unit incorporates the inner focus system in which the focus is shifted by moving the master lens (rear lens) back and forth. This inner focus system is a full-range focus type by which the focus can be shifted from approximately 10 mm to the infinity. It should be noted, however, that since the closest subject distance at the telephoto end is fixed at 1.5 m, subjects in a closer range than 1.5 m at the telephoto end will be out of focus. For this reason, the unit is designed so the zoom control is automatically shifted to the wide angle side until the position is found where the subject can be focused on.

In the auto-focusing system of this unit, the following constitute the important factors:

- Master lens position detection data
- Iris position detection data
- Zoom lens position detection data

These detection data are handled and stored by the microprocessor, lens by lens, into the E²PROM.

Therefore, in the following cases, the auto-focus function adjustment is required:

- When the lens has been replaced
- When the CCD has been replaced
- When the E²PROM (IC1001) has been replaced

1) Shifting to the auto-focus function adjustment mode

Set the data for the address "09FE" to "□□□01".



This makes the screen fade temporarily in white and shifts to the auto-focus function adjustment mode.

* When this adjustment mode has been shifted to, make the adjustment according to (5) Camera unit adjustment procedure.

* In this adjustment mode, the lens can not be operated.

2) Shifting to the normal operation mode

Set the data for the address "09FE" to "□□□FF".



This makes the screen fade temporarily in white and shifts to the normal operation mode.



Press the "CONTINUE" key, and the "CAM ADJ" display goes out of the screen, enabling the normal operation.

(4) Camera signal system adjustment mode

In the camera signal system adjustment mode, the automatic white balance is disabled to allow for the adjustment of the camera unit. At this time, the white balance mode is fixed at the INDOORS mode and the focus mode is switched to the manual focus mode.

1) Shifting to the camera signal system adjustment mode

Set the data for the address "0000" to "□□□00".



This shifts the mode to the auto-focus function adjustment mode.

* When this adjustment mode has been shifted to, make the adjustment according to (5) Camera unit adjustment procedure.

2) Shifting to the normal operation mode

Set the data for the address "0000" to "00FF".

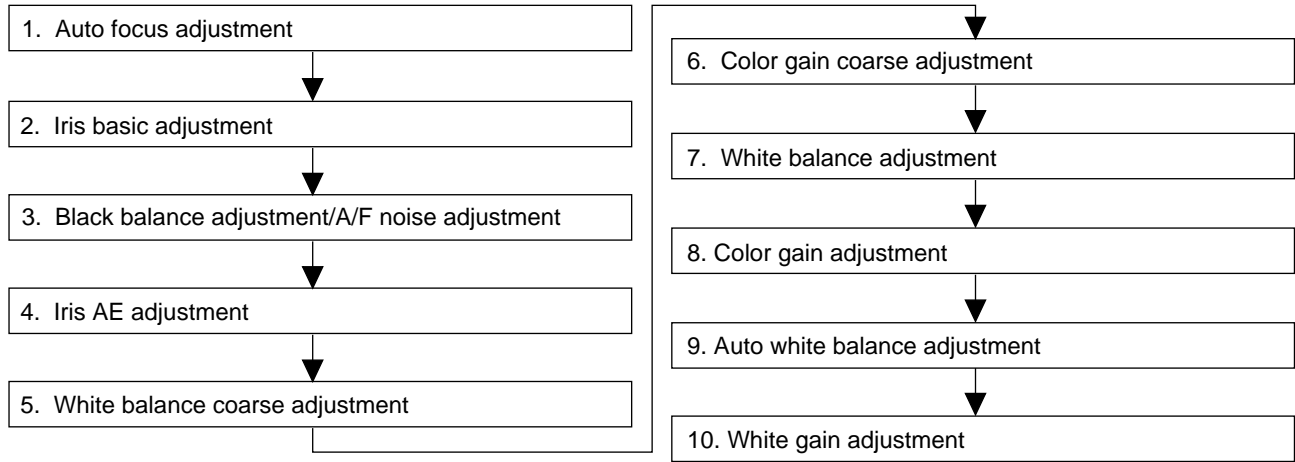


This shifts the mode to the normal operation mode.



Press the "CONTINUE" key, and the "CAM ADJ" display goes out of the screen, enabling the normal operation.

(5) Camera unit adjustment procedure



- * The above 1. Auto-focus function adjustment and 2. Iris basic adjustment are performed in the auto-focus function adjustment mode, whereas the other adjustments are made in the camera signal system adjustment mode.
- * After completing the auto-focus adjustment mode, set the camera signal system adjustment mode. (Take care that the adjustment mode transfer address is different.)

(6) Replacement procedure of gyro unit

1) When replacing E²PROM: IC1001 of camera head with the gyro unit not replaced

Since the adjustment data of gyro is written in IC1001, copy the data of addresses "864, 865" and rewrite them after replacement.

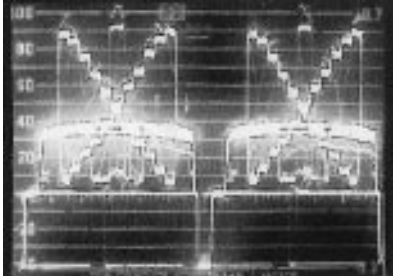
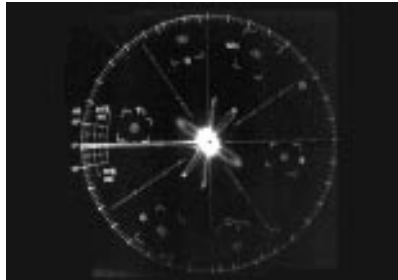
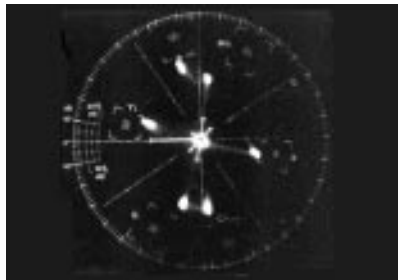
2) When replacing the gyro sensor: S1501

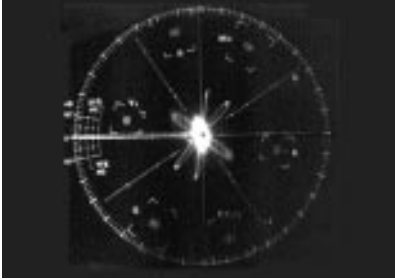
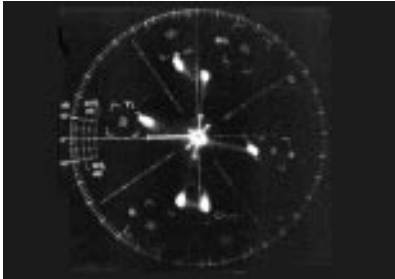
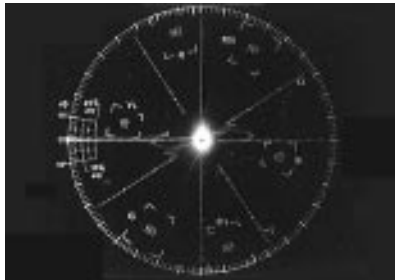
After replacing with the specified gyro sensor, write the following data in the addresses "864, 865".

S1501	Address	Data
Replacement with RSNG0005CE01	0864	06
	0865	FF

10-2-4. Adjustment procedures

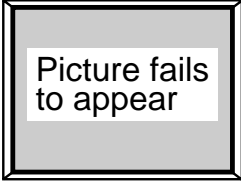
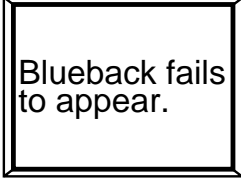
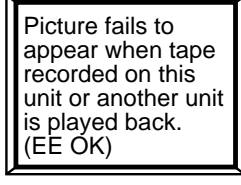
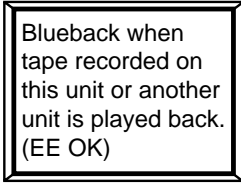
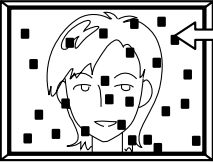
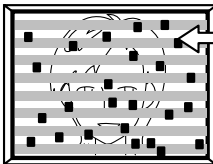
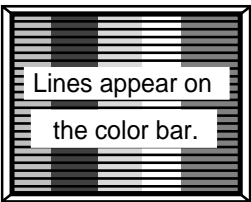
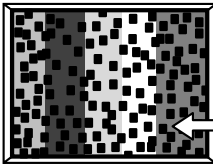
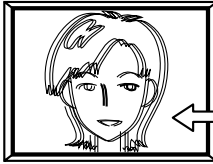
Item	Adjustment method													
<p>(1) Auto-focus adjustment</p> <p>Set the unit to the auto-focus function adjustment mode and write data to the address "09FD" one after another. This executed the adjustments automatically. The items to be adjusted are as listed below. Every time an adjustment is made properly, the data "FF" is written to the address. After each adjustment, make sure that the adjustment has been made properly, and then go on to the next adjustment item.</p> <table border="1" data-bbox="147 365 972 518"> <thead> <tr> <th>Address</th> <th>Data</th> <th>Adjustment item</th> </tr> </thead> <tbody> <tr> <td rowspan="4">09FD</td> <td>000C</td> <td>MR sensor adjustment</td> </tr> <tr> <td>0012</td> <td>WIDE end adjustment</td> </tr> <tr> <td>0008</td> <td>TELE end focus ∞ position adjustment</td> </tr> <tr> <td>0006</td> <td>WIDE end focus ∞ position adjustment</td> </tr> </tbody> </table> <p>Note 1: To adjustment of ∞ position is executed by actually picking up the image of subject. For this adjustment use the subject with clear profile. Especially, if the adjustment of TELE end focus ∞ position is made without picking up the image of remote subject, adjustment failure may occur. 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 case of ∞ position adjustment the field depth is important to ensure the adjustment accuracy. If the field depth is high, the focus becomes too stable, which may cause incorrect adjustment of ∞ position. Therefore the adjustment must be made with low field depth (with iris opened).</p> <p>The iris can be opened with the high-speed shutter.</p> <ol style="list-style-type: none"> 1. It returns to the normal operation mode. 2. In the normal operation mode, set the high-speed shutter mode until the iris is opened. (Refer to the operation manual.) 3. Display "CAM ADJ" with the remote control for service. 4. It shifts to the auto-focus adjustment mode. 5. Perform the ∞ position adjustment. 6. After completing the ∞ position adjustment, return the high-speed shutter mode to the normal mode. 	Address	Data	Adjustment item	09FD	000C	MR sensor adjustment	0012	WIDE end adjustment	0008	TELE end focus ∞ position adjustment	0006	WIDE end focus ∞ position adjustment		
Address	Data	Adjustment item												
09FD	000C	MR sensor adjustment												
	0012	WIDE end adjustment												
	0008	TELE end focus ∞ position adjustment												
	0006	WIDE end focus ∞ position adjustment												
<p>(2) Iris basic adjustment</p> <p>This is for adjusting the operating point of the hole element installed in the iris meter of the lens. In the camera signal system adjustment mode (write the address "0000" to, "□□ 00") . Set the unit to the adjustment mode and write data to the address "09FD" one after another. This executes the adjustments automatically. The items to be adjusted are as listed below. Every time an adjustment is made properly, the data "00FF" is written to the address.</p> <table border="1" data-bbox="147 1268 972 1386"> <thead> <tr> <th>Address</th> <th>Data</th> <th>Adjustment item</th> </tr> </thead> <tbody> <tr> <td rowspan="3">09FD</td> <td>0009</td> <td>Hall offset adjustment</td> </tr> <tr> <td>000A</td> <td>Iris offset adjustment</td> </tr> <tr> <td>000B</td> <td>Iris close adjustment</td> </tr> </tbody> </table> <p>* After completion of 1. Auto-focus adjustment, 2. Iris basic adjustment once restore the regular operation mode. Data "090F" is written in the address "0003".</p>	Address	Data	Adjustment item	09FD	0009	Hall offset adjustment	000A	Iris offset adjustment	000B	Iris close adjustment				
Address	Data	Adjustment item												
09FD	0009	Hall offset adjustment												
	000A	Iris offset adjustment												
	000B	Iris close adjustment												
<p>(3)Black balance adjustment/A/F noise adjustment</p> <ol style="list-style-type: none"> 1) Prior to the adjustment, initialize the data for the addresses "0224", "0226", "0228", "022A", "022C", "022E". Write "FF FF" (the last two digits are effective) to all of these address. 2) Write the data "□□ 01" to the address "0001" This starts the adjustment automatically. When the adjustment is completed properly, the data "00FF" is written automatically. 														

Item	Adjustment method															
<p>(4) Iris AE adjustment</p> <ul style="list-style-type: none"> Measurement terminal: S terminal luminance signal output (75 Ω termination) Address: "0002" AE_CVT Measuring instrument: Oscilloscope (horizontal sync) Object: Grey scale Data variation width: "0000" to "00FE" 	<p>(1) Video output is observed with the oscilloscope in the grey scale standard record state, the data of address "0002" is rewritten, and the luminance signal level (not including sync signal) is adjusted to $700 \pm 10\text{mVp-p}$.</p>  <p style="text-align: right;">100mV/div</p>															
<p>(5) White balance coarse adjustment</p> <ul style="list-style-type: none"> Measurement terminal: EE output Address: "0050" CGAIN_KR_W "0052" CGAIN_KB_W Measuring instrument: Vector scope Object: Grey scale Data variation width: "0000" to "03FF" 	<p>(1) Indication on the vector scope is observed in the grey scale standard record state, data of address "0050" and "0052" are rewritten, and an adjustment is made so that the luminous dot is located in the position of burst ratio: R-Y $0 \pm 5\%$ B-Y $0 \pm 5\%$</p> 															
<p>(6) Color gain coarse adjustment</p> <ul style="list-style-type: none"> Measurement terminal: EE output Address: "03DE" CGIN RYG "03E0" CGIN BYG "03DB" CMAT RYG "03D9" CMAT BYG Measuring instrument: Vector scope Object: Color bar chart Data variation width: "0000" to "00FF" 	<p>(1) The color bar chart is imaged, and the picture angle is adjusted so as to get white level 650 mV. Indication on the vector scope is observed, the data of address "03DE", "03E0", "03DB" and "03D9" are rewritten, and setting is made so that the red and blue luminous dots are located in the following positions. (The gain of vector scope must be set on 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>1.45 ± 0.1 time (burst ratio)</td> <td style="text-align: right;">: "03DE"</td> </tr> <tr> <td>Blue amplitude</td> <td>1.15 ± 0.1 time (burst ratio)</td> <td style="text-align: right;">: "03E0"</td> </tr> <tr> <td>Red phase</td> <td>$100^\circ \pm 2^\circ$</td> <td style="text-align: right;">: "03DB"</td> </tr> <tr> <td>Blue phase</td> <td>$347^\circ \pm 2^\circ$</td> <td style="text-align: right;">: "03D9"</td> </tr> </tbody> </table>			Adjustment address	Red amplitude	1.45 ± 0.1 time (burst ratio)	: "03DE"	Blue amplitude	1.15 ± 0.1 time (burst ratio)	: "03E0"	Red phase	$100^\circ \pm 2^\circ$: "03DB"	Blue phase	$347^\circ \pm 2^\circ$: "03D9"
		Adjustment address														
Red amplitude	1.45 ± 0.1 time (burst ratio)	: "03DE"														
Blue amplitude	1.15 ± 0.1 time (burst ratio)	: "03E0"														
Red phase	$100^\circ \pm 2^\circ$: "03DB"														
Blue phase	$347^\circ \pm 2^\circ$: "03D9"														

Item	Adjustment method											
<p>(7) White balance adjustment</p> <ul style="list-style-type: none"> Measurement terminal: EE output Address: "0050" INDOOR W/BR "0052" INDOOR W/BR Measuring instrument: Vector scope Object: Grey scale Data variation width: "0000" to "03FF" 	<p>(1) White balance adjustment is performed repeatedly.</p> 											
<p>(8) Color gain adjustment</p> <ul style="list-style-type: none"> Measurement terminal: EE output Address: "03DE" CGIN RYG "03E0" CGIN BYG "03DB" CMAT RYG "03D9" CMAT BYG Measuring instrument: Vector scope Object: Waveform monitor color bar chart Data variation width: "0000" to "00FF" 	<p>(1) Color gain adjustment is performed repeatedly.</p>  <table border="0" style="width: 100%; margin-top: 20px;"> <tr> <td></td> <td style="text-align: right;">Adjustment address</td> </tr> <tr> <td>Red amplitude</td> <td>1.45 ± 0.05 time (burst ratio) : "03DE"</td> </tr> <tr> <td>Blue amplitude</td> <td>1.15 ± 0.05 time (burst ratio) : "03E0"</td> </tr> <tr> <td>Red phase</td> <td>100° ± 1° : "03DB"</td> </tr> <tr> <td>Blue phase</td> <td>347° ± 2° : "03D9"</td> </tr> </table>		Adjustment address	Red amplitude	1.45 ± 0.05 time (burst ratio) : "03DE"	Blue amplitude	1.15 ± 0.05 time (burst ratio) : "03E0"	Red phase	100° ± 1° : "03DB"	Blue phase	347° ± 2° : "03D9"	
	Adjustment address											
Red amplitude	1.45 ± 0.05 time (burst ratio) : "03DE"											
Blue amplitude	1.15 ± 0.05 time (burst ratio) : "03E0"											
Red phase	100° ± 1° : "03DB"											
Blue phase	347° ± 2° : "03D9"											
<p>(9) Auto white balance adjustment</p> <ul style="list-style-type: none"> Measurement terminal: EE output Address: "000C" OUTDOOR R "000E" OUTDOOR B Measuring instrument: Vector scope Object: Grey scale Data variation width: "0000" to "03FF" 	<p>(1) The color temperature conversion filter (LB165) is mounted in front of lens. (2) Indication of vector scope is observed in the grey scale standard record state, and an adjustment is made so that the luminous dots are located in the following positions:</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>R-Y 0 ± 5% (burst ratio) B-Y 0 ± 5% (burst ratio)</p> </div> 											
<p>(10) White gain adjustment In the signal system adjustment mode, adjustment is performed automatically when the data is written in the address "0001".</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th>Address</th> <th>Data</th> <th>Adjustment item</th> <th>Object</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="text-align: center;">0001</td> <td style="text-align: center;">0005</td> <td style="text-align: center;">Low color temperature white gain adjustment</td> <td style="text-align: center;">White pattern</td> </tr> <tr> <td style="text-align: center;">0006</td> <td style="text-align: center;">High color temperature white gain adjustment</td> <td style="text-align: center;">White pattern + LB165</td> </tr> </tbody> </table> <p>1) In the signal system adjustment mode, adjustment is performed automatically when the data "_05" is written in the address "0001". When the adjustment is completed normally, the data "FFFF" is return to the address "0001". If a data other than "FFFF" is returned, the adjustment is judged improper.</p> <p>2) Mount the color temperature conversion filter(LB165) on the front of lens.</p> <p>3) In the signal system adjustment mode, adjustment is performed automatically when the data "06" is written in the address "0001". When the adjustment is completed normally, the data "FFFF" is return to the address "0001". If a data other than "FFFF" is returned, the adjustment is judged improper.</p>		Address	Data	Adjustment item	Object	0001	0005	Low color temperature white gain adjustment	White pattern	0006	High color temperature white gain adjustment	White pattern + LB165
Address	Data	Adjustment item	Object									
0001	0005	Low color temperature white gain adjustment	White pattern									
	0006	High color temperature white gain adjustment	White pattern + LB165									

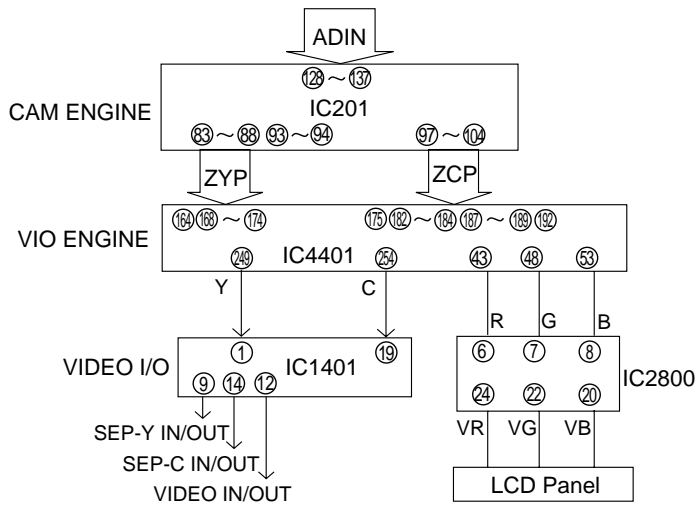
After completion of adjustment set the regular operation mode (the data "□□FF" is written in the address "0000".)

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

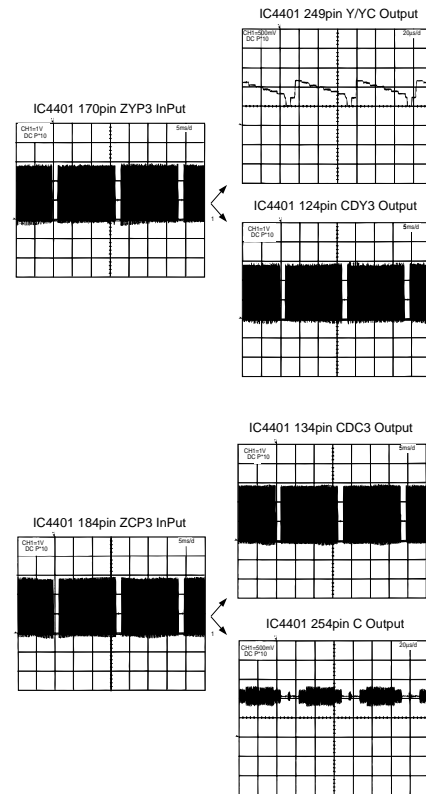
<p>Camera (EE mode)</p> <div style="text-align: center;">  </div> <p>Major circuits to be checked</p> <ul style="list-style-type: none"> • CCD • Camera circuits (CDS, ADC, CAM ENGINE) • System controller (IC701) • VIDEO I/O (IC1401) • VIO ENGINE (IC4401) 	<p>VCR (EE mode)</p> <div style="text-align: center;">  </div> <p>Major circuits to be checked</p> <ul style="list-style-type: none"> • Mechanical controller (IC7701) • System controller (IC701) • CAM ENGINE (IC201) • REC/PB ENGINE (IC452) 	<p>Camera (REC mode) VCR (PB mode)</p> <div style="text-align: center;">  </div> <p>Major circuits to be checked</p> <ul style="list-style-type: none"> • CAM ENGINE (IC201) • REC/PB ENGINE (IC452)
<p>Camera (REC mode) VCR (PB mode)</p> <div style="text-align: center;">  </div> <p>Major circuits to be checked</p> <ul style="list-style-type: none"> • EQ/PLL (IC3401) • ATF (IC3402) • Head amplifier (IC301) * Dirty or defective video head 	<p>Camera (REC mode) VCR (PB mode)</p> <div style="display: flex; align-items: center;"> <div style="text-align: center;">  <p>Random block noise when tape recorded on this unit or another unit is played back.</p> </div> <div style="margin: 0 20px;">or</div> <div style="text-align: center;">  <p>Noise bar (Green) + random block noise when tape recorded on this unit or another unit is played back.</p> </div> </div> <p>Major circuits to be checked</p> <ul style="list-style-type: none"> • EQ/PLL (IC3401) • ATF (IC3402) • Head amplifier (IC301) * Dirty or defective video head 	
<p>VCR (PB mode) + color bar</p> <div style="text-align: center;">  <p>Lines appear on the color bar.</p> </div> <p>Major circuits to be checked</p> <ul style="list-style-type: none"> • CAM ENGINE (IC201) 	<p>VCR (PB mode) + color bar</p> <div style="text-align: center;">  <p>There is considerable random block noise.</p> </div> <p>Major circuits to be checked</p> <ul style="list-style-type: none"> • Adjustment of the electromagnetic conversion circuit system. 	<p>Camera (EE mode)</p> <div style="text-align: center;">  <p>The outline looks like a Moire pattern.</p> </div> <p>Major circuits to be checked</p> <ul style="list-style-type: none"> • Y data between CAM ENGINE (IC201) and LCD_DSP (IC801) is missing.

12. SIGNAL FLOW DIAGRAMS

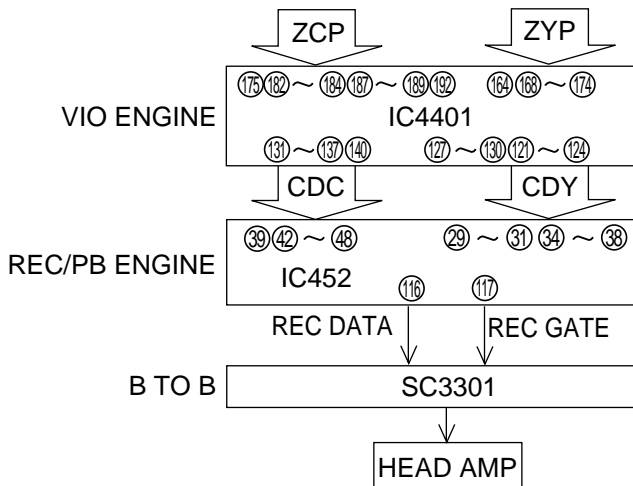
12-1. EE MODE FLOW (VIDEO)



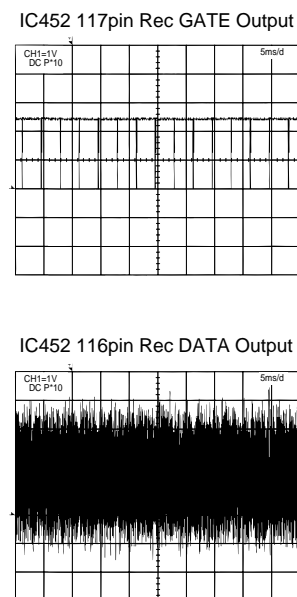
WAVEFORM DIAGRAM (DURING COLOR BAR RECORDING)



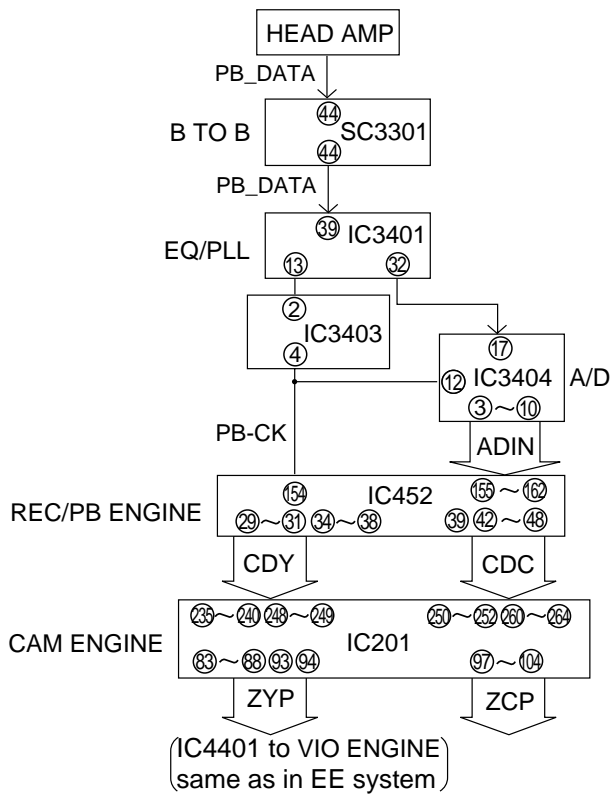
12-2. FLOW IN REC MODE (VIDEO)



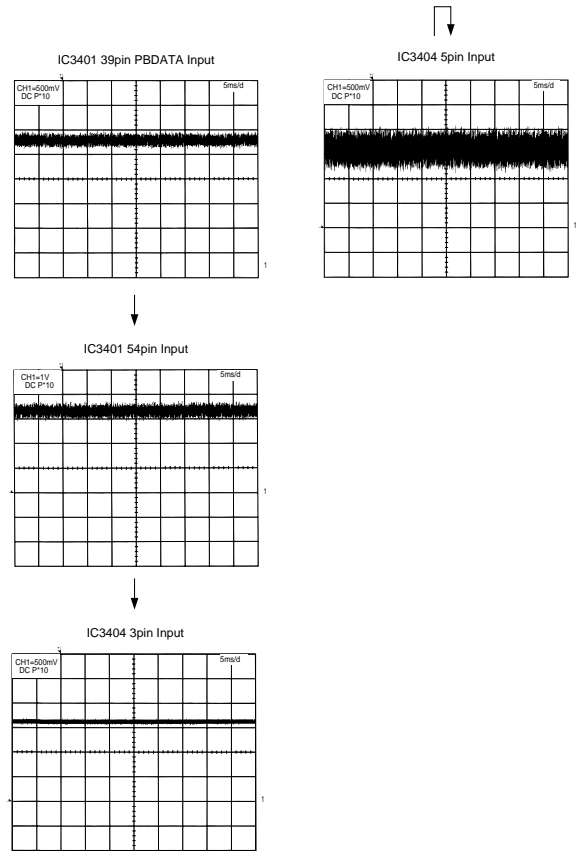
WAVEFORM DIAGRAM (DURING COLOR BAR RECORDING)



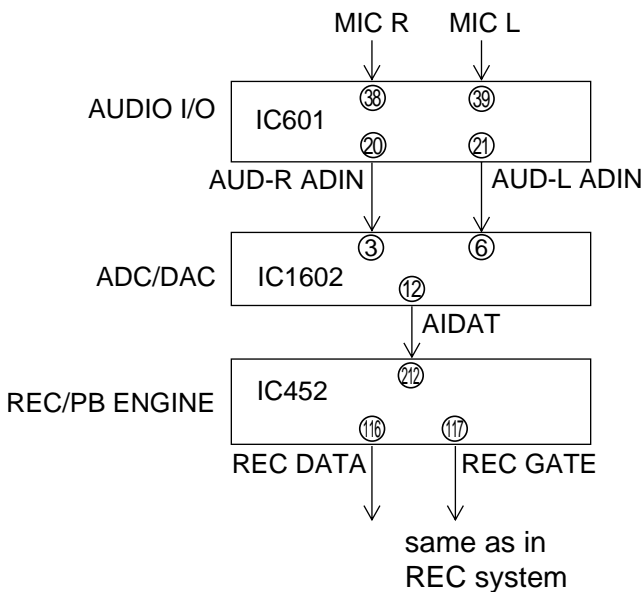
12-3. FLOW IN PB MODE (VIDEO)



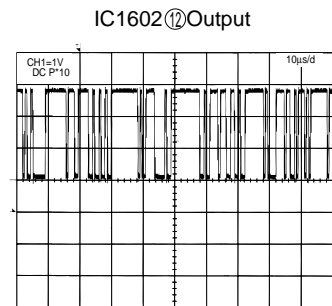
WAVEFORM DIAGRAM (DURING COLOR BAR PLAYBACK)



12-4. FLOW IN REC MODE (AUDIO)

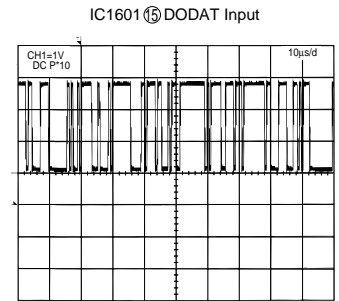
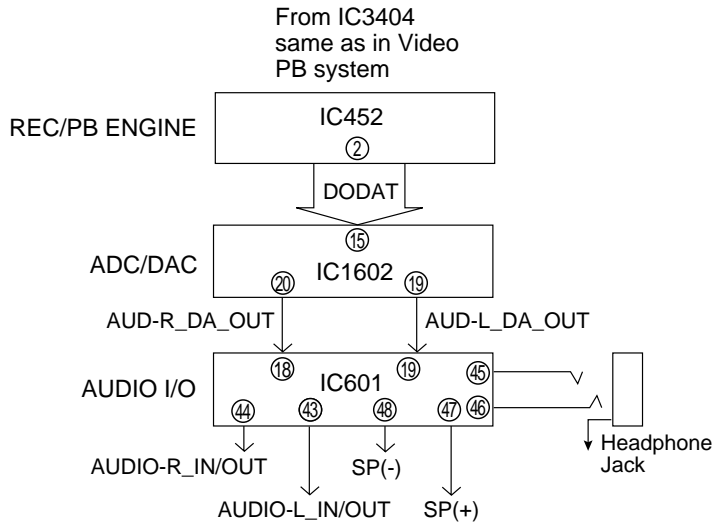


WAVEFORM DIAGRAM (1.6 kHz SINE WAVE)

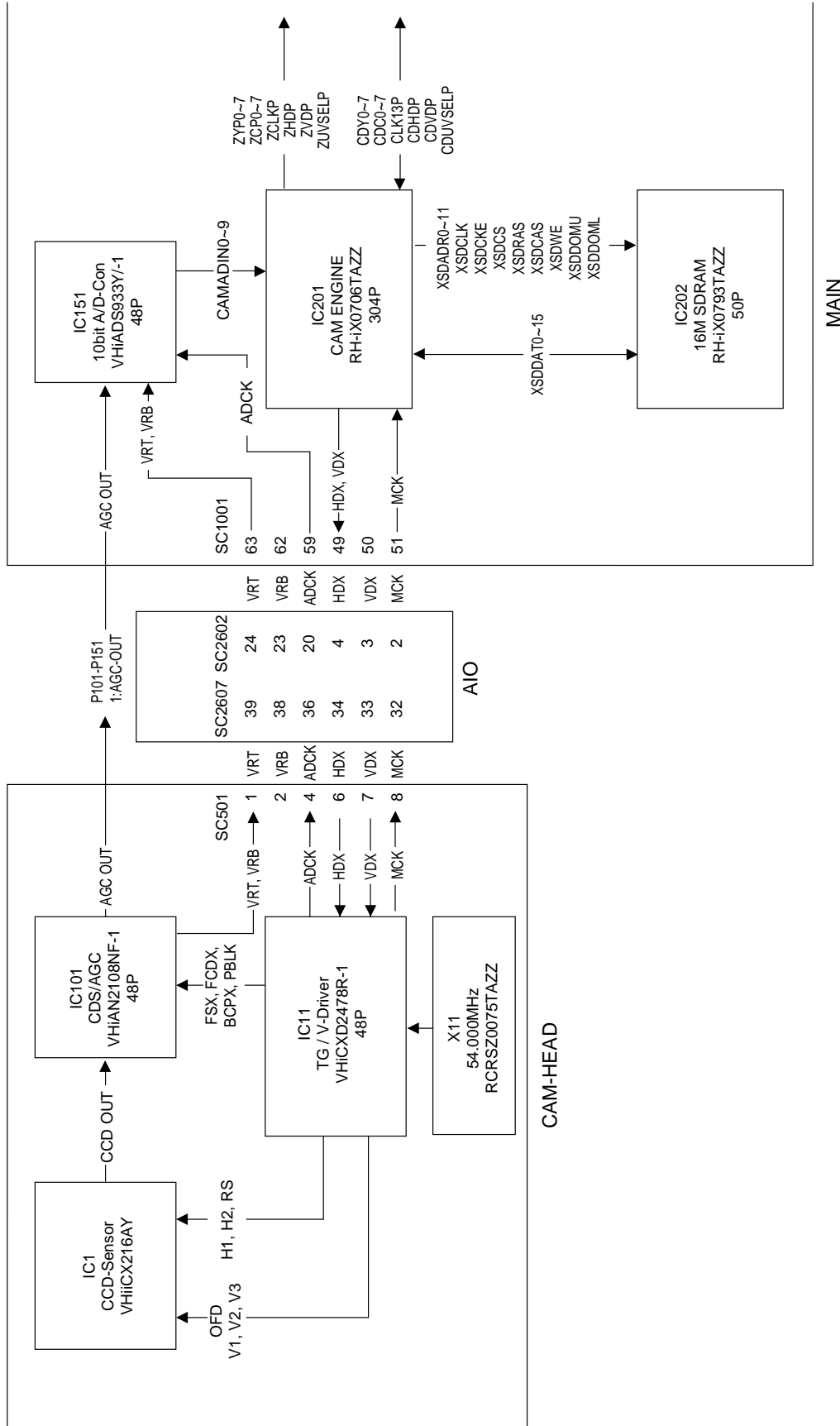


12-5. FLOW IN PB MODE (AUDIO)

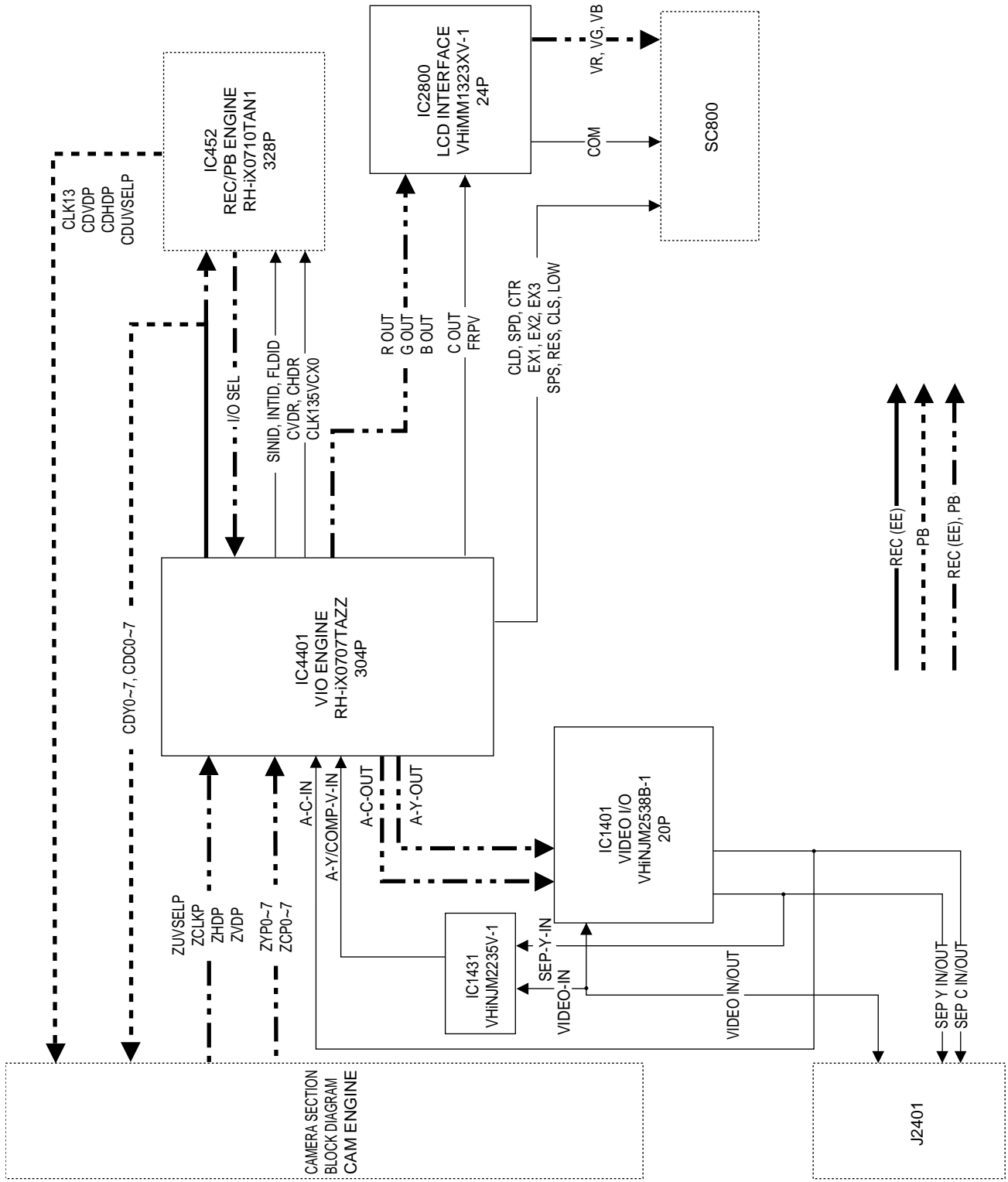
WAVEFORM DIAGRAM (1.6 kHz SINE WAVE)



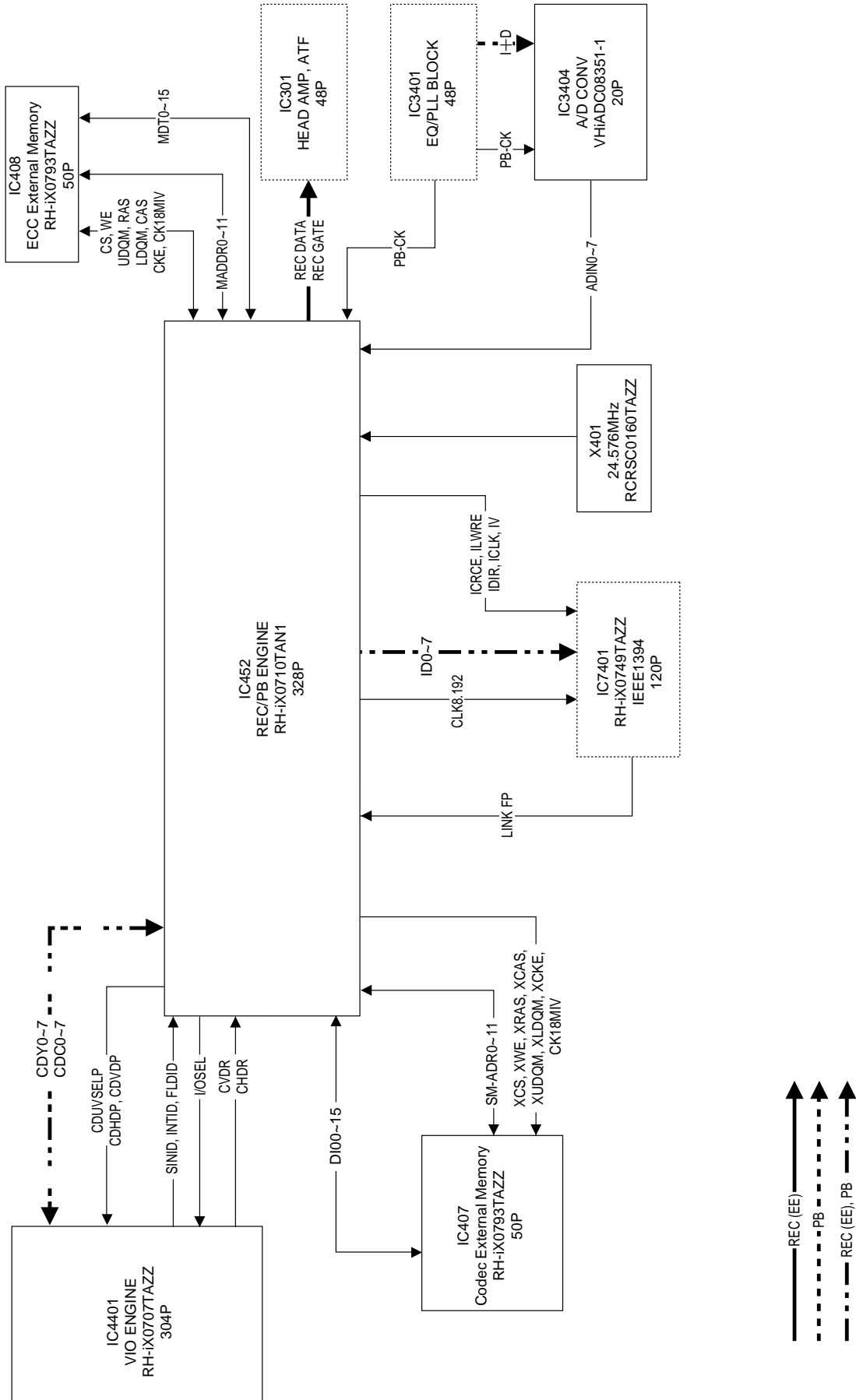
13-2. CAMERA SECTION BLOCK DIAGRAM



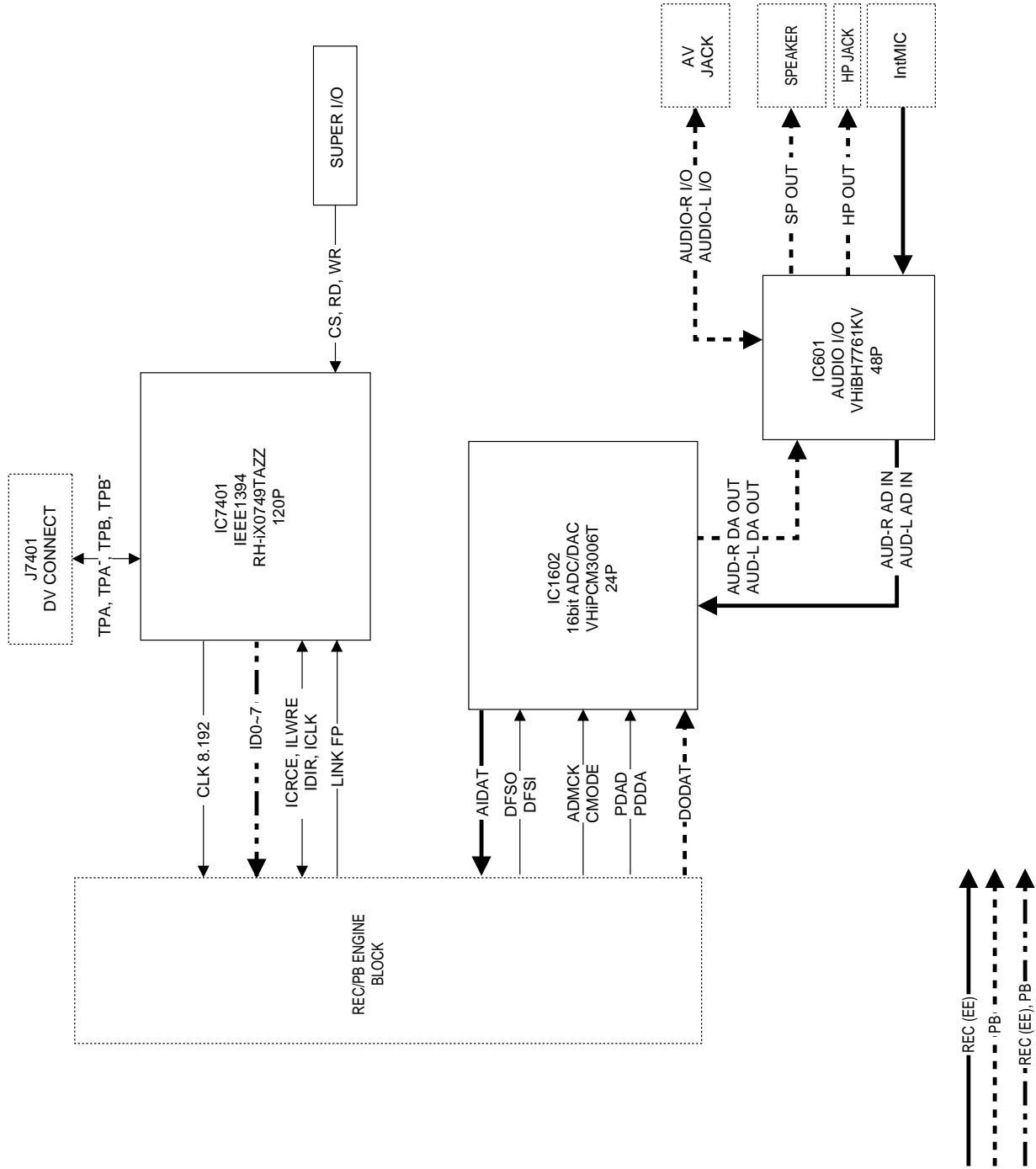
13-3. VIO ENGINE SECTION BLOCK DIAGRAM



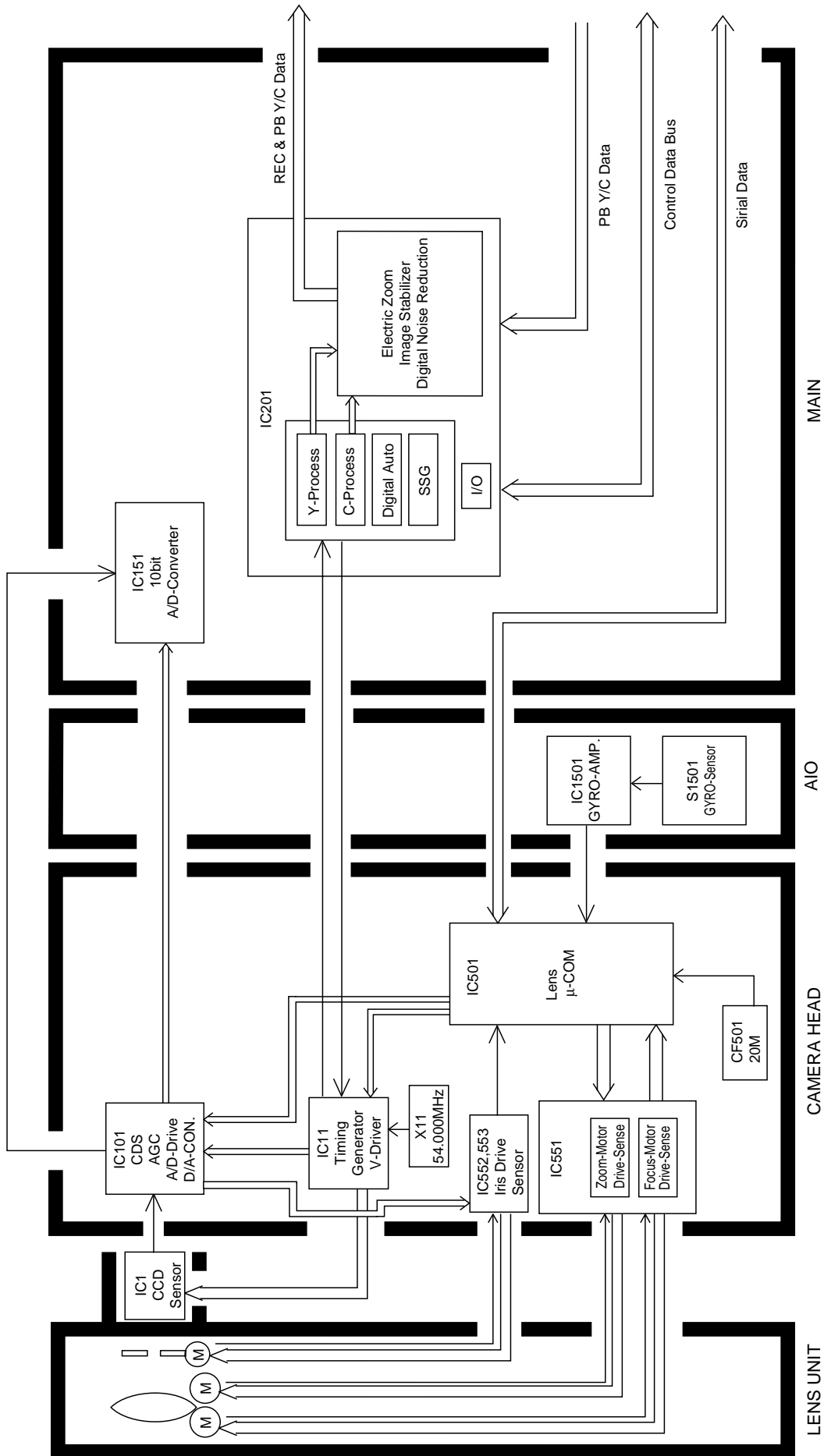
13-4. REC/PB SECTION SECTION BLOCK DIAGRAM



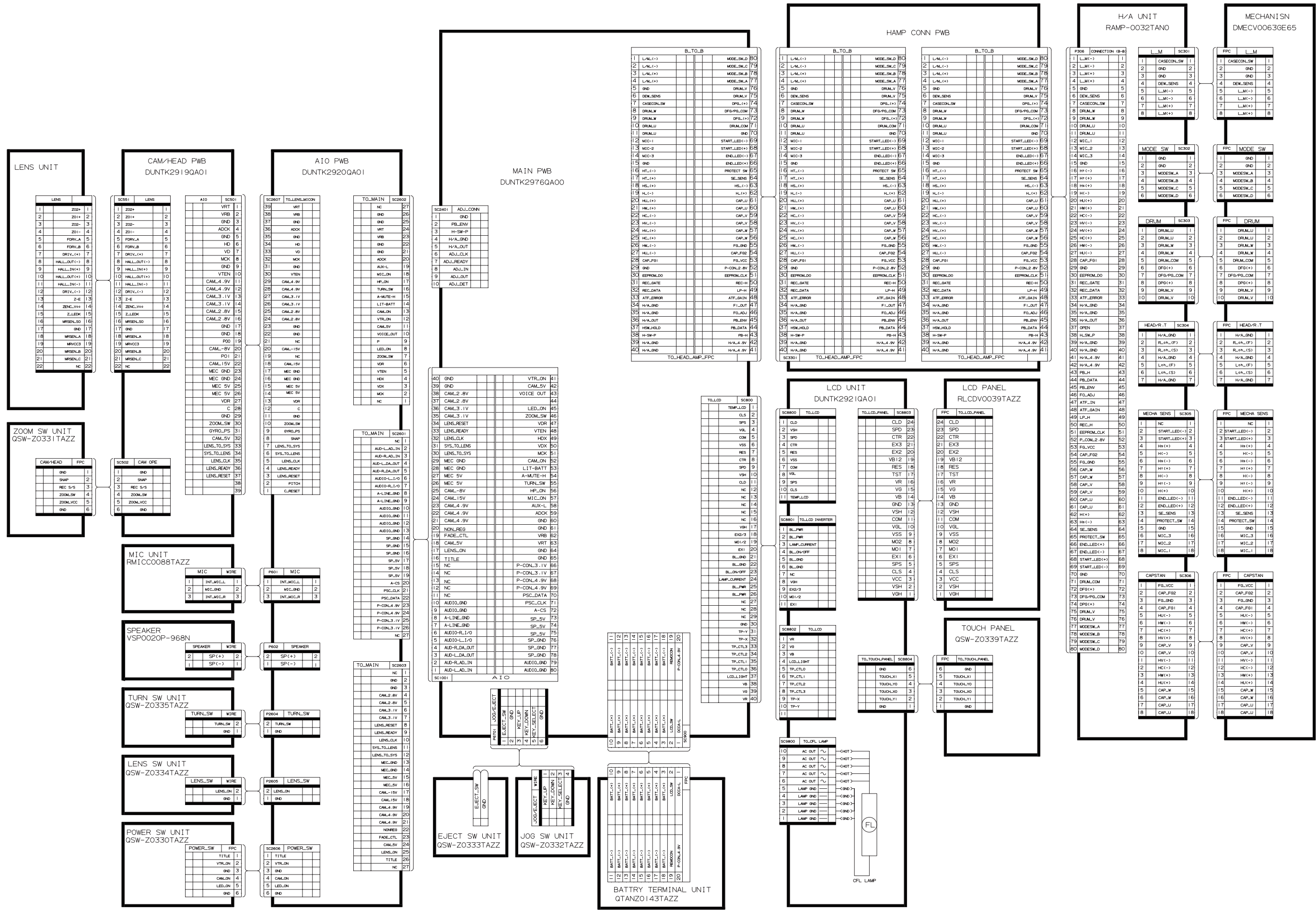
13-5. AUDIO/DIGITAL OUTPUT SECTION BLOCK DIAGRAM



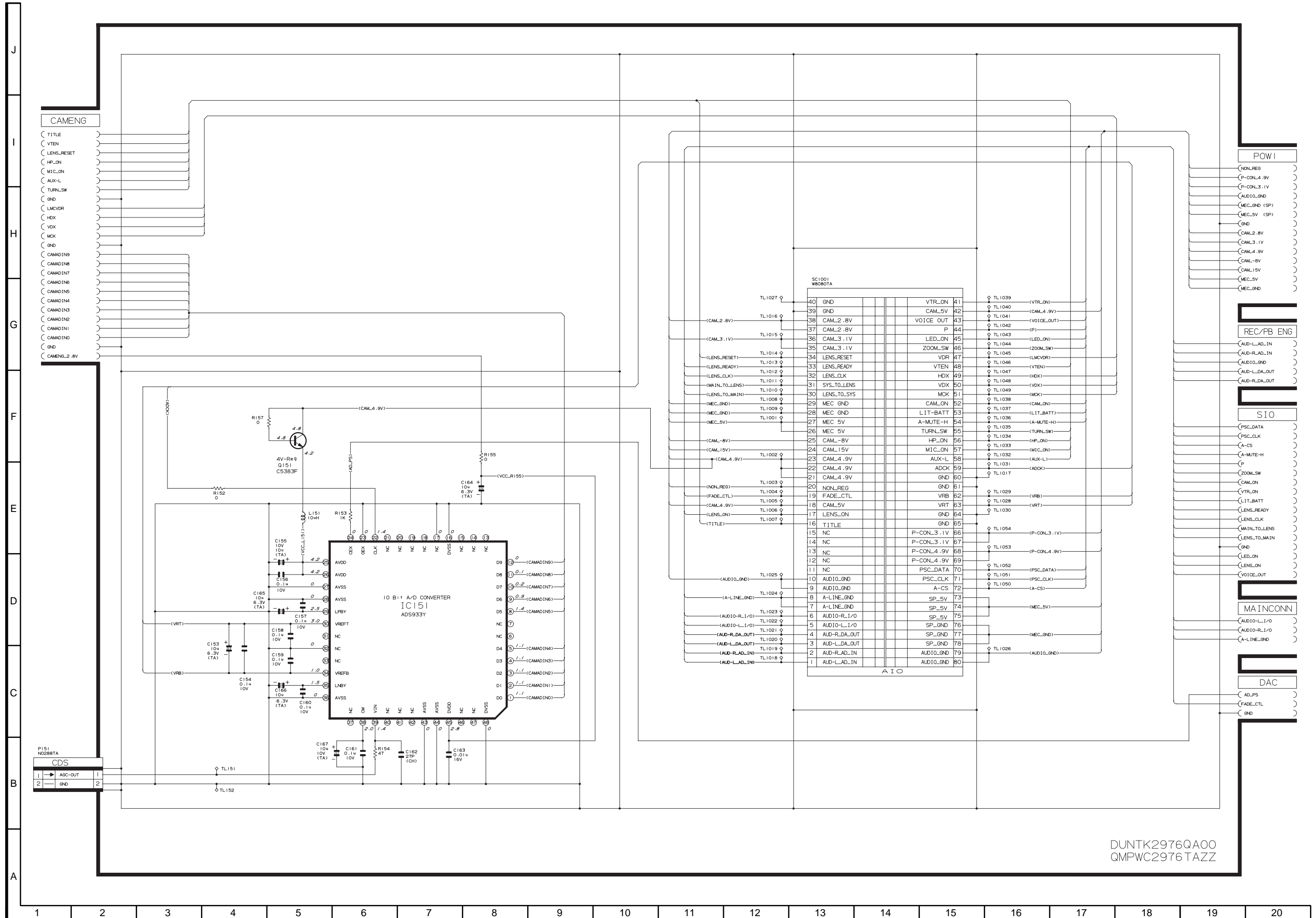
13-6. CAMERA CIRCUIT BLOCK DIAGRAM



14. SCHEMATIC DIAGRAMS 14-1. OVERALL SCHEMATIC DIAGRAM

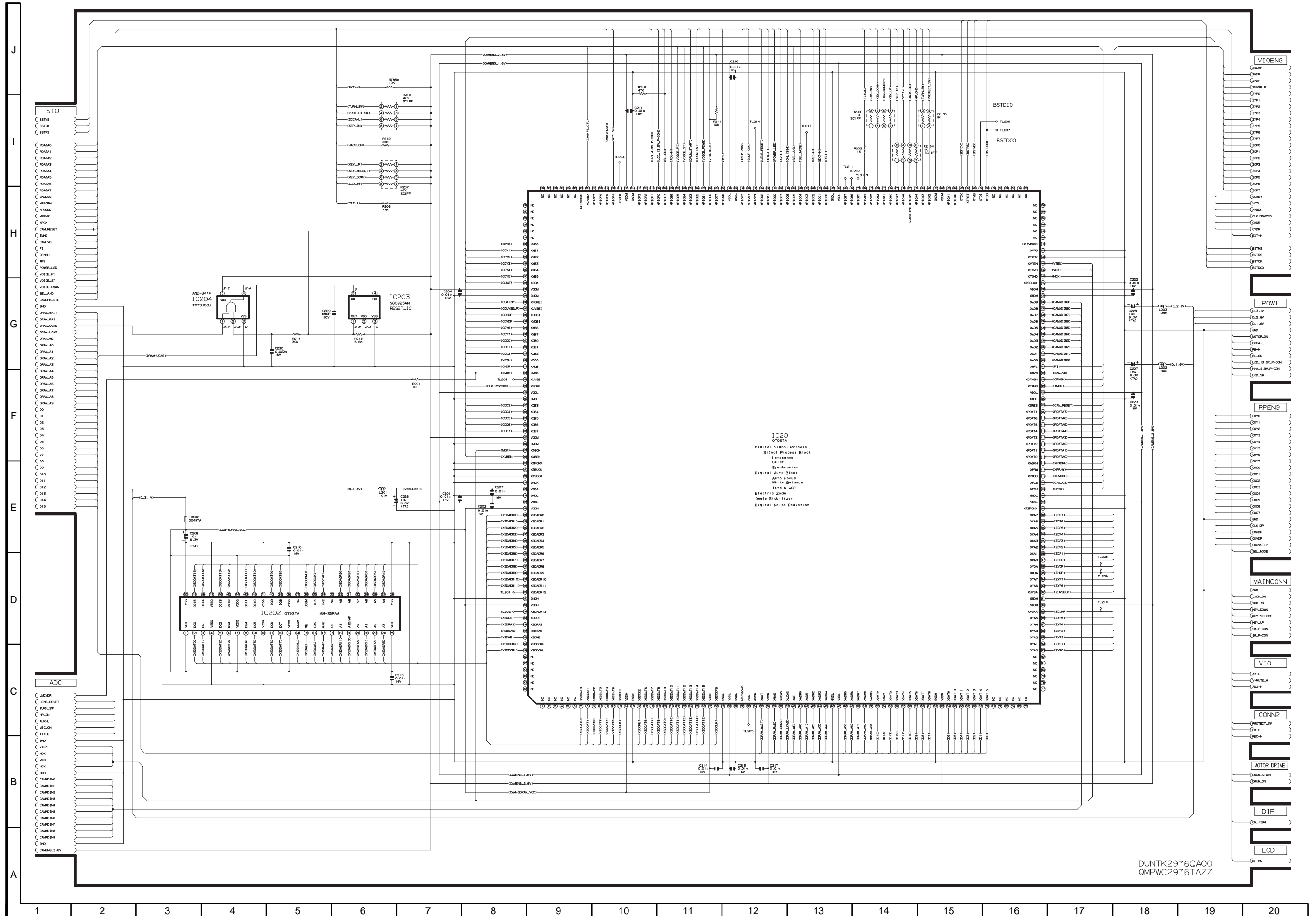


14-2. ADC SCHEMATIC DIAGRAM



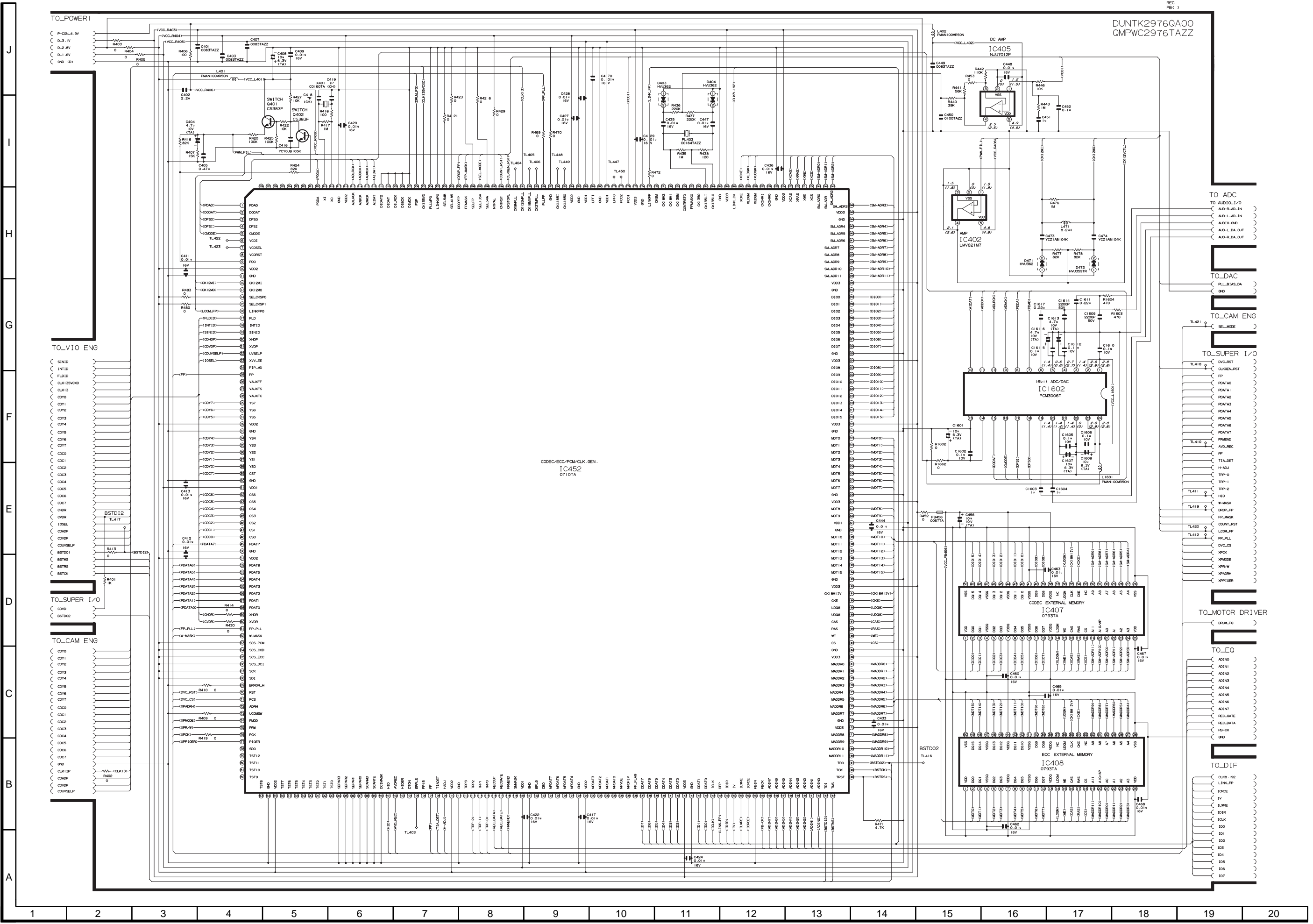
DUNTK2976QA00
QMPWC2976TAZZ

14-3. CAMERA ENGINE SCHEMATIC DIAGRAM



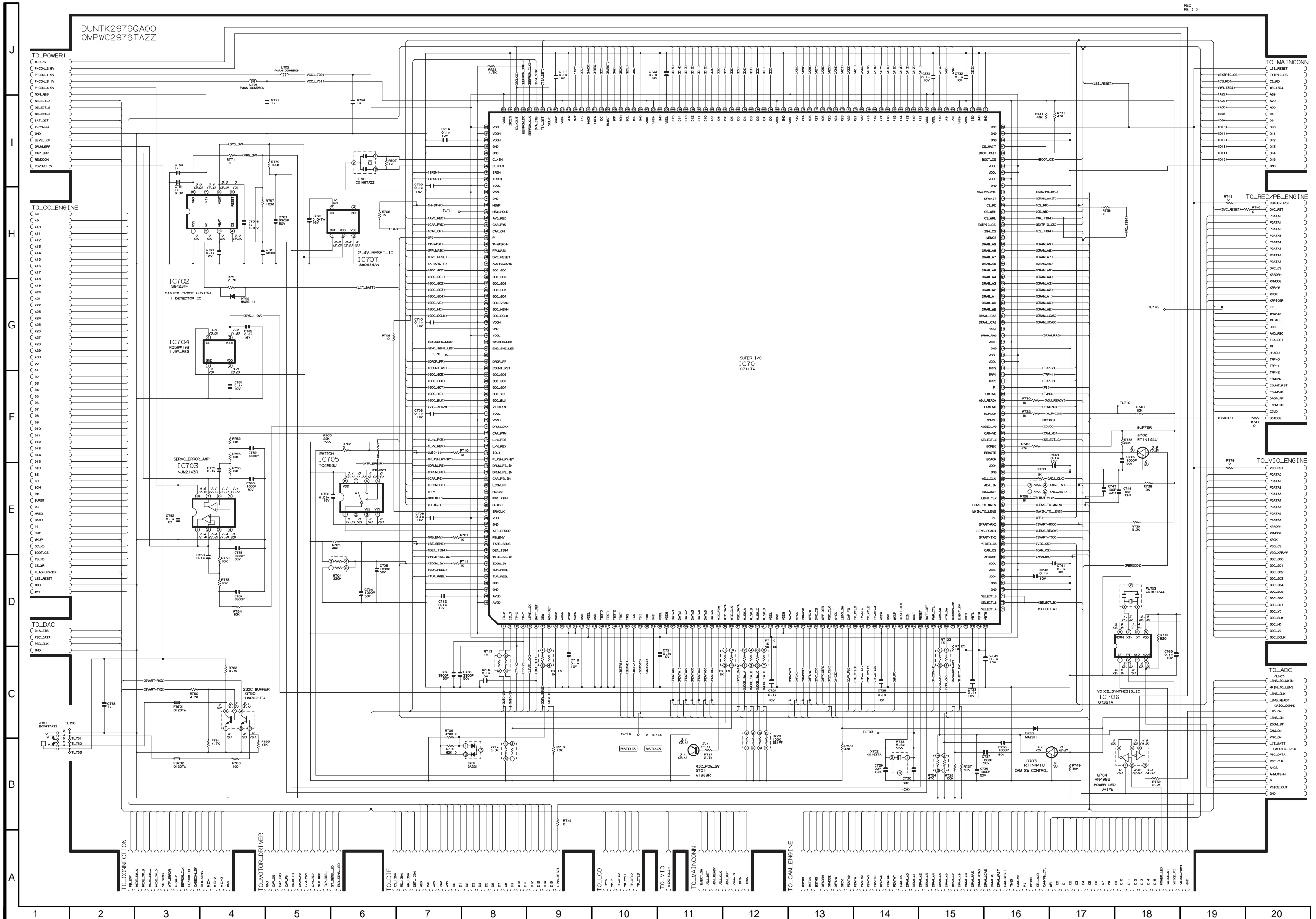
DUNTK2976QA00
QMPWC2976TAZZ

14-4. REC/PB ENGINE SCHEMATIC DIAGRAM



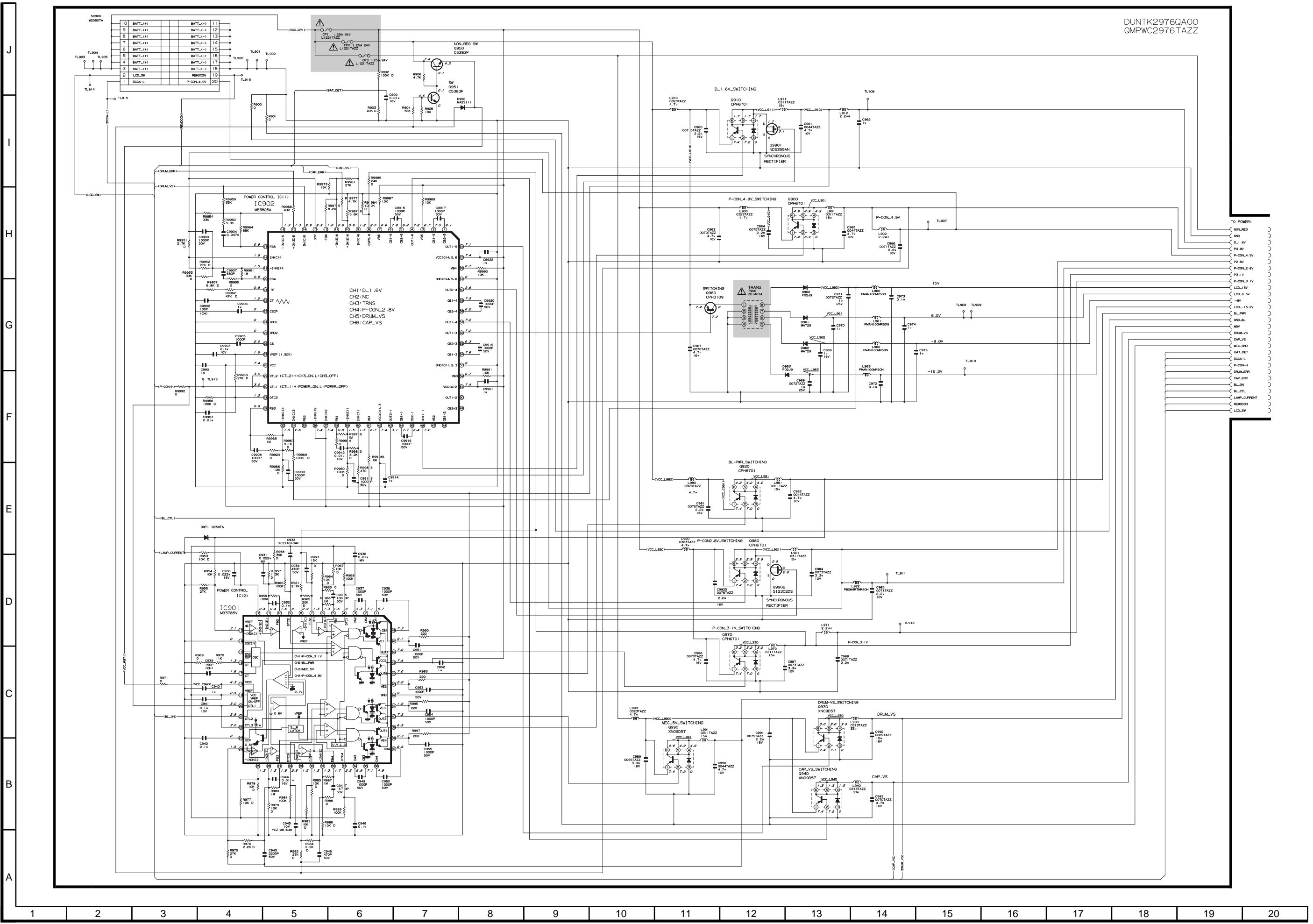
14-5. SUPER I/O SCHEMATIC DIAGRAM

REC PB 1-1



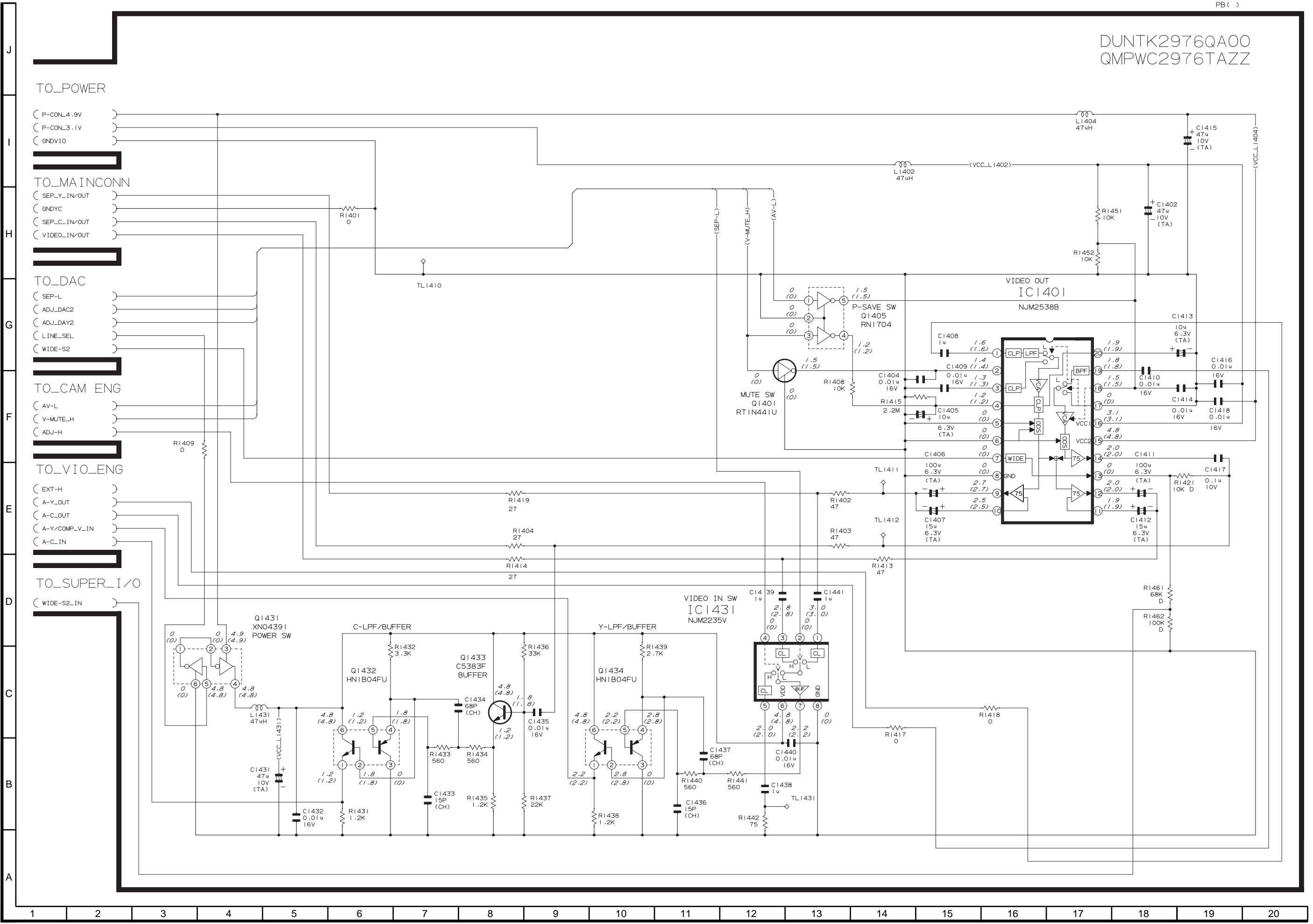
14-6. POWER2 SCHEMATIC DIAGRAM

DUNTK2976QA00
QMPWC2976TAZZ

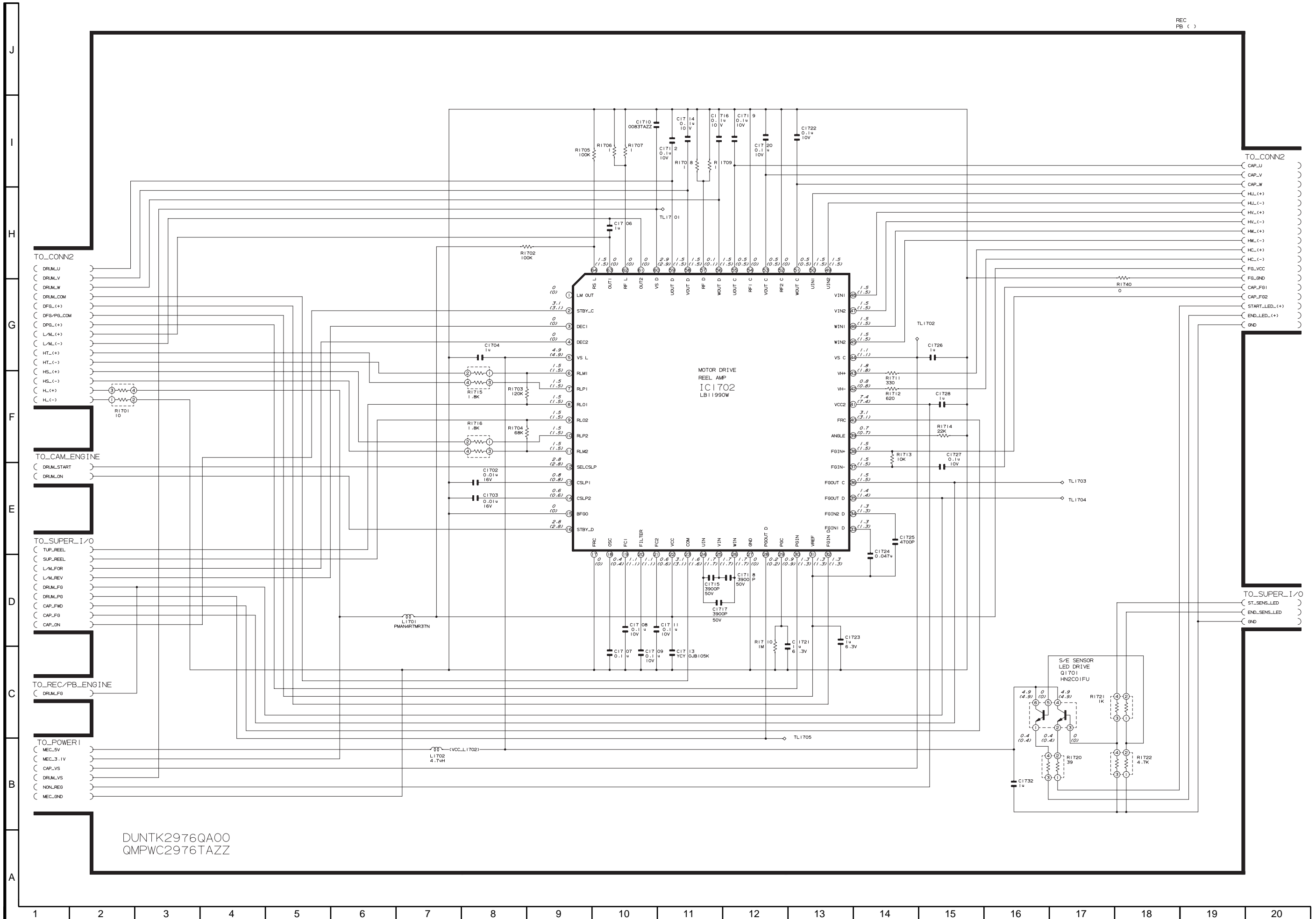


14-7. VIDEO I/O SCHEMATIC DIAGRAM

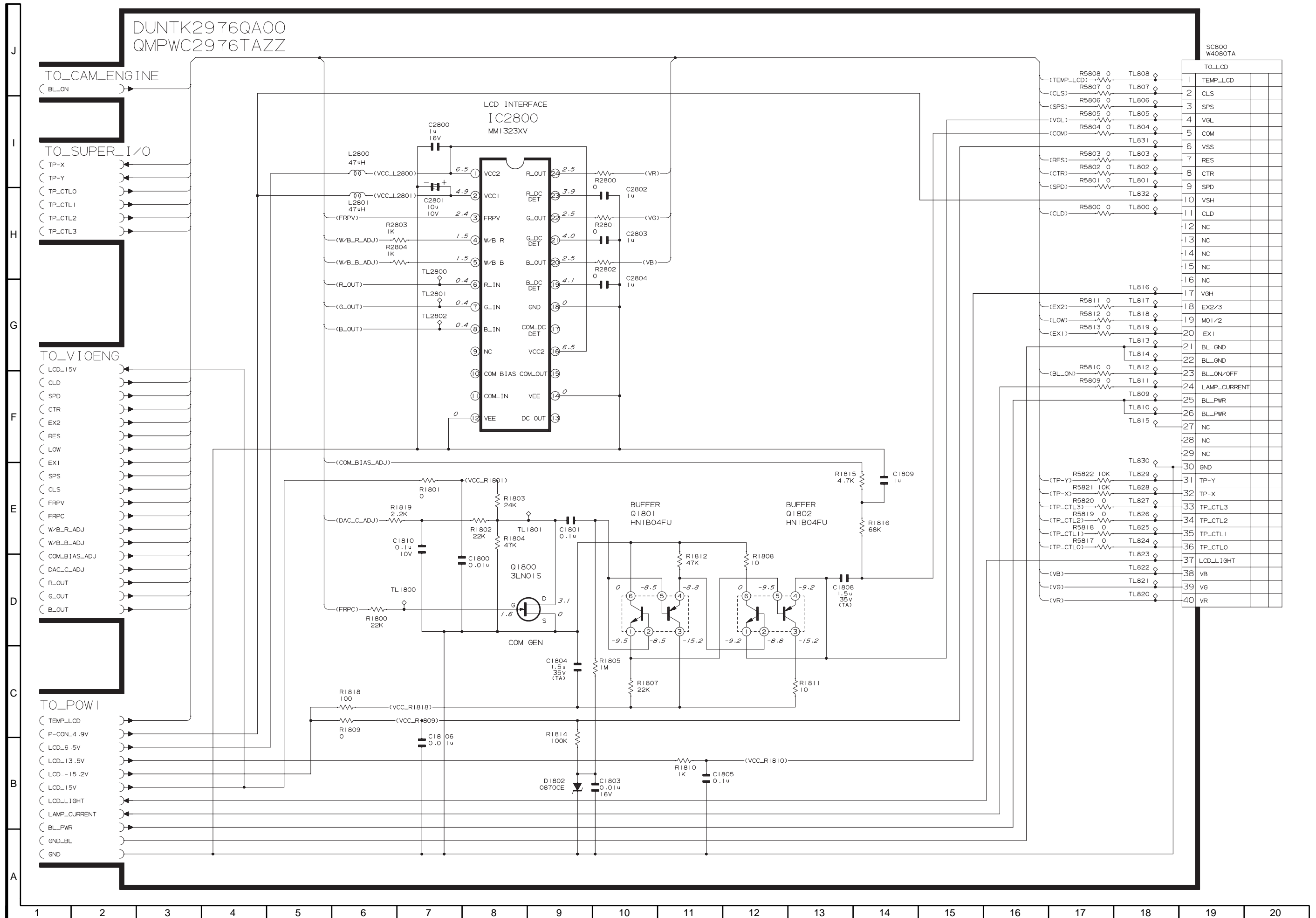
DUNTK2976QA00
QMPWC2976TAZZ



14-8. MOTOR DRIVER SCHEMATIC DIAGRAM



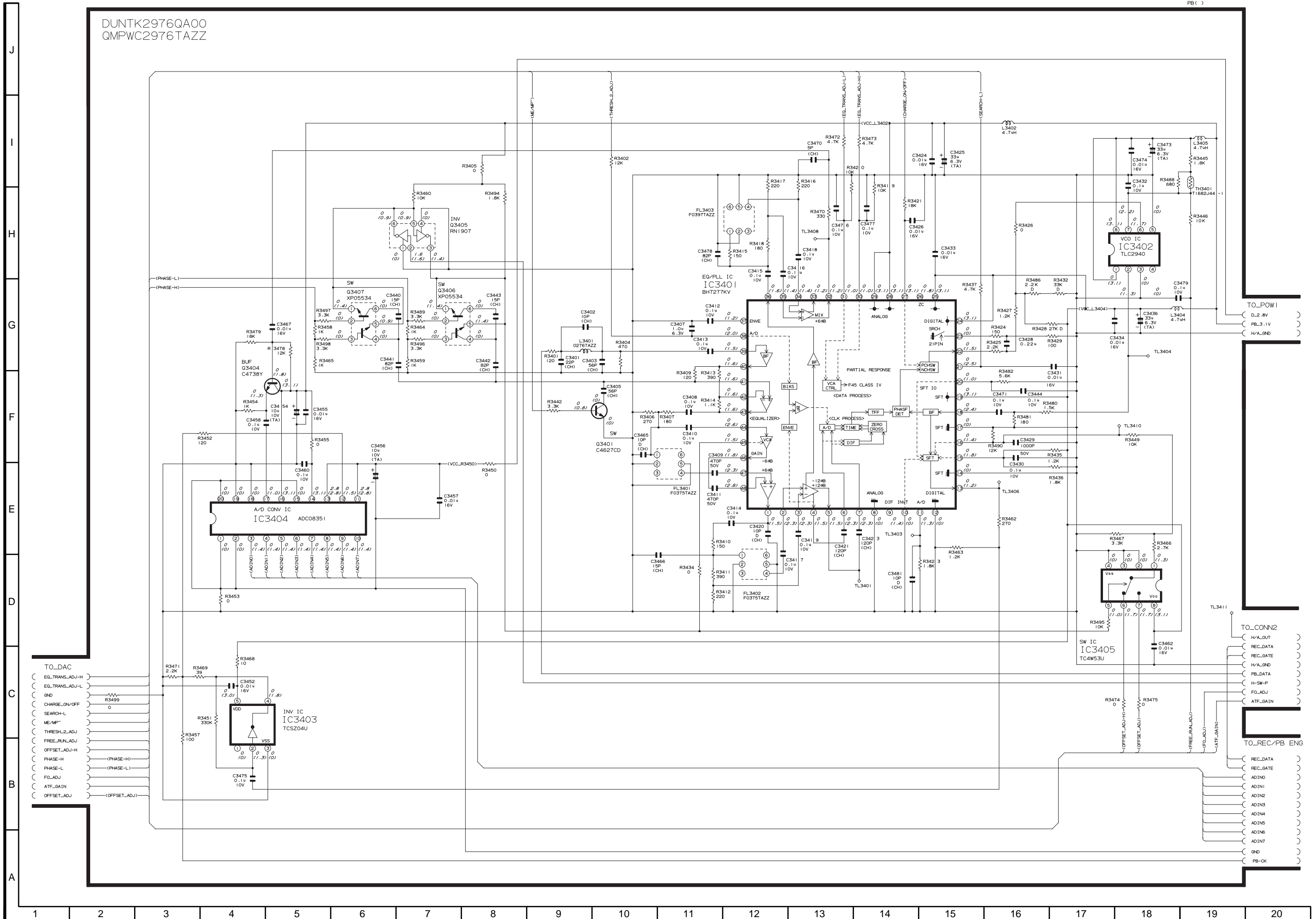
14-10. LCD DISPLAY SCHEMATIC DIAGRAM



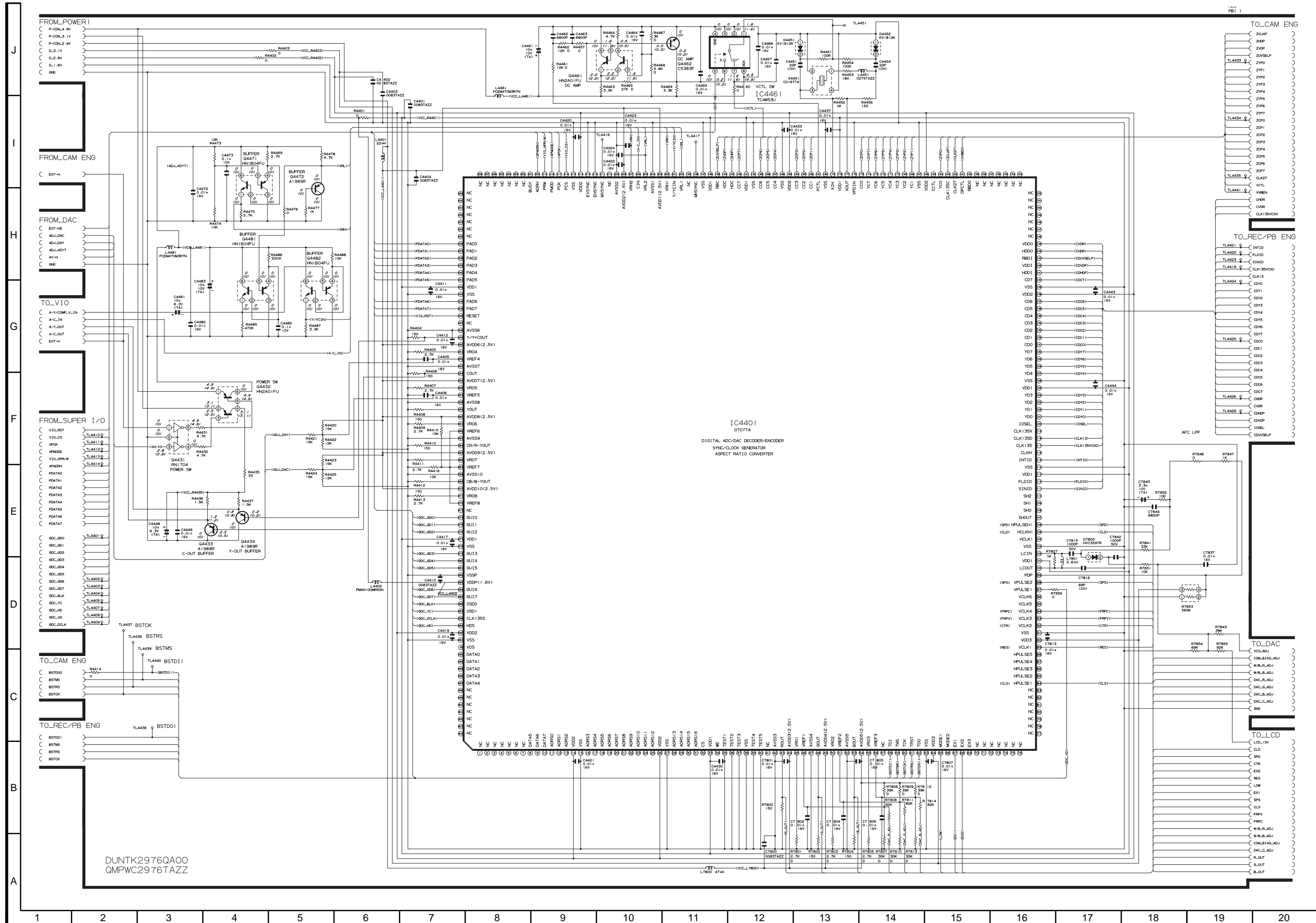
14-11. EQ/PLL SCHEMATIC DIAGRAM

DUNTK2976QA00
QMPWC2976TAZZ

PB ()

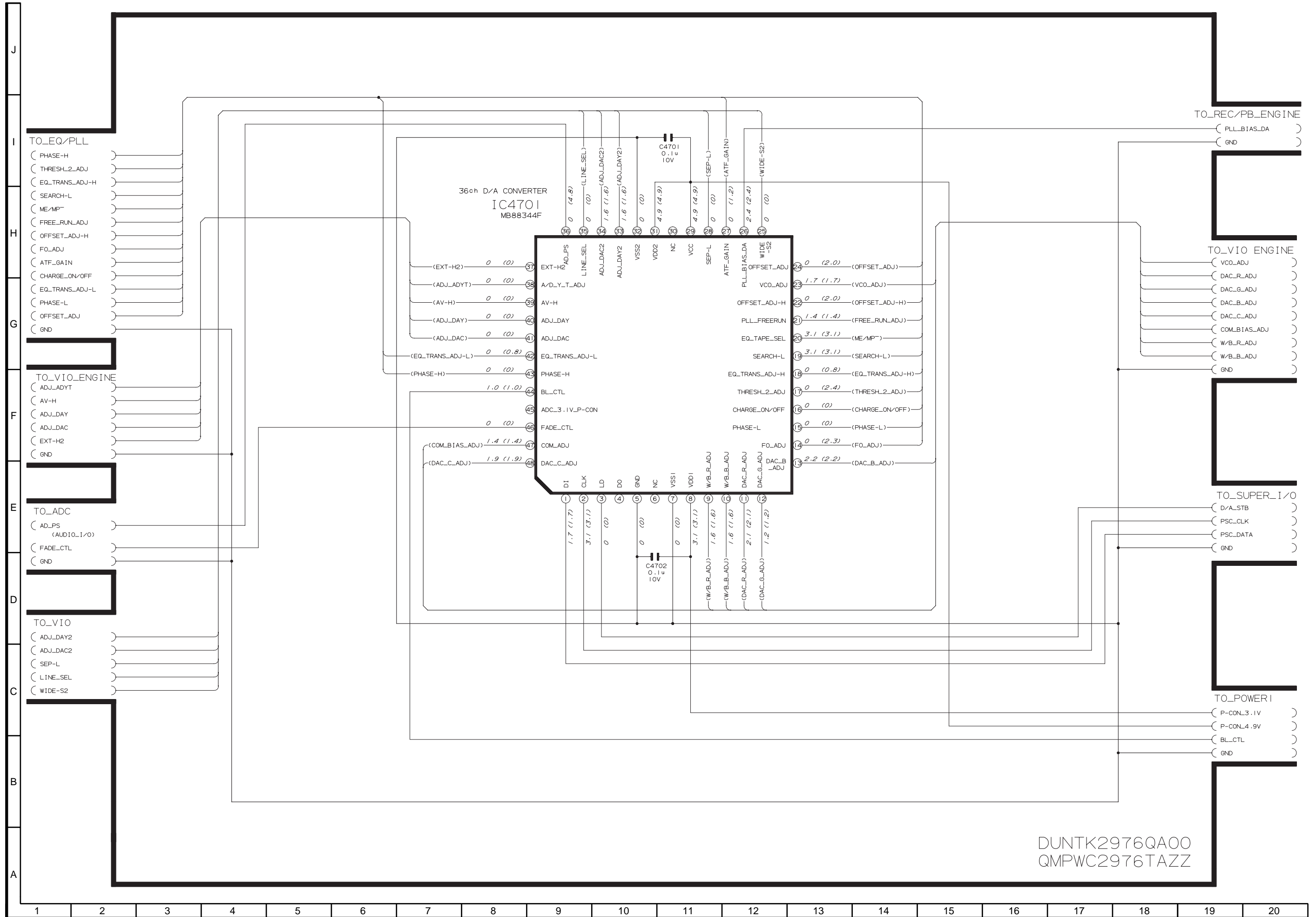


14-12. VIDEO I/O ENGINE SCHEMATIC DIAGRAM



DUNTK2976QA00
QMPWC2976TAZZ

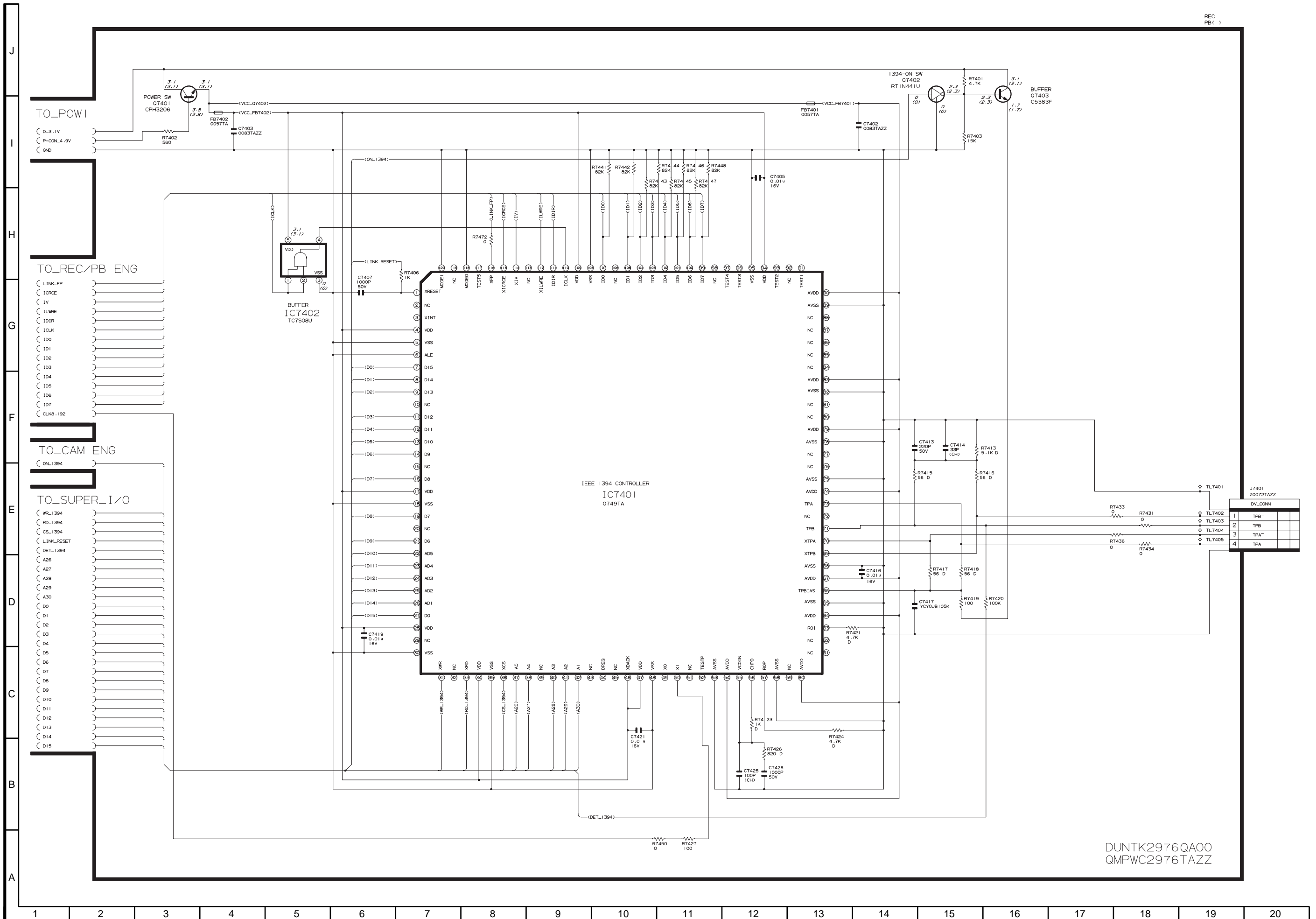
14-13. DAC SCHEMATIC DIAGRAM



DUNTK2976QA00
QMPWC2976TAZZ

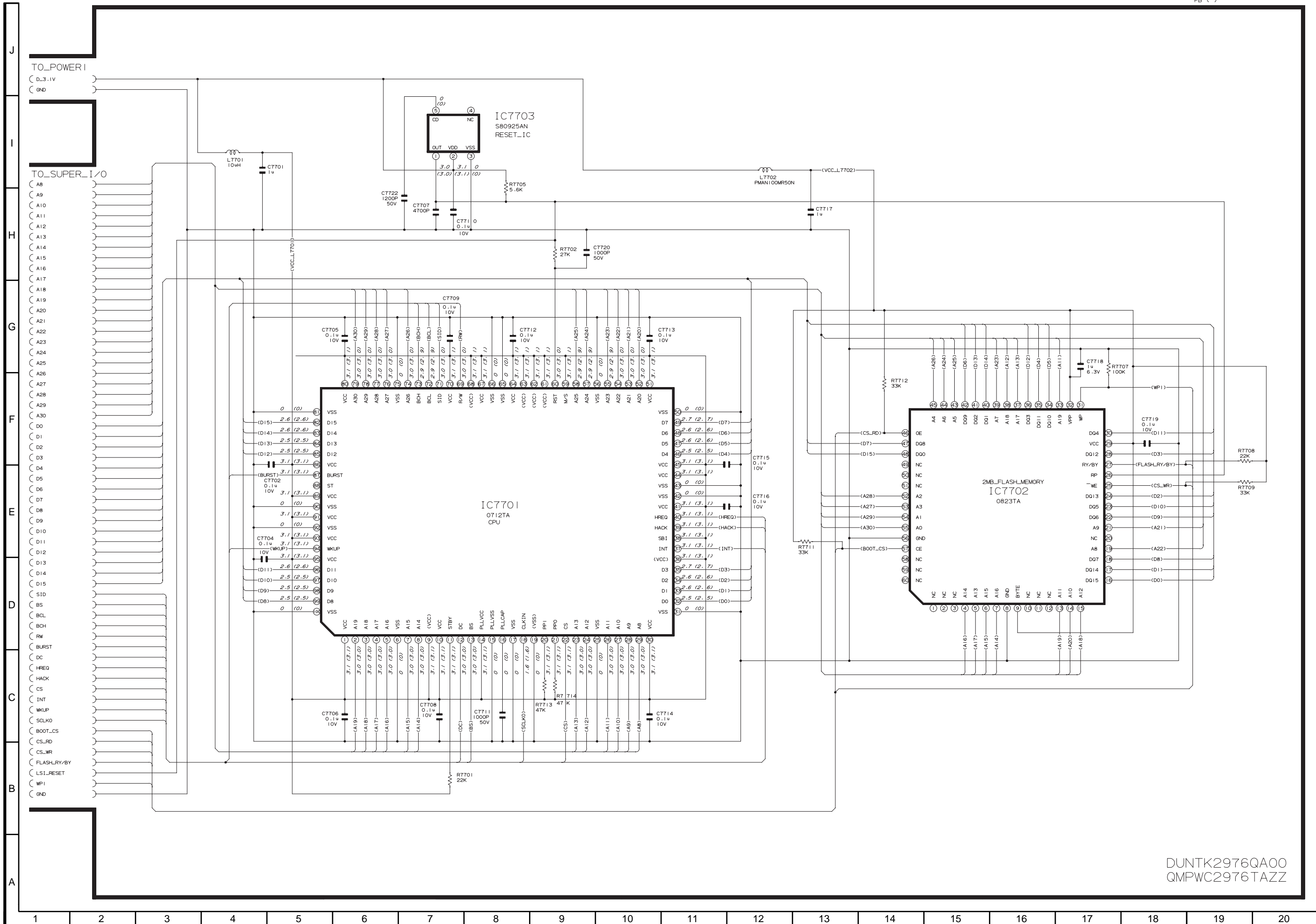
14-14. DIGITAL I/F SCHEMATIC DIAGRAM

REC
PB ()



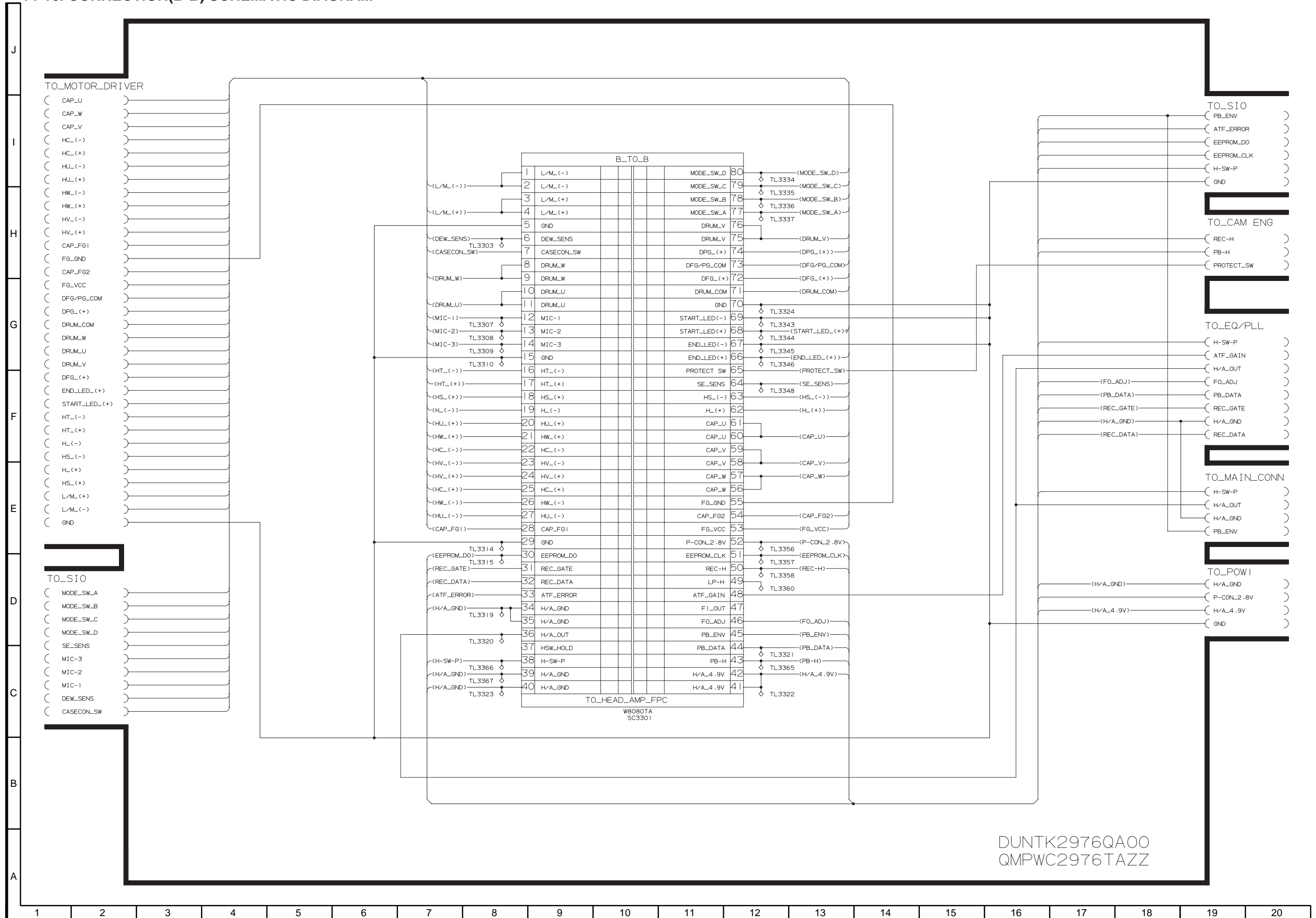
DUNTK2976QA00
QMPWC2976TAZZ

14-15. CC ENGINE SCHEMATIC DIAGRAM



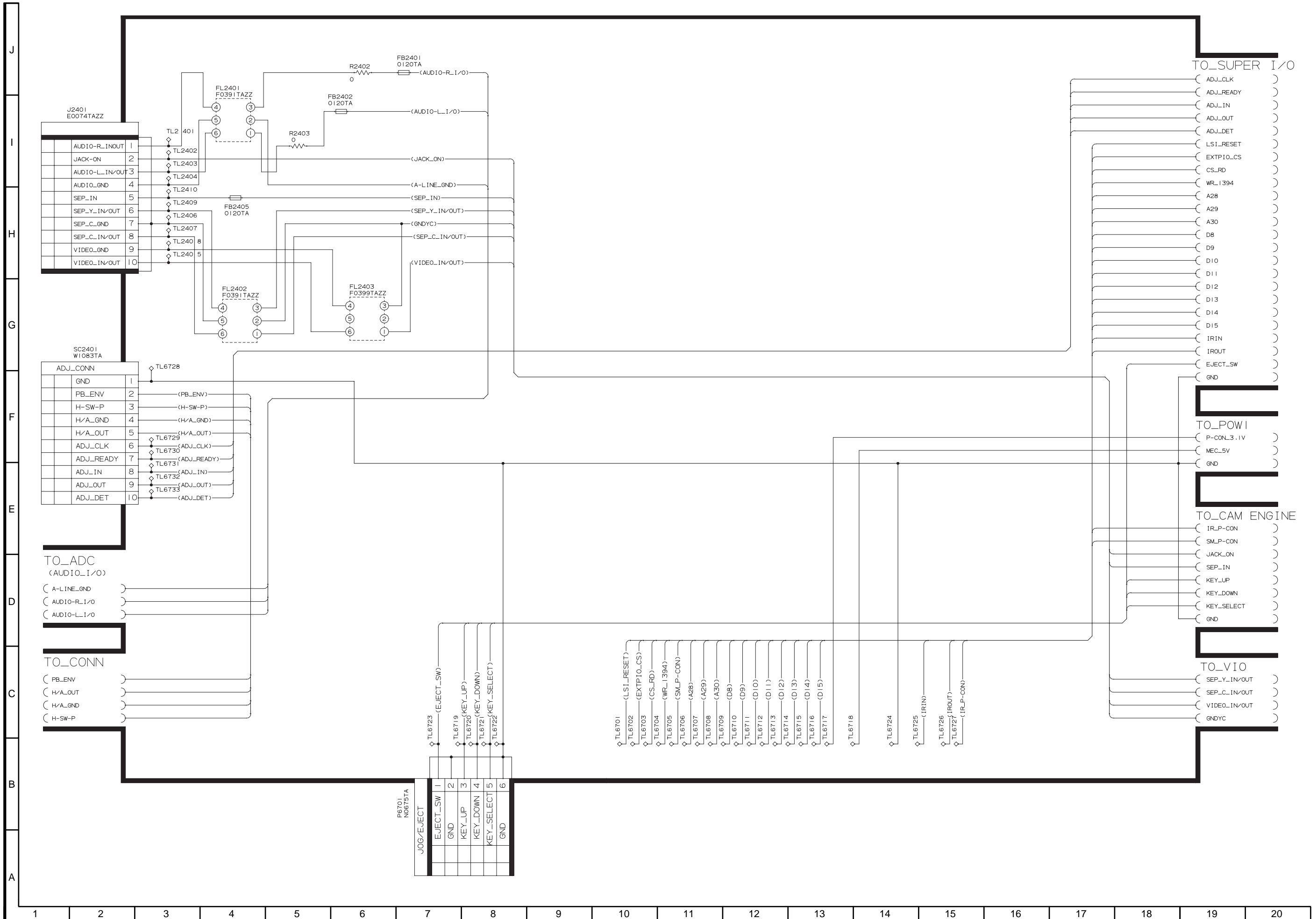
DUNTK2976QA00
QMPWC2976TAZZ

14-16. CONNECTION(B-B) SCHEMATIC DIAGRAM

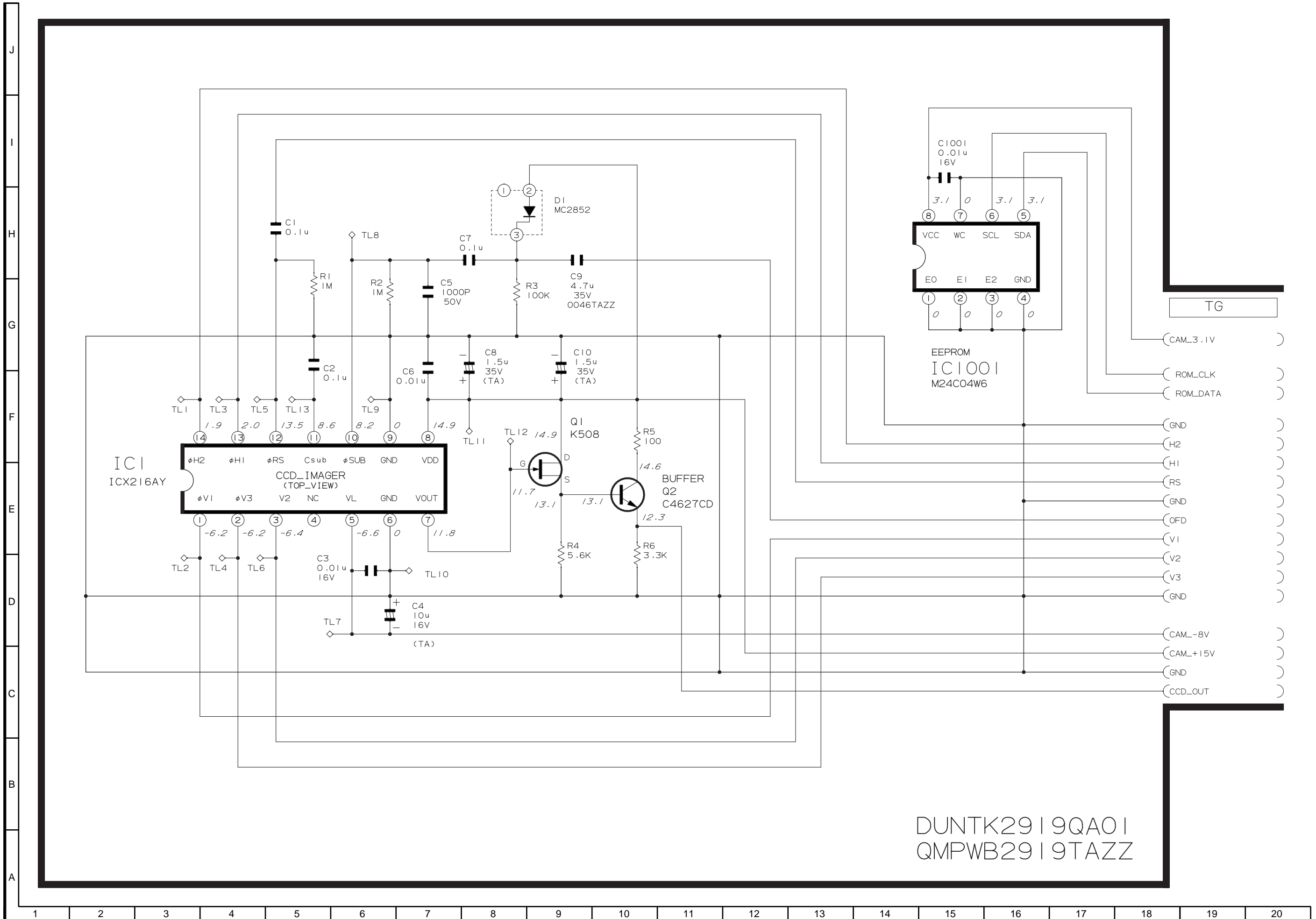


DUNTK2976QA00
QMPWC2976TAZZ

14-17. MAIN CONNECTION SCHEMATIC DIAGRAM

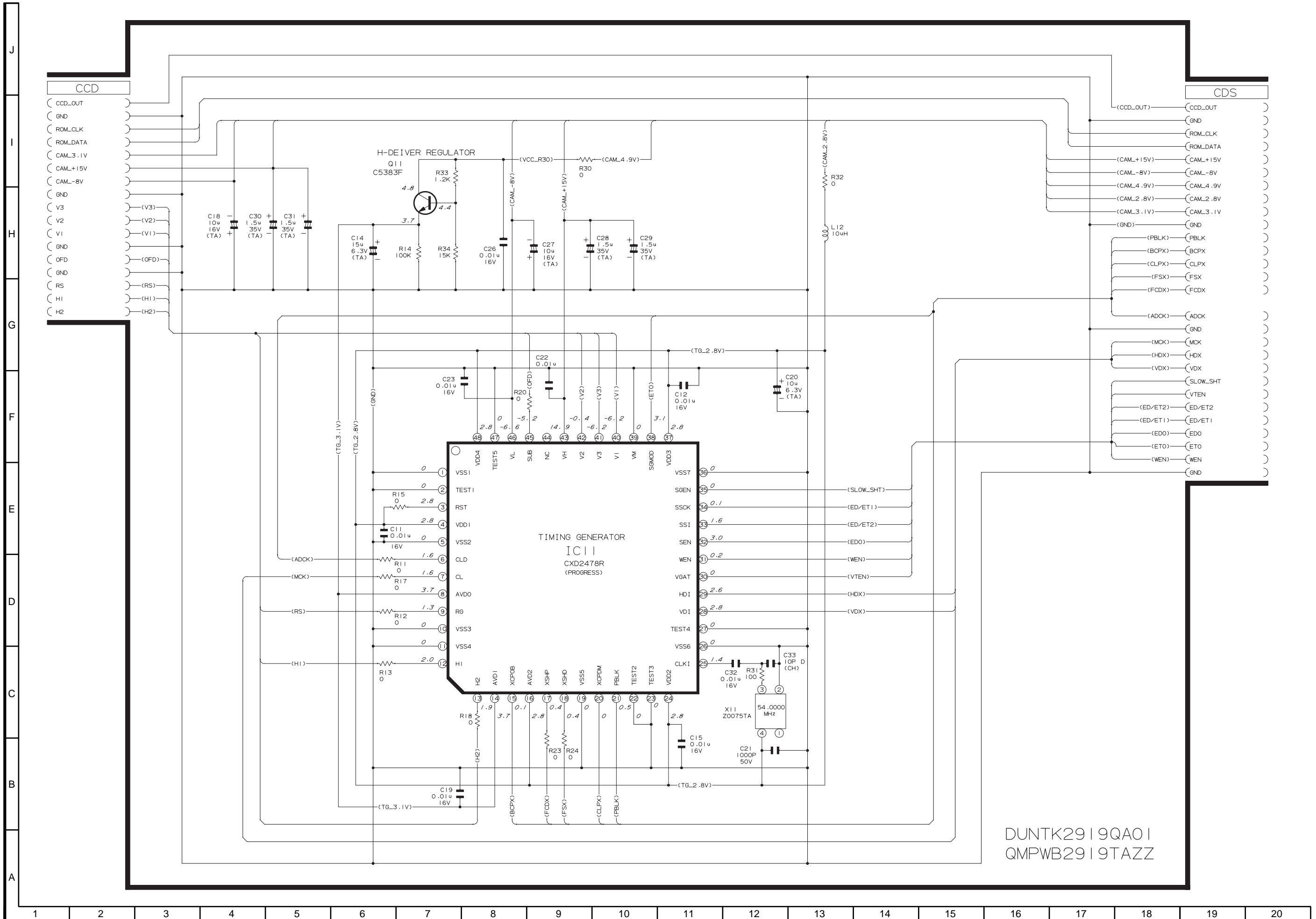


14-18. CCD SCHEMATIC DIAGRAM



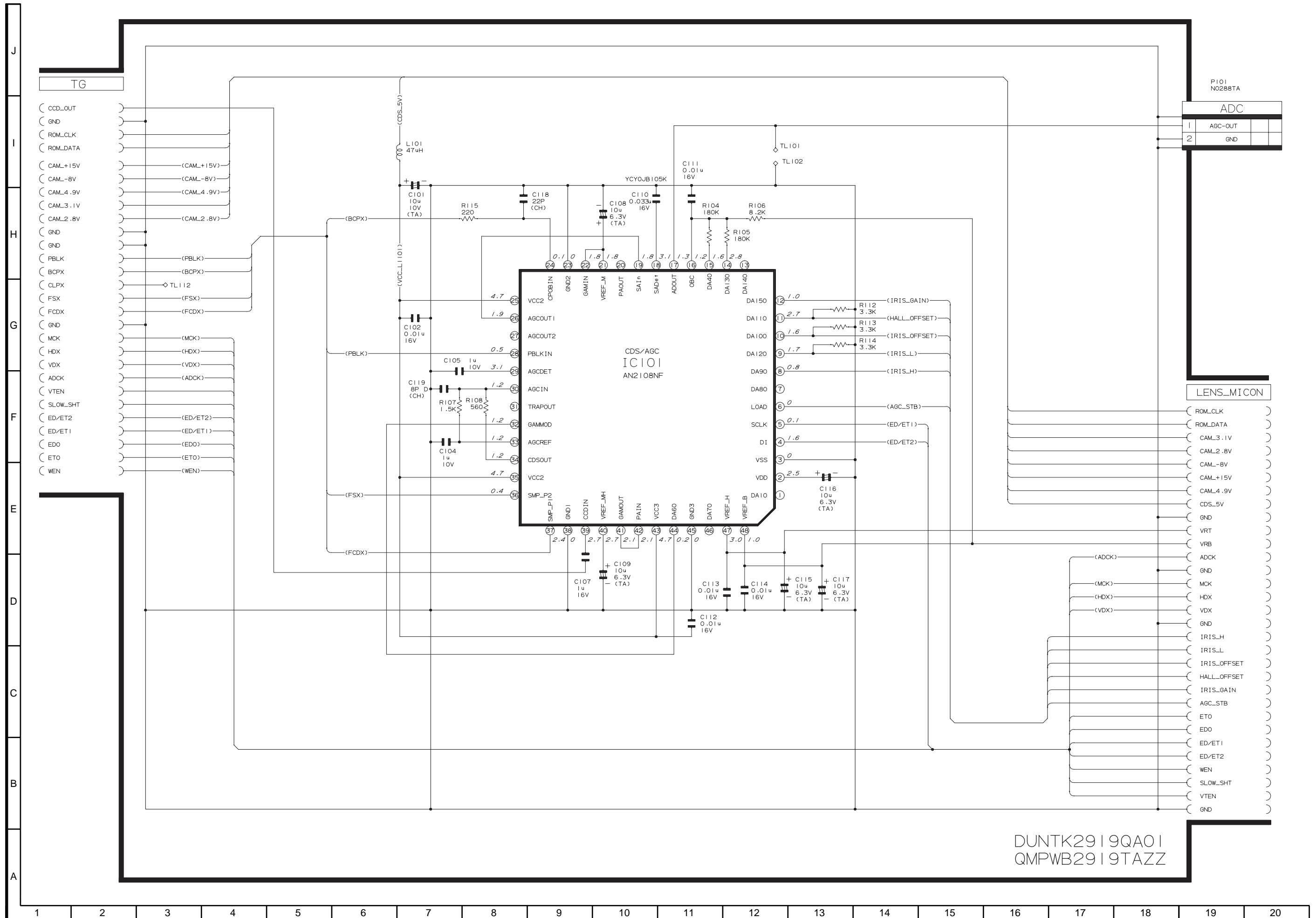
DUNTK29 | 9QA0 |
QMPWB29 | 9TAZZ

14-19. TG SCHEMATIC DIAGRAM

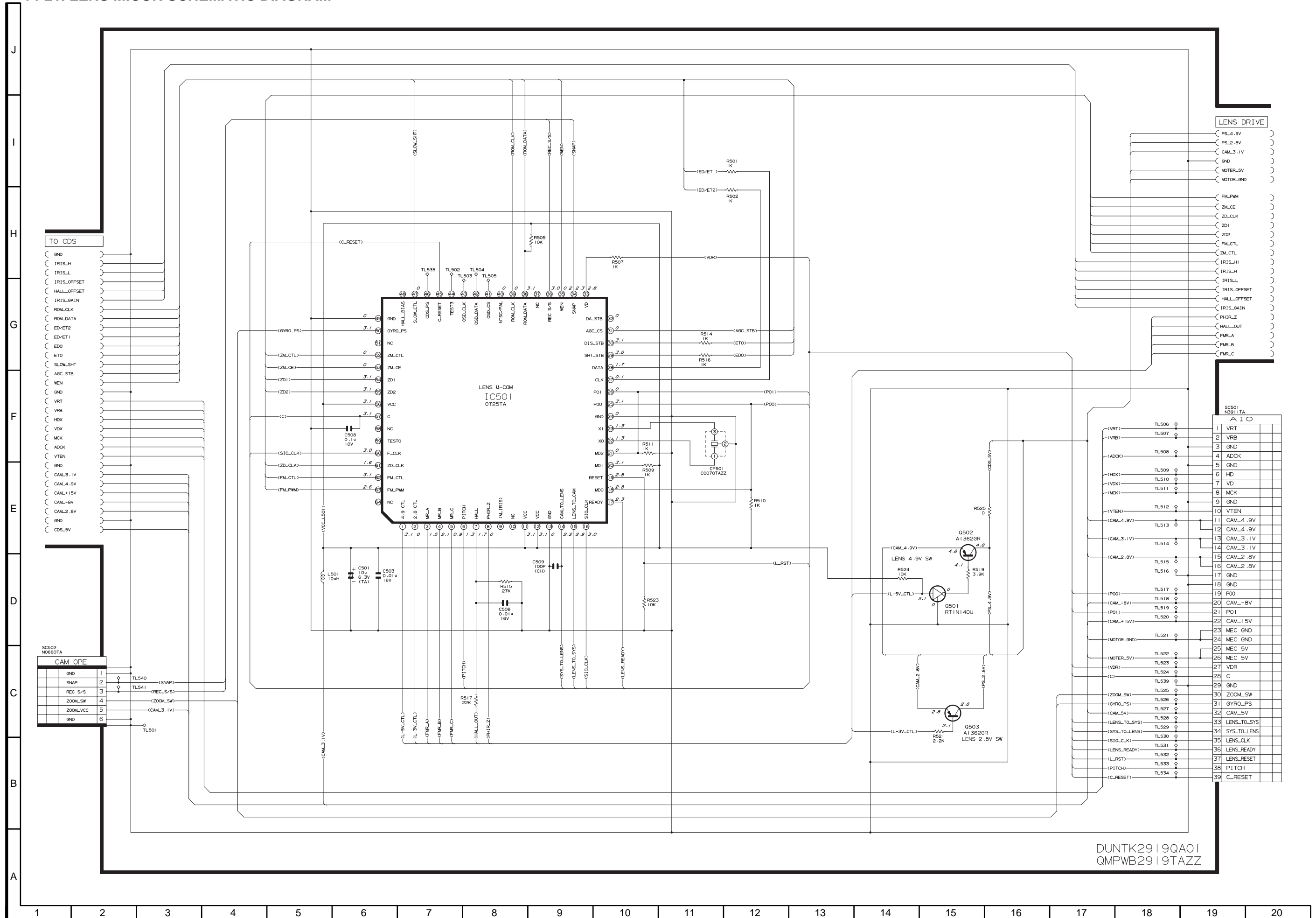


DUNTK29I9QA0I
QMPWB29I9TAZZ

14-20. CDS SCHEMATIC DIAGRAM



14-21. LENS MICON SCHEMATIC DIAGRAM



TO CDS

- (GND)
- (IRIS_H)
- (IRIS_L)
- (IRIS_OFFSET)
- (HALL_OFFSET)
- (IRIS_GAIN)
- (ROM_CLK)
- (ROM_DATA)
- (ED/ET2)
- (ED/ET1)
- (EDO)
- (ETO)
- (SLOW_SHT)
- (AGC_STB)
- (GND)
- (VRT)
- (VRB)
- (HD)
- (VDX)
- (MCK)
- (ADCK)
- (VTEN)
- (GND)
- (CAM_3_1V)
- (CAM_4_9V)
- (CAM_4_15V)
- (CAM_2_8V)
- (CAM_2_8V)
- (GND)
- (CDS_5V)

SC502 N06601A

CAM OPE

- | | | |
|------------|---|------------|
| (GND) | 1 | TL540 |
| (SNAP) | 2 | (SNAP) |
| (REC_S/S) | 3 | TL541 |
| (ZOOM_SW) | 4 | (ZOOM_SW) |
| (ZOOM_VCC) | 5 | (CAM_3_1V) |
| (GND) | 6 | TL501 |

LENS DRIVE

- (PS_4_9V)
- (PS_2_8V)
- (CAM_3_1V)
- (GND)
- (MOTOR_5V)
- (MOTOR_GND)
- (FIL_PWM)
- (ZML_CE)
- (ZD_CLK)
- (ZD1)
- (ZD2)
- (FIL_CTL)
- (ZML_CTL)
- (IRIS_HI)
- (IRIS_L)
- (IRIS_OFFSET)
- (HALL_OFFSET)
- (IRIS_GAIN)
- (PHIR_L)
- (HALL_OUT)
- (FIL_A)
- (FIL_B)
- (FIL_C)

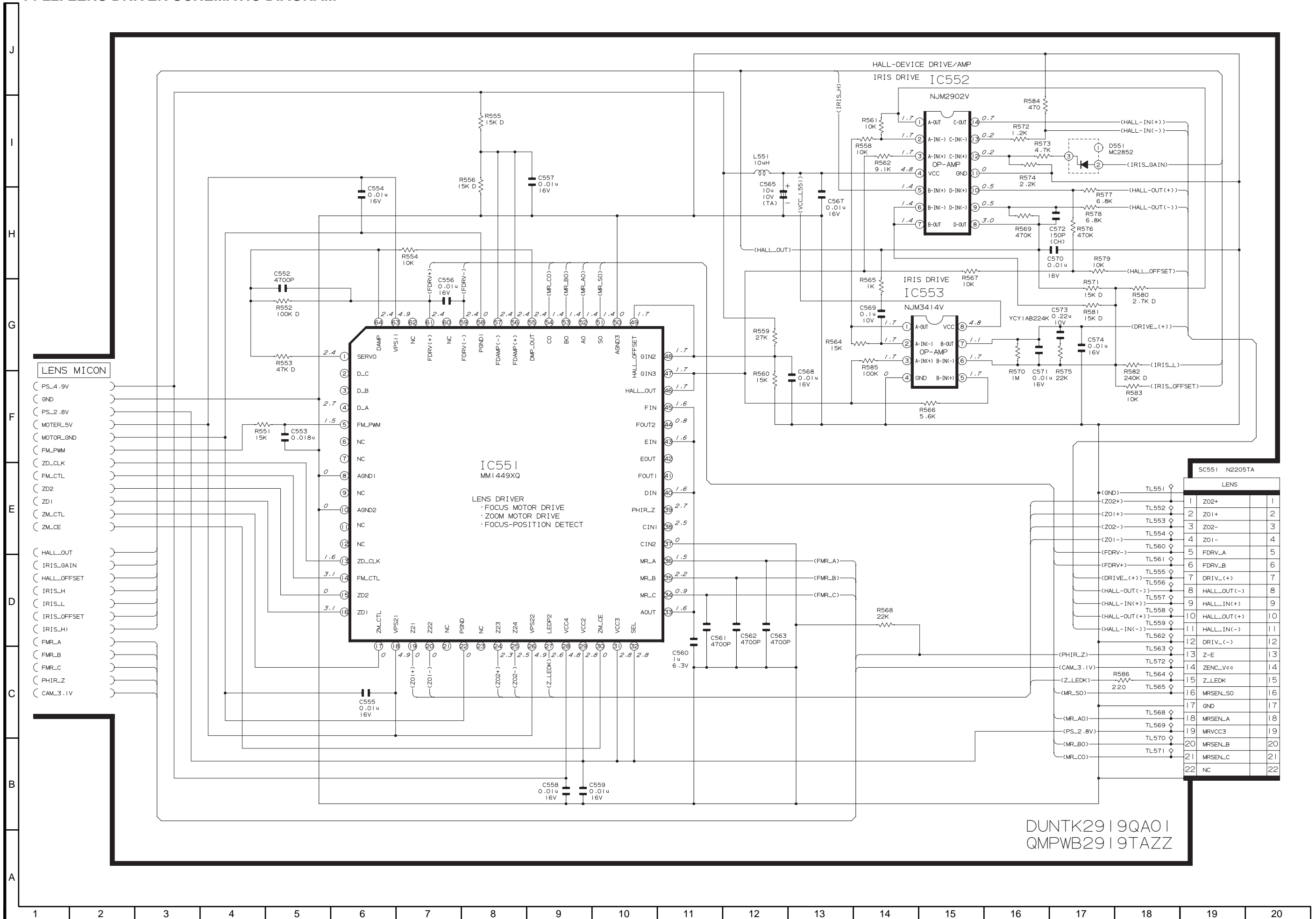
SC501 N5911TA

A I O

- | | | |
|----|--------------|-------|
| 1 | VRT | TL506 |
| 2 | VRB | TL507 |
| 3 | GND | |
| 4 | ADCK | TL508 |
| 5 | GND | |
| 6 | HD | TL509 |
| 7 | VD | TL510 |
| 8 | MCK | TL511 |
| 9 | GND | |
| 10 | VTEN | TL512 |
| 11 | CAM_4_9V | TL513 |
| 12 | CAM_4_9V | TL514 |
| 13 | CAM_3_1V | TL515 |
| 14 | CAM_3_1V | TL516 |
| 15 | CAM_2_8V | TL517 |
| 16 | CAM_2_8V | TL518 |
| 17 | GND | |
| 18 | GND | |
| 19 | P00 | TL519 |
| 20 | CAM_8V | TL520 |
| 21 | P01 | TL521 |
| 22 | CAM_15V | TL522 |
| 23 | MEC_GND | TL523 |
| 24 | MEC_GND | TL524 |
| 25 | MEC_5V | TL525 |
| 26 | MEC_5V | TL526 |
| 27 | VDR | TL527 |
| 28 | C | TL528 |
| 29 | GND | |
| 30 | ZOOM_SW | TL529 |
| 31 | GYRO_PS | TL530 |
| 32 | CAM_5V | TL531 |
| 33 | LENS_TO_LENS | TL532 |
| 34 | LENS_TO_LENS | TL533 |
| 35 | LENS_CLK | TL534 |
| 36 | LENS_READY | |
| 37 | LENS_RESET | |
| 38 | PITCH | |
| 39 | C_RESET | |

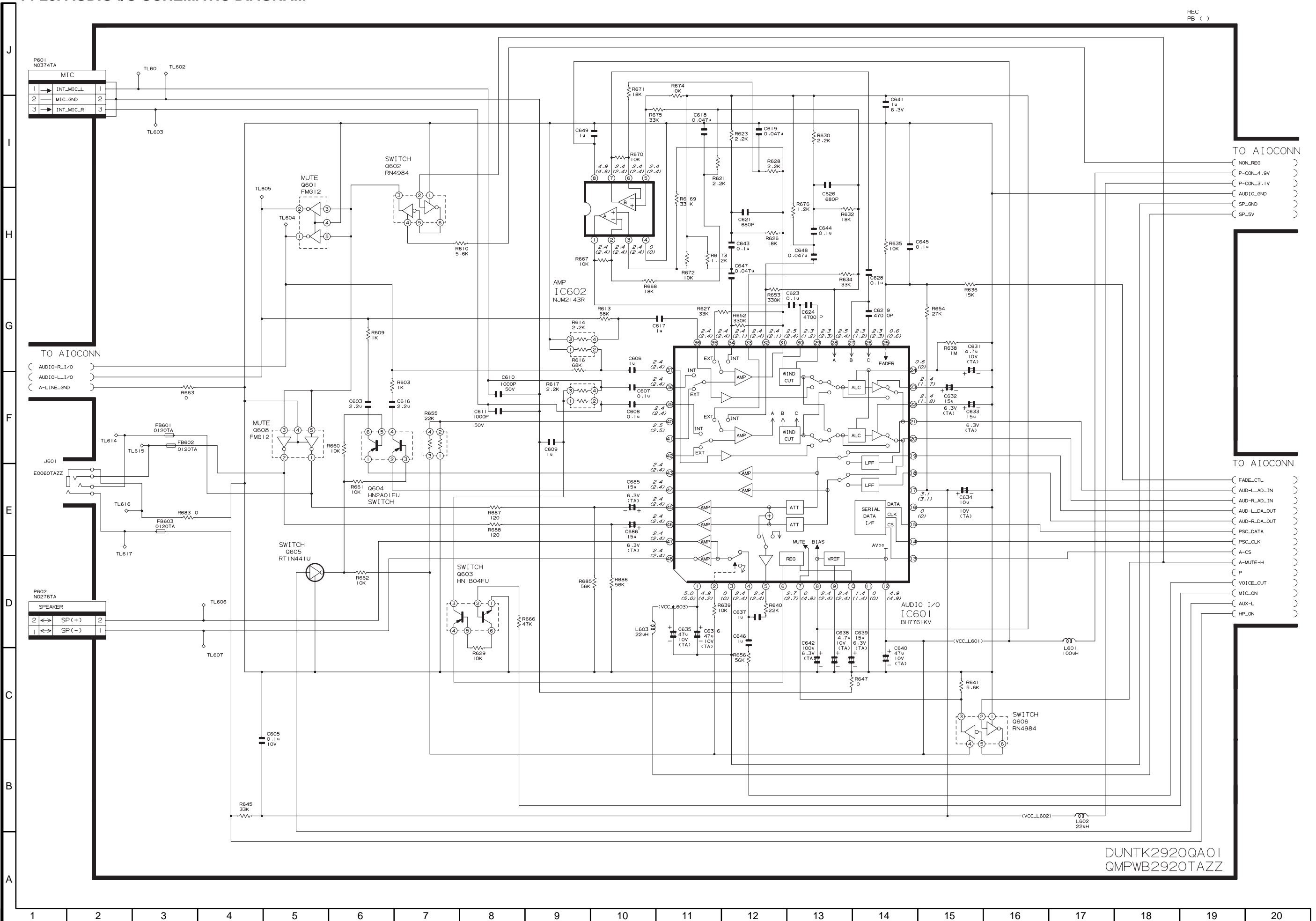
DUNT2919QA01
QMPWB2919TAZZ

14-22. LENS DRIVER SCHEMATIC DIAGRAM



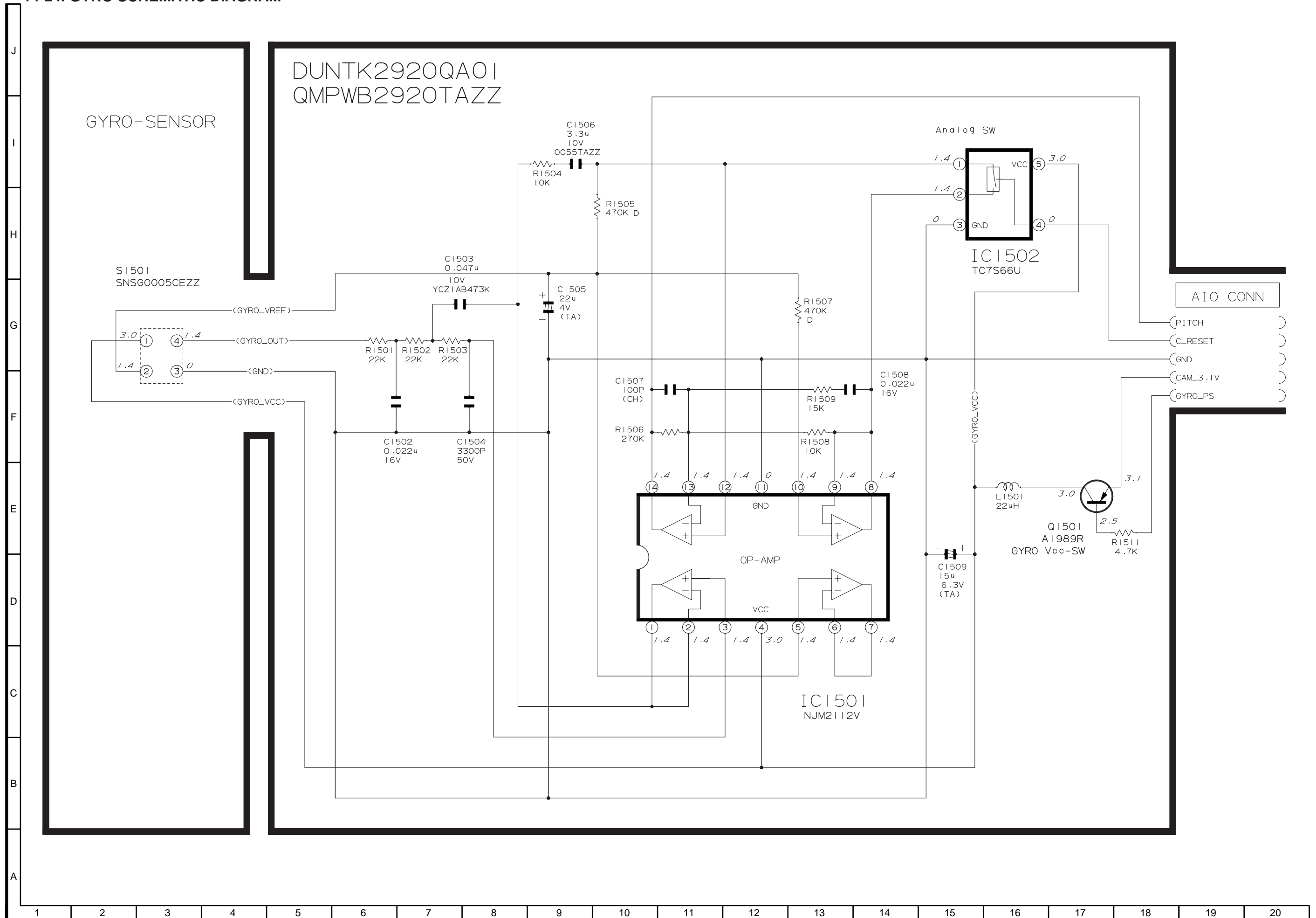
DUNTK29 I9QA0 I
 QMPWB29 I9TAZZ

14-23. AUDIO I/O SCHEMATIC DIAGRAM

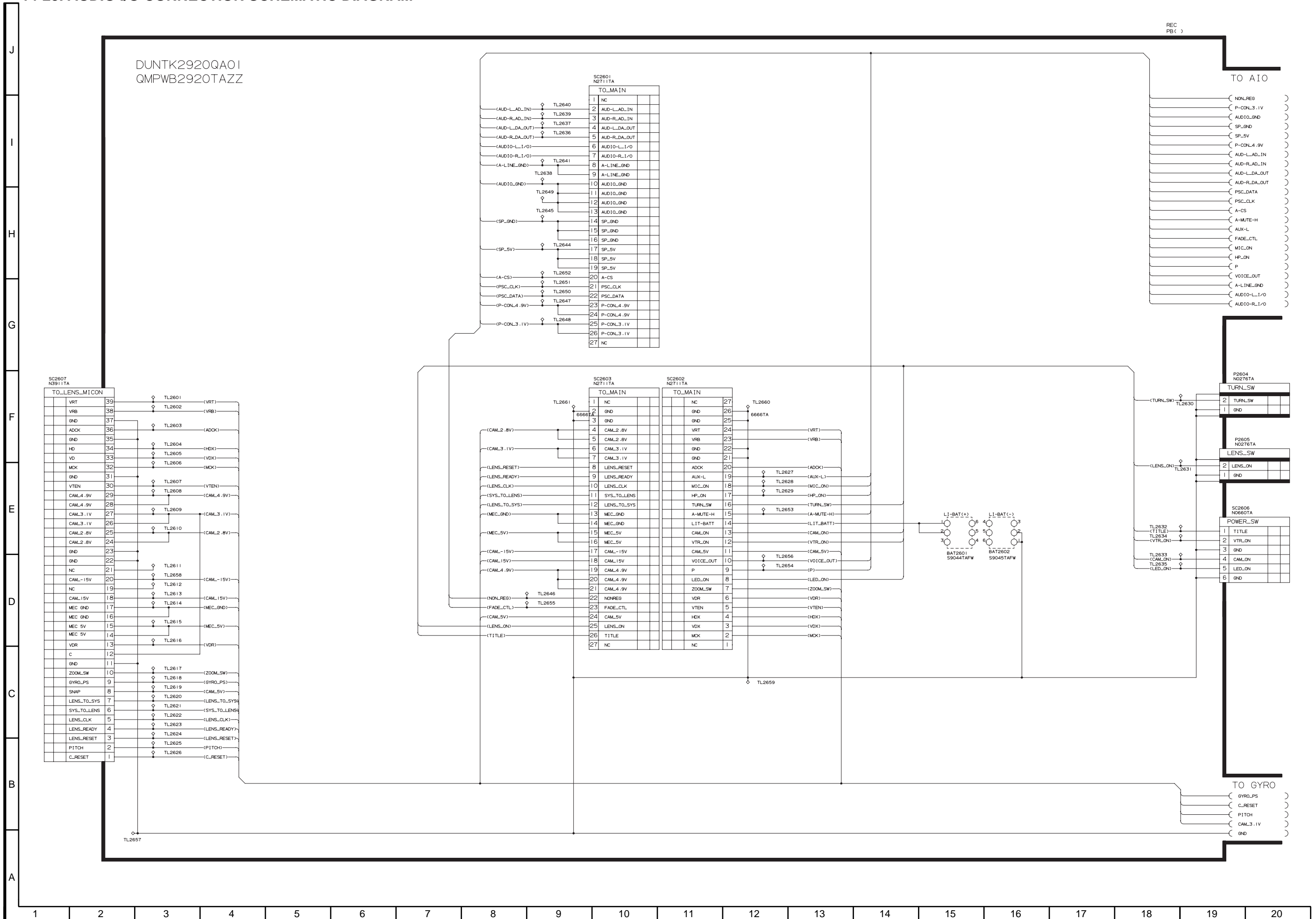


DUNTK2920QA01
QMPWB2920TAZZ

14-24. GYRO SCHEMATIC DIAGRAM

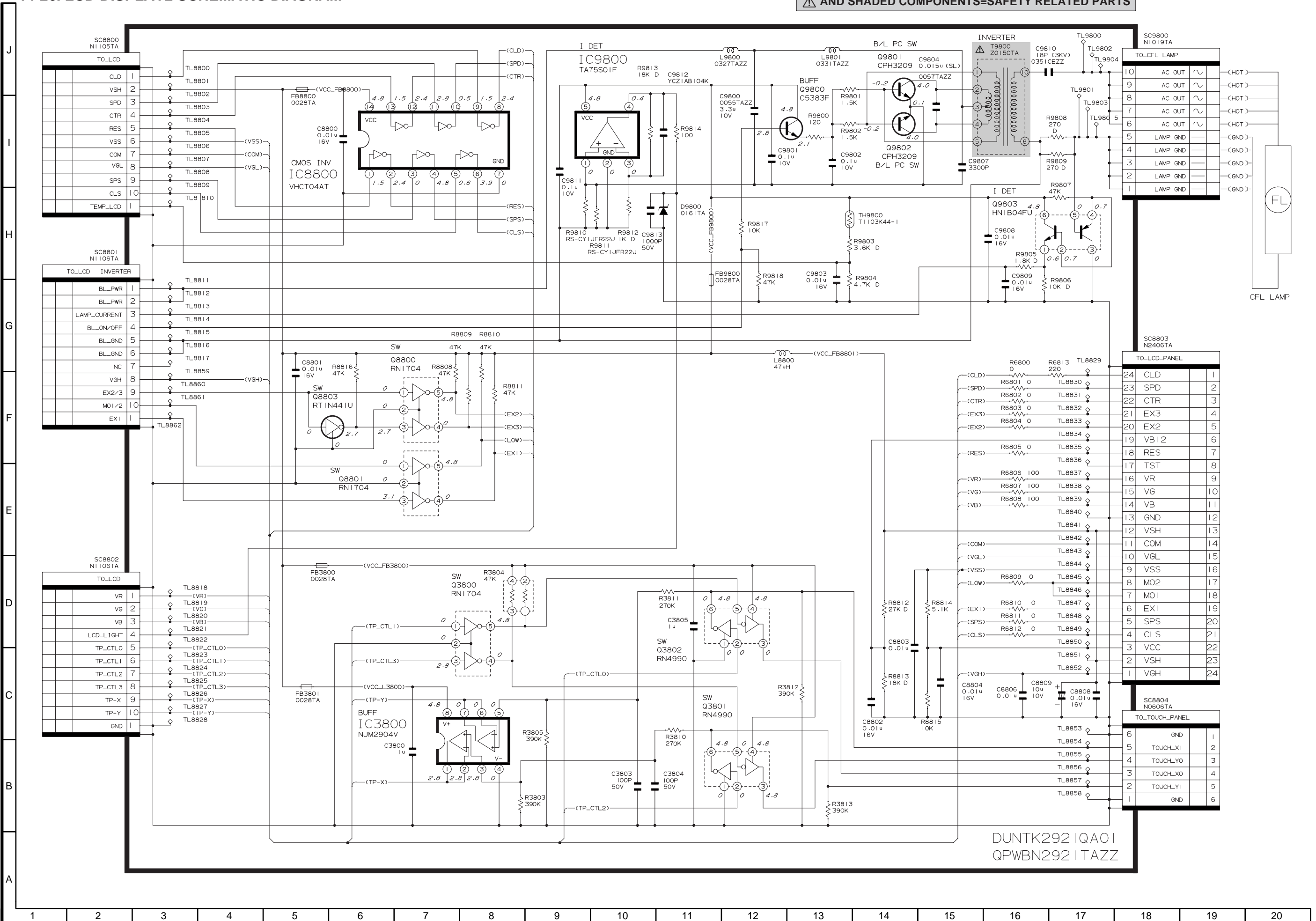


14-25. AUDIO I/O CONNECTION SCHEMATIC DIAGRAM



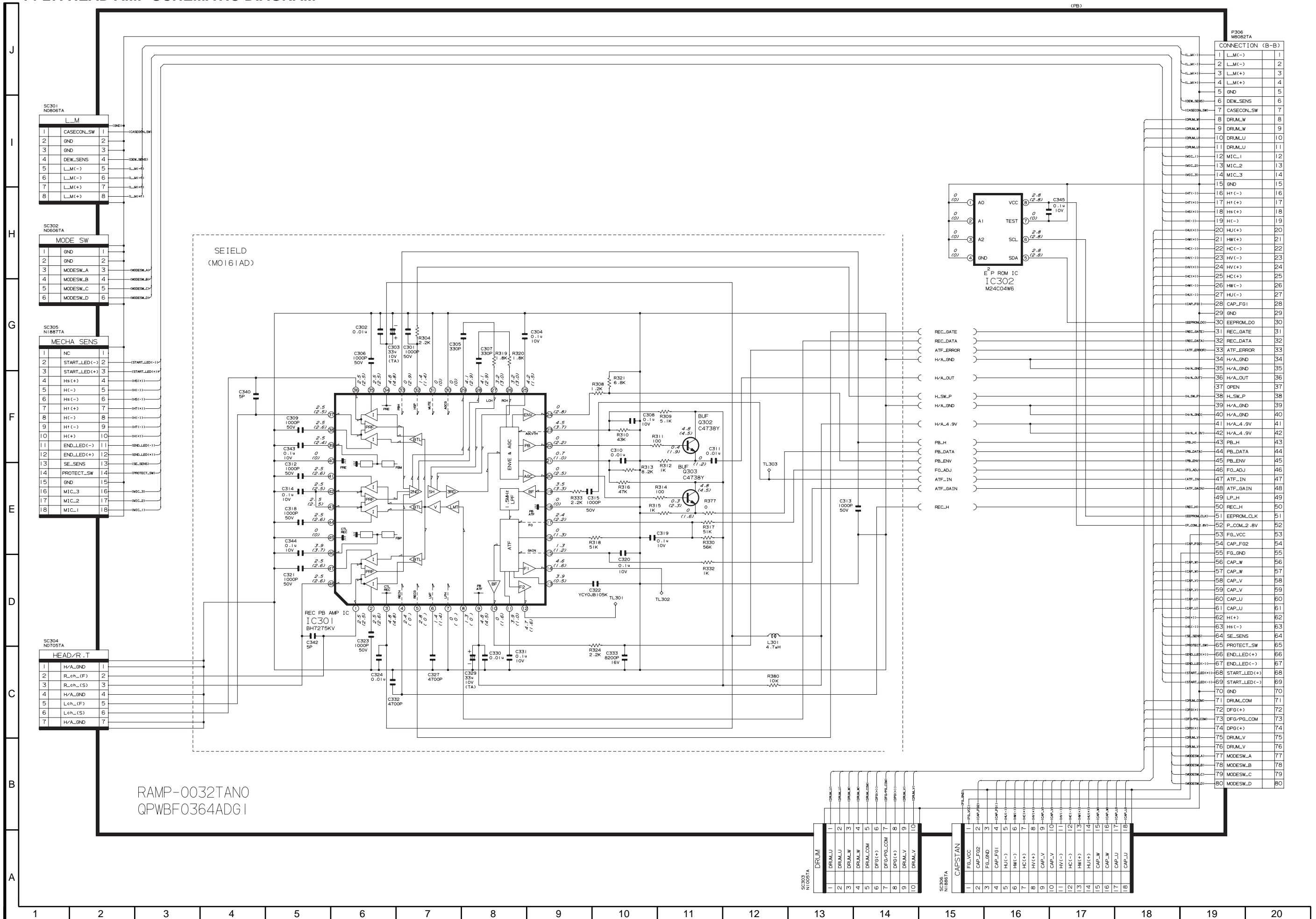
14-26. LCD DISPLAY2 SCHEMATIC DIAGRAM

⚠ AND SHADED COMPONENTS=SAFETY RELATED PARTS



DUNTK292 IQA01
QPWBN292 I TAZZ

14-27. HEAD AMP SCHEMATIC DIAGRAM



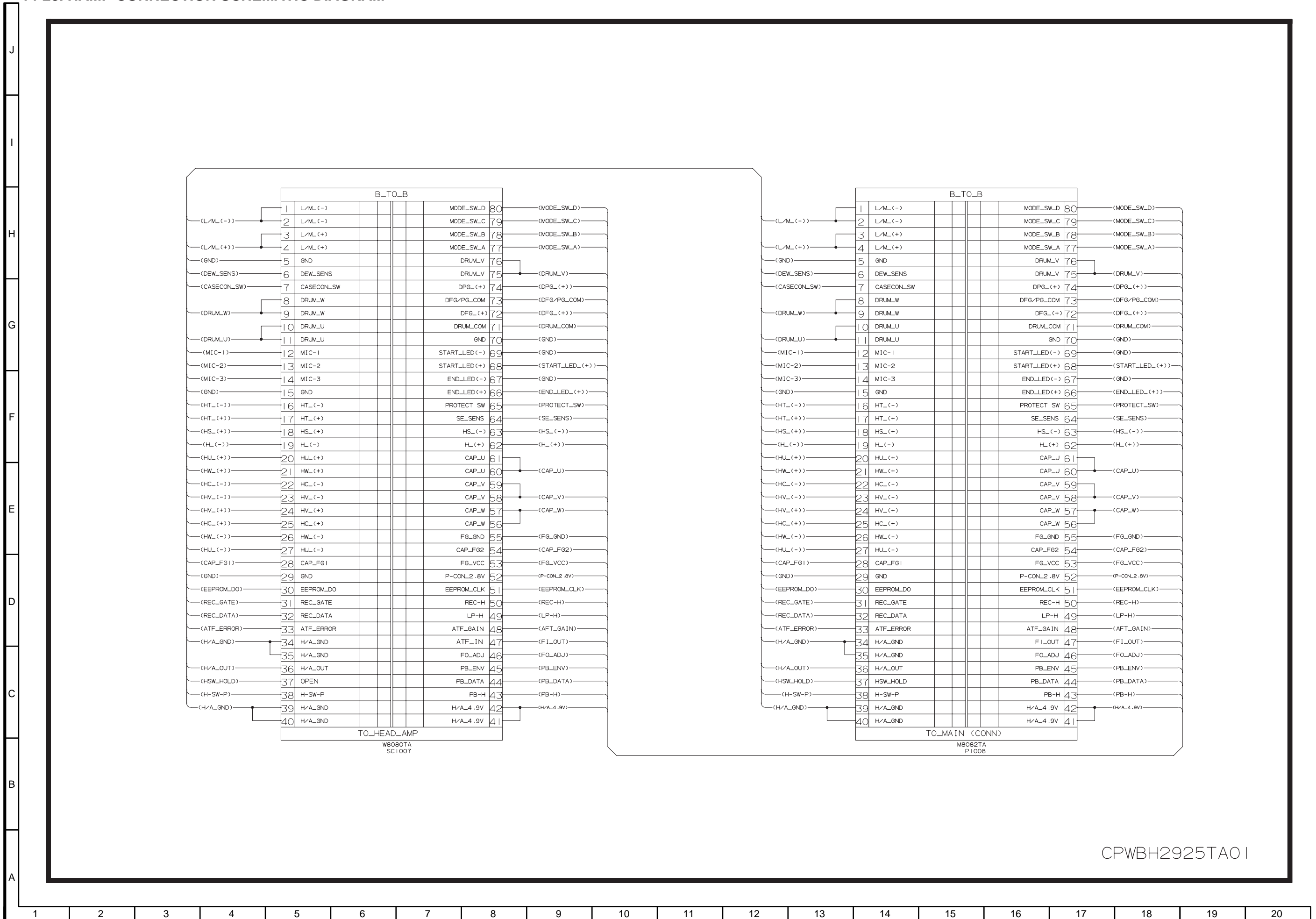
RAMP-0032TANO
QPWF0364ADG1

P306 M8082TA		CONNECTION (B-B)	
1	L_M(-)	1	L_M(-)
2	L_M(-)	2	L_M(-)
3	L_M(+)	3	L_M(+)
4	L_M(+)	4	L_M(+)
5	GND	5	GND
6	DEW_SENS	6	DEW_SENS
7	CASECON_SW	7	CASECON_SW
8	DRMLW	8	DRMLW
9	DRMLU	9	DRMLU
10	DRMLU	10	DRMLU
11	DRMLU	11	DRMLU
12	MIC_1	12	MIC_1
13	MIC_2	13	MIC_2
14	MIC_3	14	MIC_3
15	GND	15	GND
16	H1(-)	16	H1(-)
17	H1(+)	17	H1(+)
18	Hs(+)	18	Hs(+)
19	H(-)	19	H(-)
20	HJ(+)	20	HJ(+)
21	HV(+)	21	HV(+)
22	HC(-)	22	HC(-)
23	HV(-)	23	HV(-)
24	HV(+)	24	HV(+)
25	HC(+)	25	HC(+)
26	HW(-)	26	HW(-)
27	HJ(-)	27	HJ(-)
28	CAP_F01	28	CAP_F01
29	GND	29	GND
30	EEPROM_LOAD	30	EEPROM_LOAD
31	REC_GATE	31	REC_GATE
32	REC_DATA	32	REC_DATA
33	ATF_ERROR	33	ATF_ERROR
34	H/A_GND	34	H/A_GND
35	H/A_GND	35	H/A_GND
36	H/A_OUT	36	H/A_OUT
37	OPEN	37	OPEN
38	H/SW_P	38	H/SW_P
39	H/A_GND	39	H/A_GND
40	H/A_GND	40	H/A_GND
41	H/A_4.9V	41	H/A_4.9V
42	H/A_4.9V	42	H/A_4.9V
43	PBJ_H	43	PBJ_H
44	PBJ_DATA	44	PBJ_DATA
45	PBJ_ENV	45	PBJ_ENV
46	FO_ADJ	46	FO_ADJ
47	ATF_IN	47	ATF_IN
48	ATF_GAIN	48	ATF_GAIN
49	LP_H	49	LP_H
50	REC_H	50	REC_H
51	EEPROM_CLK	51	EEPROM_CLK
52	P_COM_2_8V	52	P_COM_2_8V
53	FG_VCC	53	FG_VCC
54	CAP_F02	54	CAP_F02
55	FG_GND	55	FG_GND
56	CAP_W	56	CAP_W
57	CAP_W	57	CAP_W
58	CAP_V	58	CAP_V
59	CAP_V	59	CAP_V
60	CAP_U	60	CAP_U
61	CAP_U	61	CAP_U
62	H(+)	62	H(+)
63	Hs(-)	63	Hs(-)
64	SE_SENS	64	SE_SENS
65	PROTECT_SW	65	PROTECT_SW
66	END_LED(+)	66	END_LED(+)
67	END_LED(-)	67	END_LED(-)
68	START_LED(+)	68	START_LED(+)
69	START_LED(-)	69	START_LED(-)
70	GND	70	GND
71	DRML_COM	71	DRML_COM
72	DFG(+)	72	DFG(+)
73	DFG_PG_COM	73	DFG_PG_COM
74	DFG(+)	74	DFG(+)
75	DRML_V	75	DRML_V
76	DRML_V	76	DRML_V
77	MODESW_A	77	MODESW_A
78	MODESW_B	78	MODESW_B
79	MODESW_C	79	MODESW_C
80	MODESW_D	80	MODESW_D

SC302 N1887TA		DRUM	
1	DRML_U	1	DRML_U
2	DRML_U	2	DRML_U
3	DRML_W	3	DRML_W
4	DRML_W	4	DRML_W
5	DRML_COM	5	DRML_COM
6	DFG(+)	6	DFG(+)
7	DFG_PG_COM	7	DFG_PG_COM
8	DFG(-)	8	DFG(-)
9	DRML_V	9	DRML_V
10	DRML_V	10	DRML_V

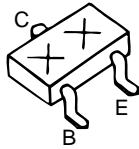
SC306 N1887TA		CAPSTAN	
1	FG_VCC	1	FG_VCC
2	CAP_F02	2	CAP_F02
3	FG_GND	3	FG_GND
4	CAP_F01	4	CAP_F01
5	HJ(-)	5	HJ(-)
6	HJ(+)	6	HJ(+)
7	HV(+)	7	HV(+)
8	HV(+)	8	HV(+)
9	HC(-)	9	HC(-)
10	CAP_V	10	CAP_V
11	CAP_V	11	CAP_V
12	HC(+)	12	HC(+)
13	HV(+)	13	HV(+)
14	HJ(+)	14	HJ(+)
15	CAP_W	15	CAP_W
16	CAP_W	16	CAP_W
17	CAP_U	17	CAP_U
18	CAP_U	18	CAP_U

14-28. HAMP CONNECTION SCHEMATIC DIAGRAM



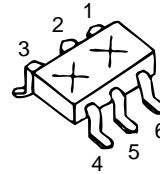
CPWBH2925TA01

15. SEMICONDUCTOR LEAD IDENTIFICATION



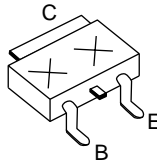
2SA1577R
2SA1774F
2SB12956
2SC4617B
2SC4738Y
2SD2216
FMMT717
ZH431F01
2SC3931C
SI2301DS
CPH3106

RT1P141U
RT1N441U
DTD123TK
2SC4627CD
2SB1197KQ
2SD1819A
DTC144EE
UN9111
UN9214
DTA144EE

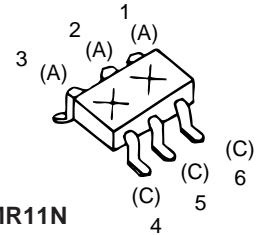


UMB2
UMD12N
UMT2
UMX2
UPUMZ1
XP6501
XP4311

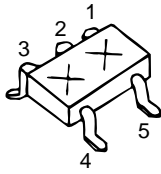
HN1B01FU
XP4501
UMZ1
XP4601
UMD6
UMD3



2SD1805

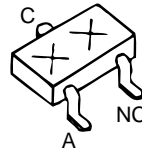


UMR11N
MA6S121

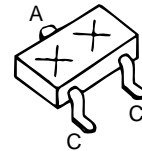


FMG12
UMG2
UMG5N
XP1B301
XP1213
S81230SG
XPIC301

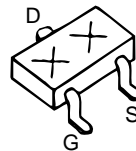
PST597KN
RN5RL43
TC7SL04U
NJM2107F
TA75S01F
TC7S08U
TA7SL02U



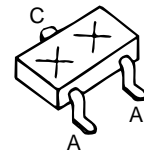
DA121



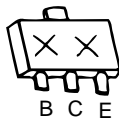
MA704WA



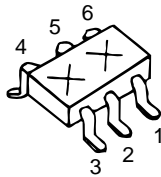
NDS355AN
NDS356AP



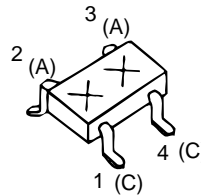
DAN222



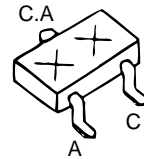
2SB1121T
2SB1302S



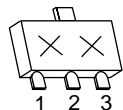
IMX9
XN4604
IMD16A



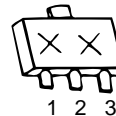
DA227



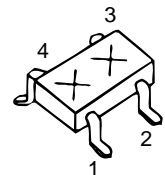
DA221
MA147
MA133



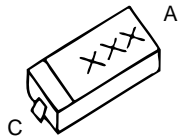
RH5RE58A



NJM79L09

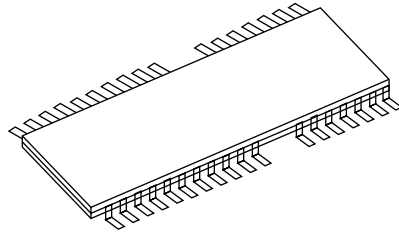


PST592KM

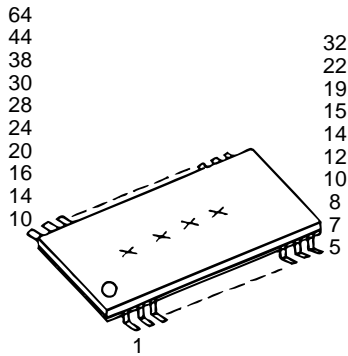
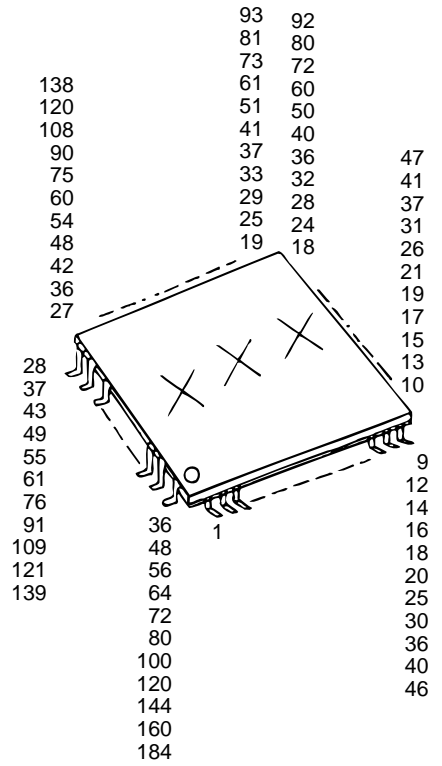


MA729
MA2S111
F1J2H
HVU350B
HVU359TR
F02J9

EX0161TA
EX0210TA
EX0870CE
HVU362
KV1812K



IX0616TA

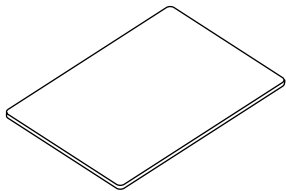


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MS548331
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BU4051FV
LA7473V
PCMB3006T
M40C558V
T7A164S
UPD16510

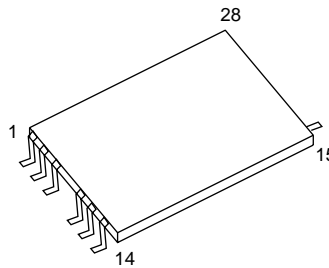
NJM2904V
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Z4C2973G
TC74VUC244FS
IX0613TA

ADS933Y
IX0474TA
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IX0605TA
IX0606TA
IX0607TA
MB3825A
MB3785V

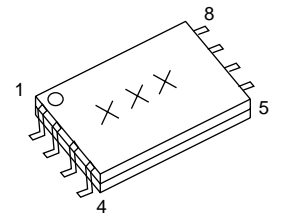
BA7761KV
BH7273KV
LR38573
BH7272KV
MB88344F
UPC2391G
LB1990W
MM1299XQ
MB86611
C111306F



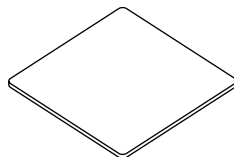
IX0494TA



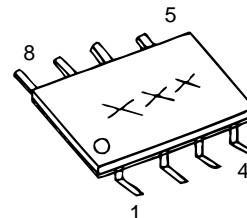
IX0560TA



S84235F
MM1116FS



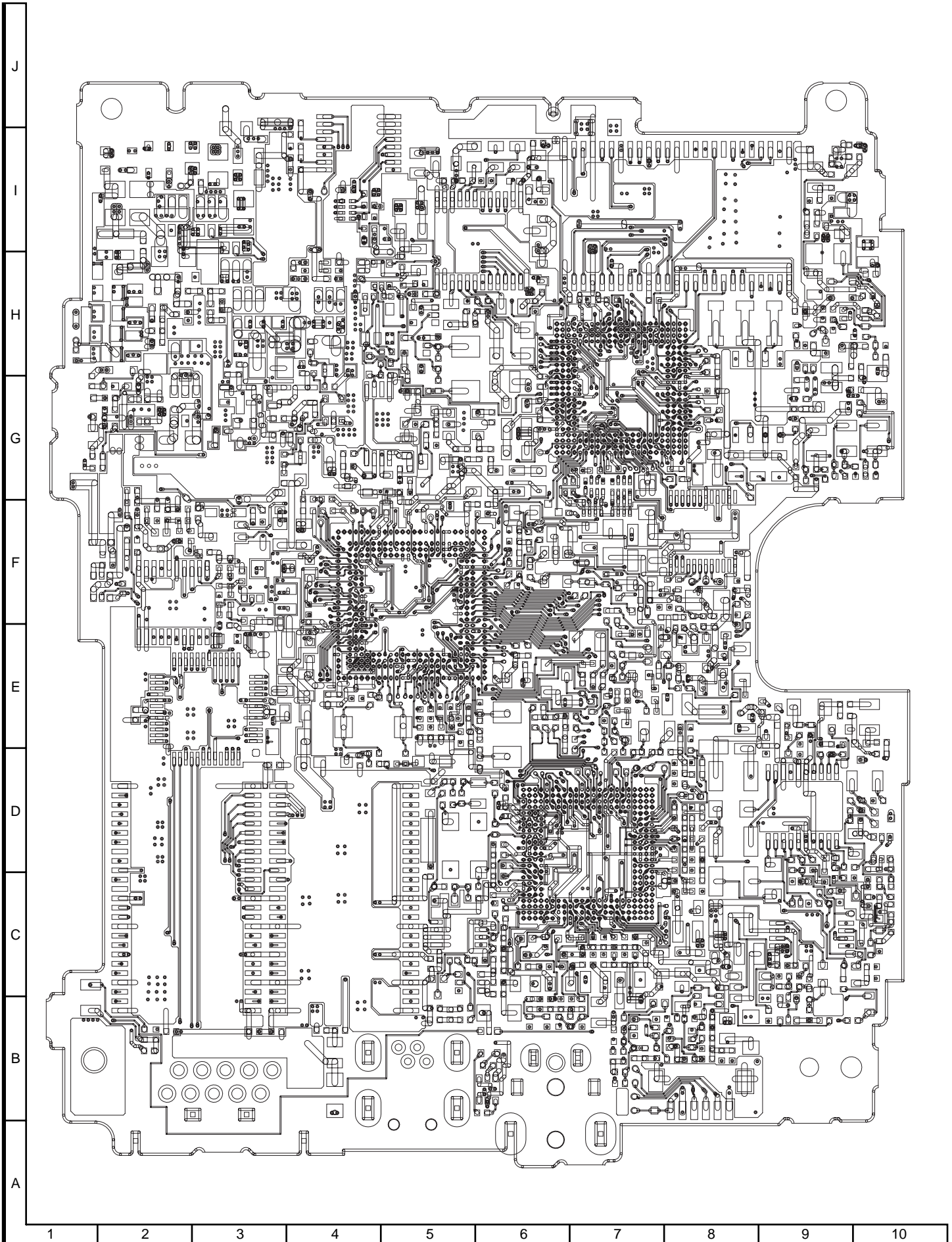
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IX0550TA
IX0604TA
IX0629TA
IX0630TA
IX0625TA



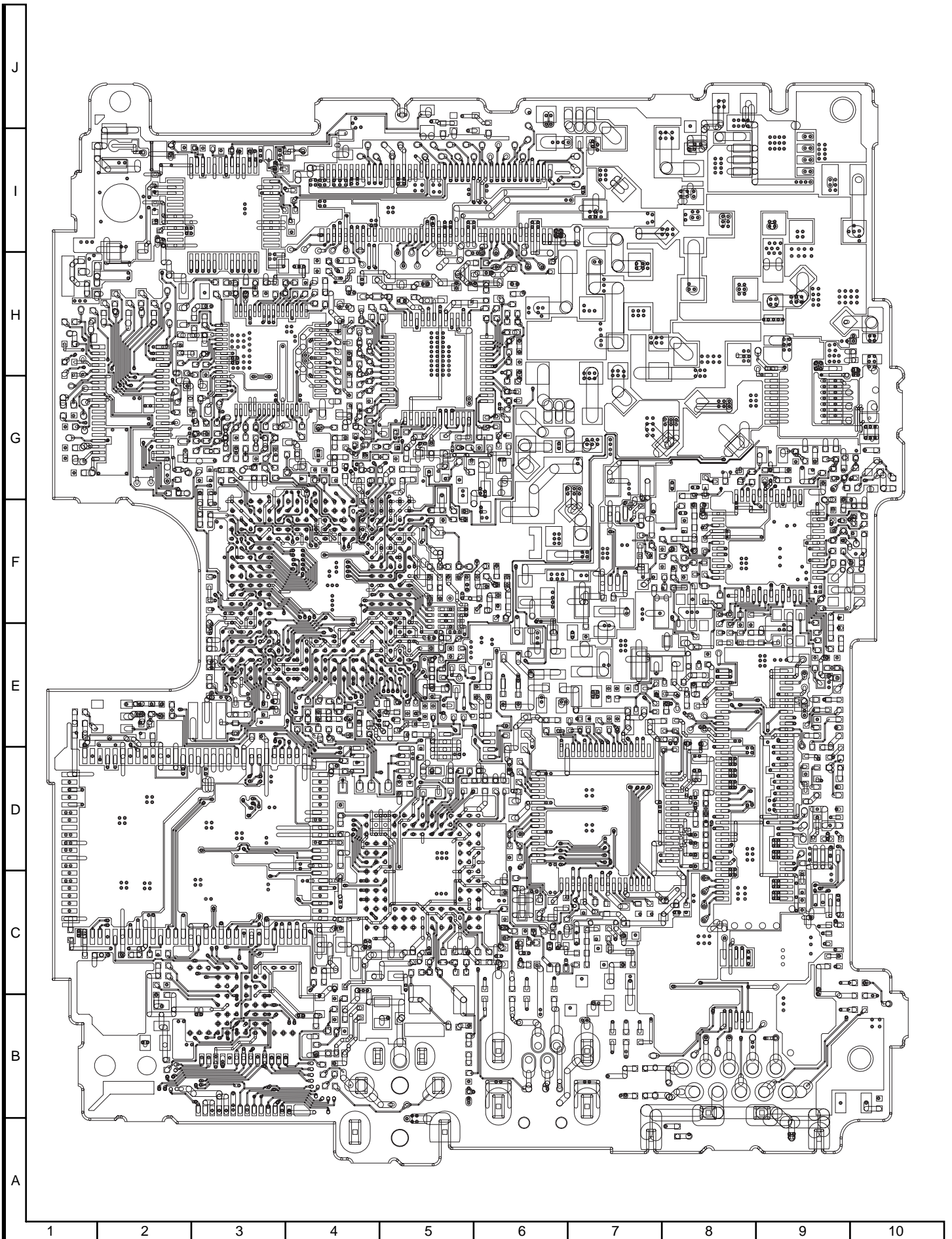
S84235F
S24C02A
TA75W558
TC4W66U
TC7W14U
TC7W74U

TC7W74U
TC7W08U
TC4W53U
24LC8BIN
TC7WH74U
TC7W66U

MAIN PWB Wiring Side SIDE A

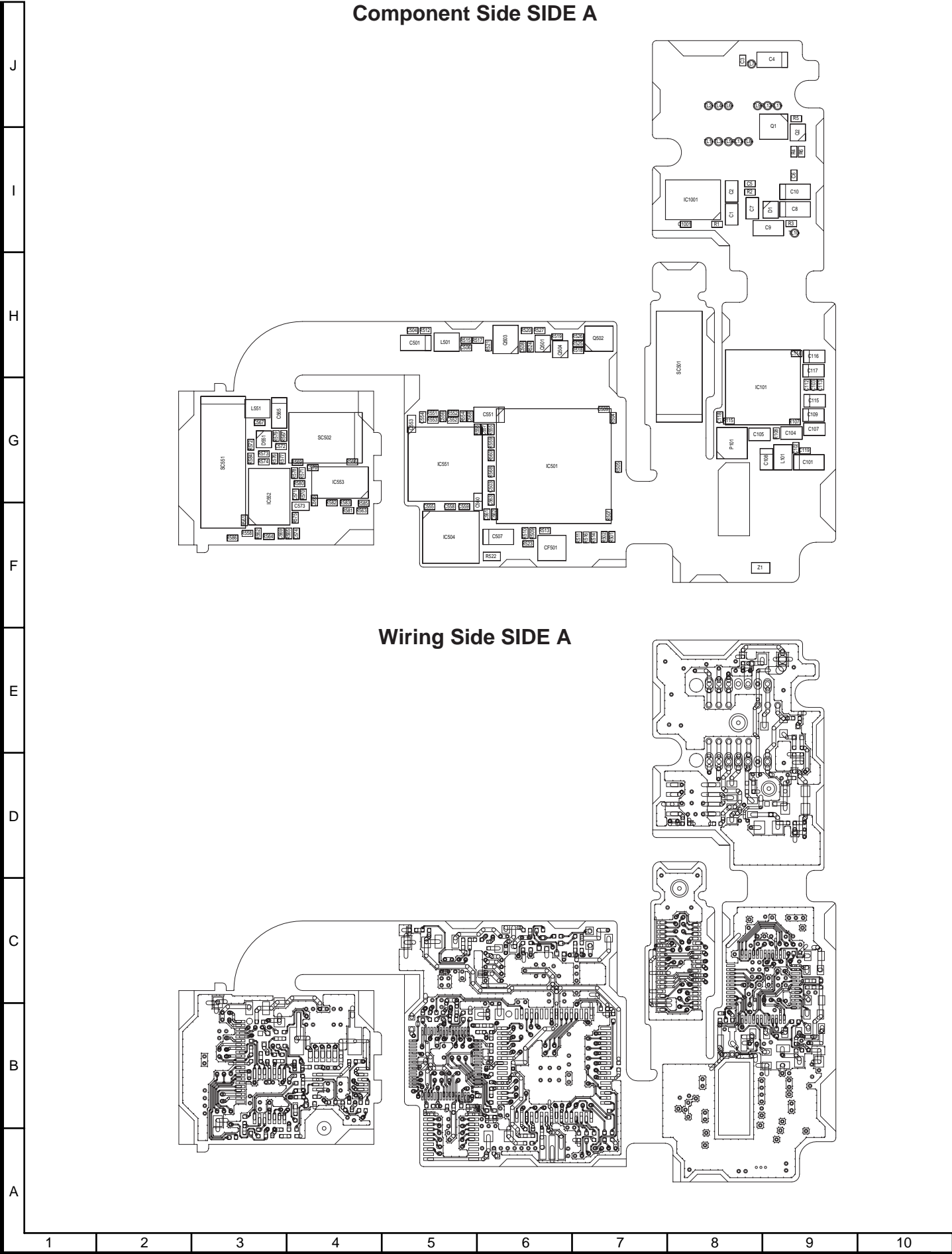


MAIN PWB Wiring Side SIDE B



CAMERA HEAD PWB

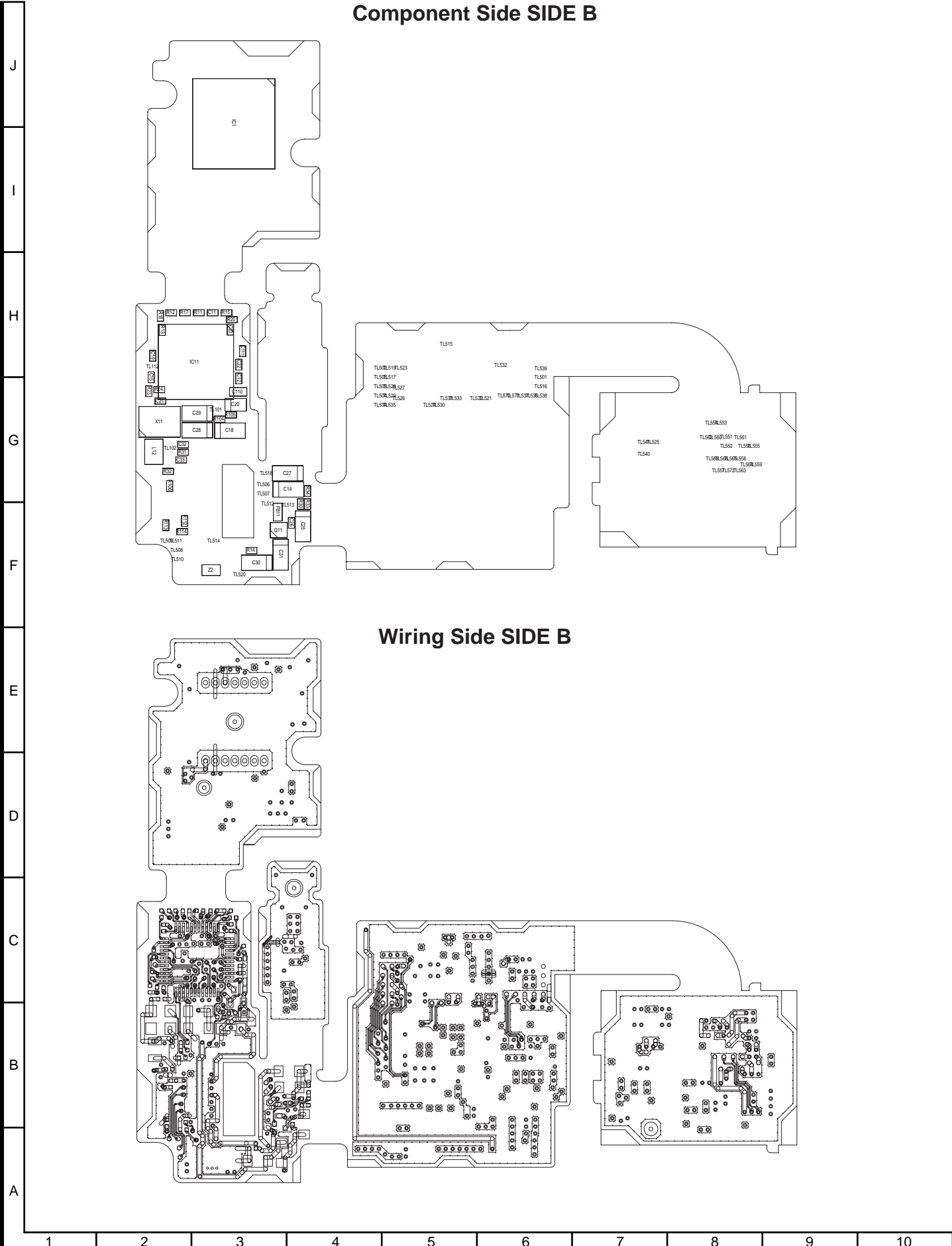
Component Side SIDE A



Wiring Side SIDE A

CAMERA HEAD PWB

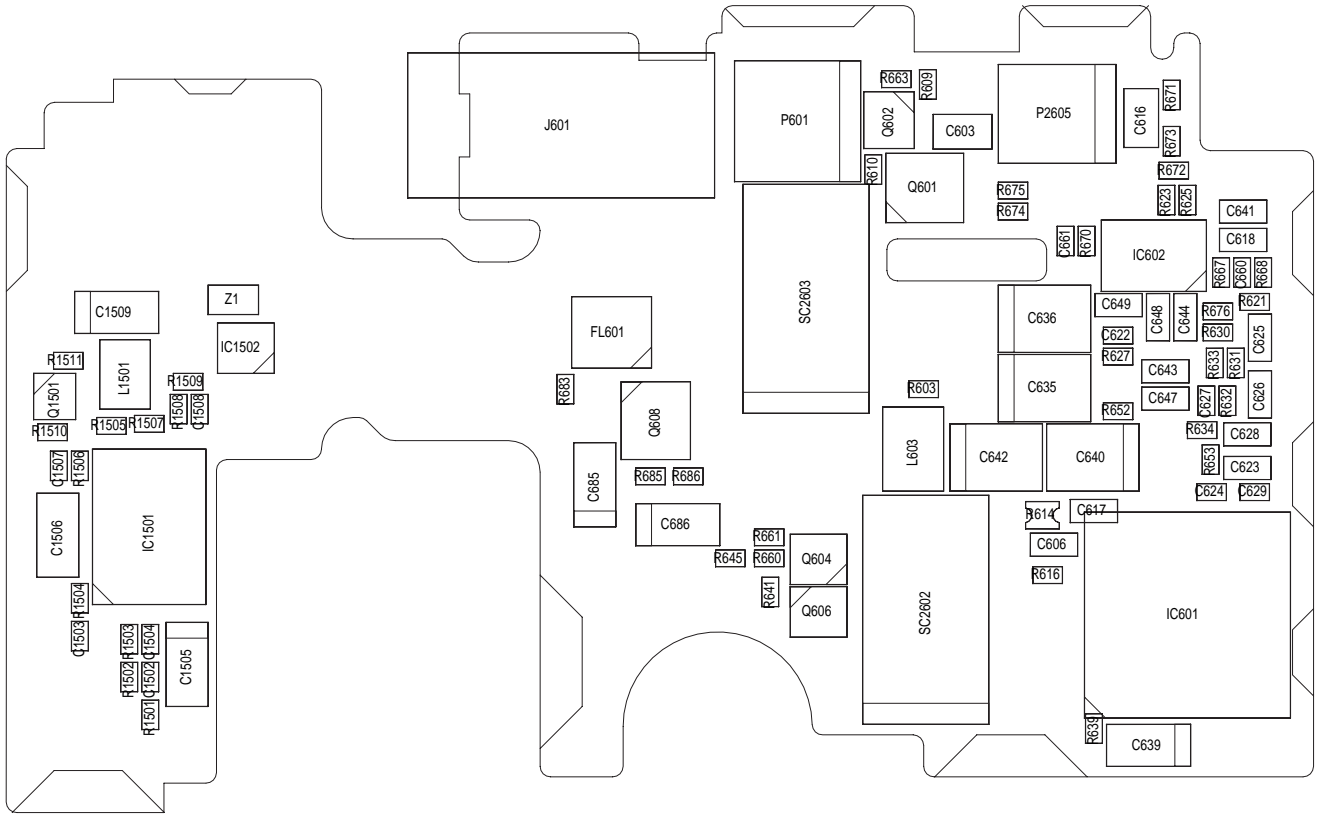
Component Side SIDE B



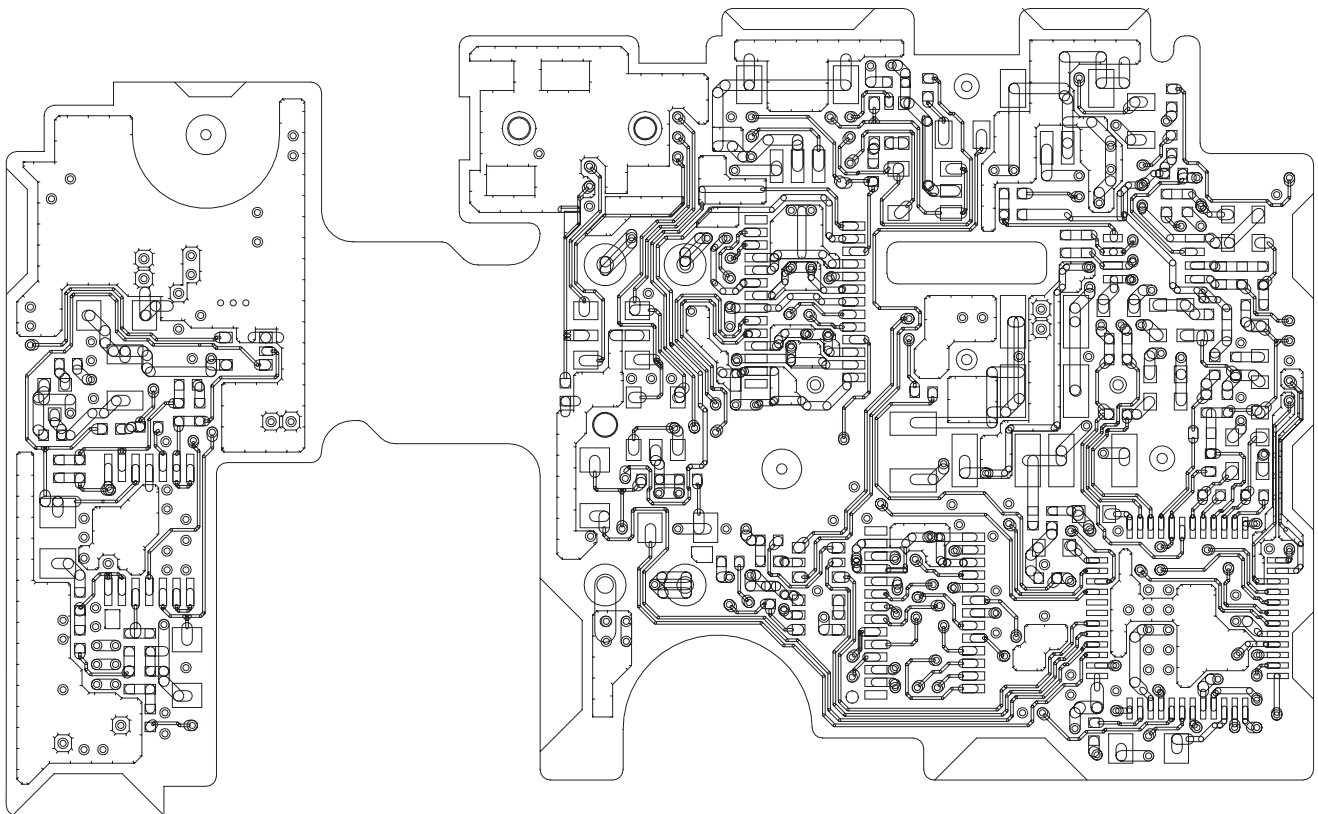
Wiring Side SIDE B

AUDIO I/O PWB

Component Side SIDE A



Wiring Side SIDE A

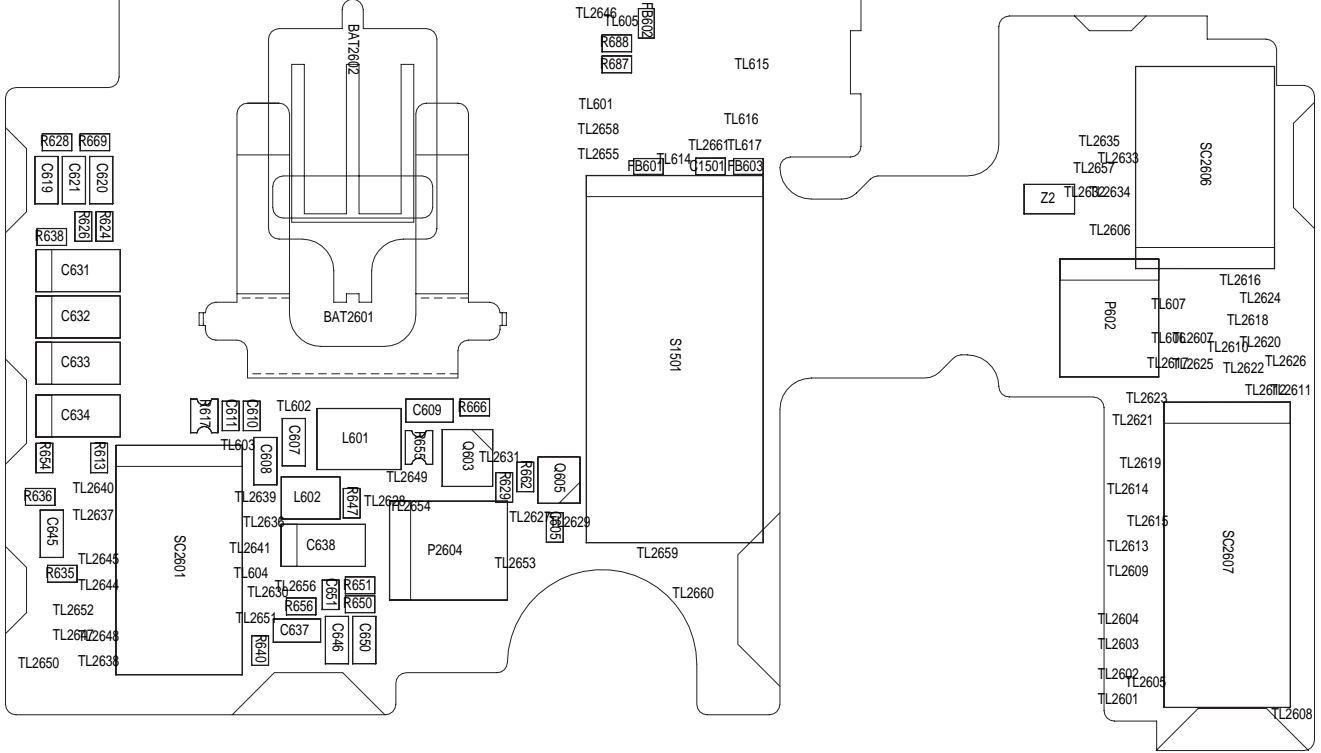


J
I
H
G
F
E
D
C
B
A

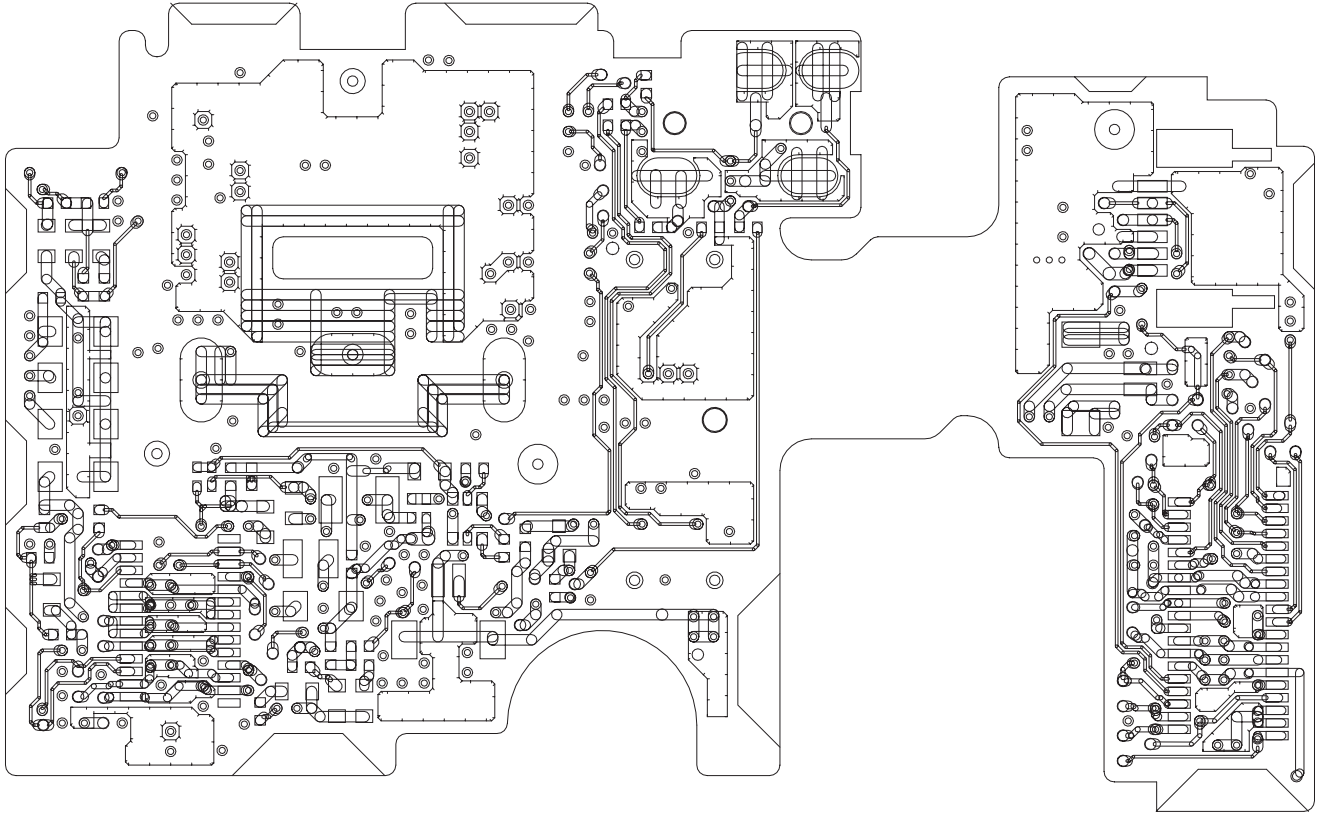
1 2 3 4 5 6 7 8 9 10

AUDIO I/O PWB

Component Side SIDE B



Wiring Side SIDE B

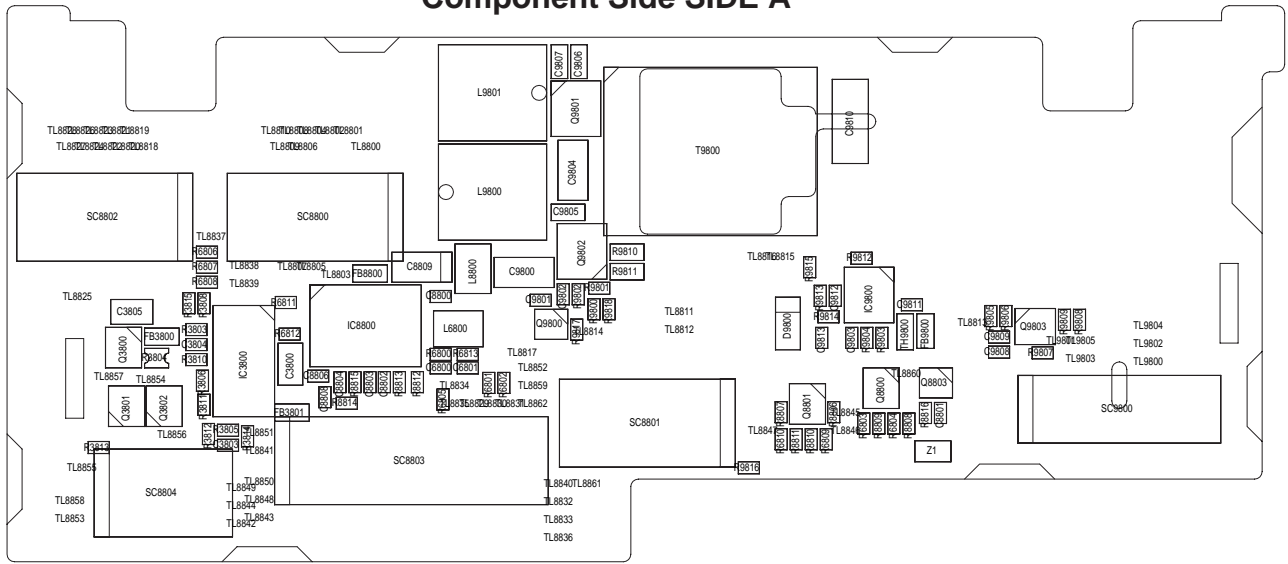


J
I
H
G
F
E
D
C
B
A

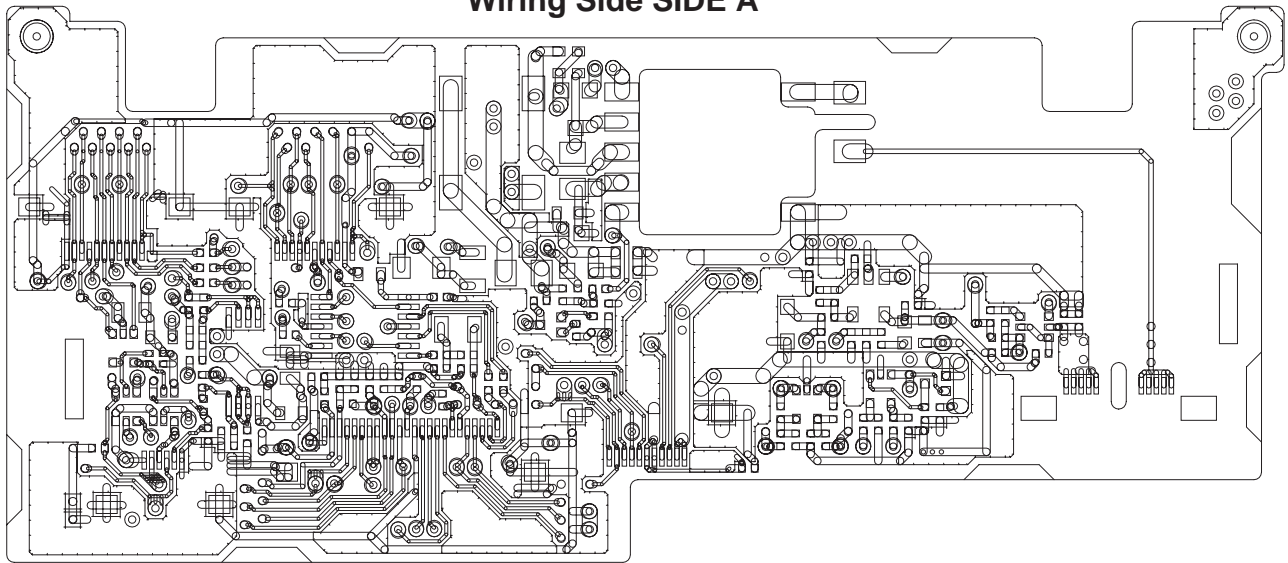
1 2 3 4 5 6 7 8 9 10

LCD PWB

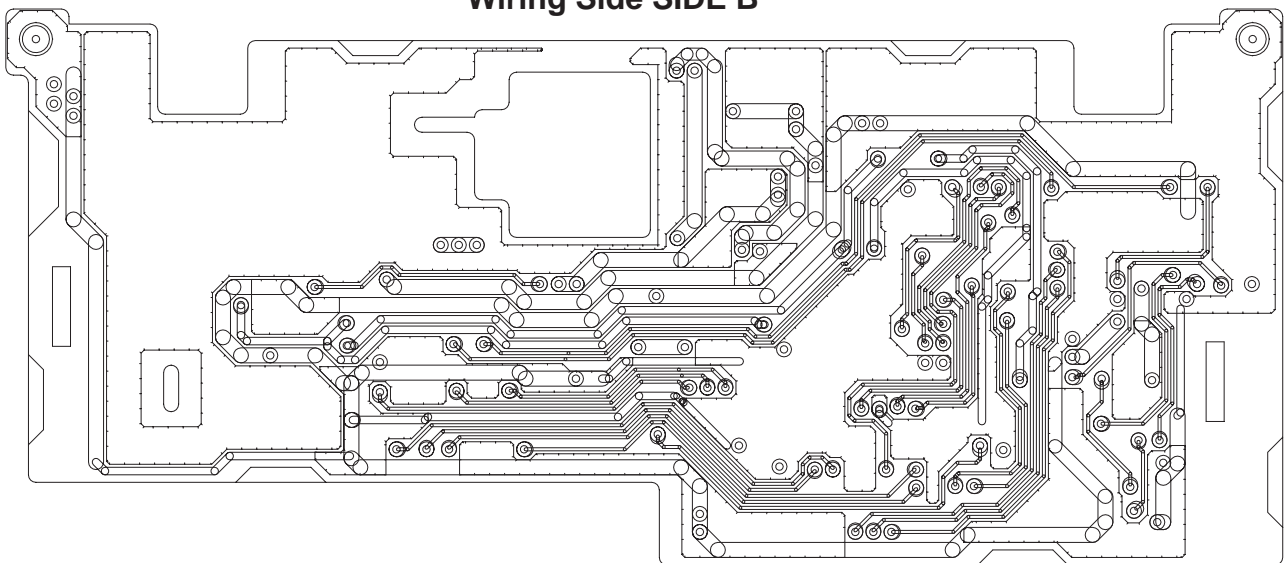
Component Side SIDE A



Wiring Side SIDE A

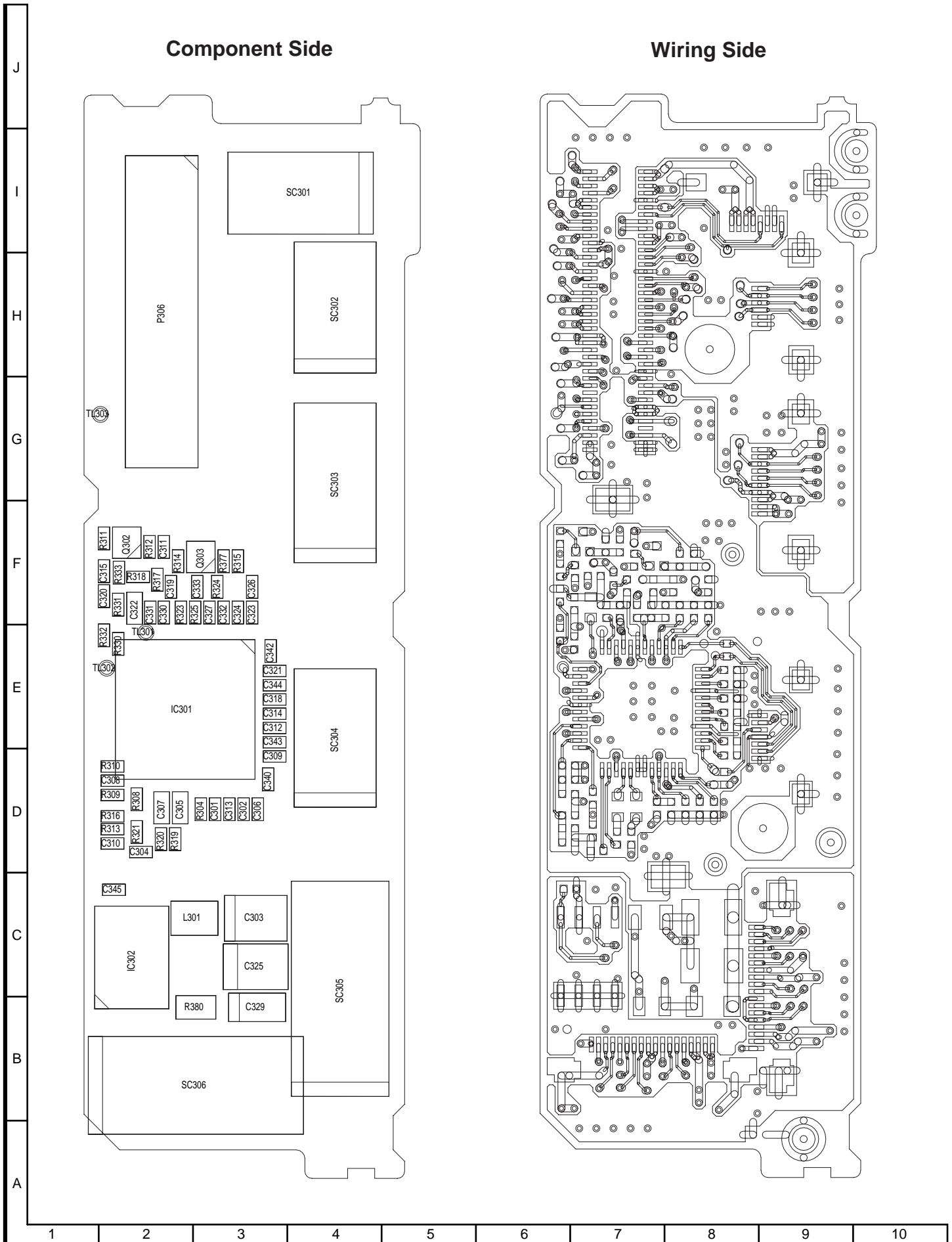


Wiring Side SIDE B



J										
I										
H										
G										
F										
E										
D										
C										
B										
A										
	1	2	3	4	5	6	7	8	9	10

HEAD AMP PWB



17. 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.

Les pièces marquées "▲" sont importantes pour maintenir la sécurité de l'appareil. Ne remplacer ces pièces que par des pièces dont le numéro est spécifié pour maintenir la sécurité et protéger le bon fonctionnement de l'appareil.

" HOW TO ORDER REPLACEMENT PARTS "

in USA: Contact your nearest SHARP Parts Distributor. For location of SHARP Parts Distributor, Call Toll-free 1-IBE800-SHARP

in CANADA: Contact SHARP Electronics of Canada Limited Phone (416) 890-2100.

★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
▲ PIECES: RELATIVES A LA SECURITE

PWB ASSEMBLY IS NOT REPLACEMENT ITEM
L'ASSEMBLAGE P.C.I. EST UN ARTICLE NON REMPLACABLE

Ref. No.	Part No.	★	Description	Code
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PRINTED WIRING BOARD ASSEMBLIES (NOT REPLACEMENT ITEM)

DUNTK2976QA00	MAIN PWB Unit	—
DUNTK2919QA01	CAMERA HEAD PWB Unit	—
DUNTK2920QA01	AUDIO I/O PWB Unit	—
DUNTK2921QA01	LCD PWB Unit	—
RAMP-0032TAN0	HEAD AMP PWB Unit	—

DUNTK2976QA00 MAIN PWB UNIT

INTEGRATED CIRCUITS

IC151	VHiADS933Y/-1	ADS933Y, 10 Bit A/D Converter	AR
IC201	RH-iX0706TAZZ	IX0706TA, Digital Signal Process	BC
IC202	RH-iX0793TAZZ	IX0793TA, 16M-SDRAM	AX
IC203	VHiS80925AN-1	S80925AN, Reset IC	AD
IC204	VHiTC7SH08U-1	TC7SH08U, AND-Gate	AF
IC401	VHiNJU7012F-1	NJU7012F	AE
IC405	VHiNJU7012F-1	NJU7012F, DC Amp	AE
IC407	RH-iX0793TAZZ	IX0793TA, Codec External Memory	AX
IC408	RH-iX0793TAZZ	IX0793TA, ECC External Memory	AX
IC452	RH-iX0710TAN1	IX0710TA, Codec/ECC/PCM/CLK. Gen.	BE
IC701	RH-iX0711TAZZ	IX0711TA, Super I/O	BC

Ref. No.	Part No.	★	Description	Code
IC702	VHiS8423YF/-1		S8423YF, System Power Control & Detector IC	AG
IC703	VHiNJM2143R-1		NJM2143R, Servo Error Amp	AE
IC704	VHiRQ5RW19B-1		RQ5RW19B, 1.9V Reg	AE
IC705	VHiTC4W53U/-1		TC4W53U, Switch	AF
IC706	RH-iX0732TAZZ		IX0732TA, Voice Synthesis IC	AM
IC707	VHiS80924AN-1		S80924AN, 2.4V Reset IC	AE
IC901	VHiMB3785V/-1		MB3785V, Power Control IC (2)	AQ
IC902	VHiMB3825A/-1		MB3825A, Power Control IC (1)	AR
IC1401	VHiNJM2538B-1		NJM2538B, Video Out	AM
IC1431	VHiNJM2235V-1		NJM2235V, Video In SW	AE
IC1602	VHiPCM3006T-1		PCM3006T, 16bit ADC/DAC	AS
IC1702	VHiLB11990W-1		LB11990W, Motor Drive Reel Amp	AR
IC1901	VHiRQ5RW25B-1		RQ5RW25B, 2.5V Reg	AE
IC1903	VHiBU4051FV-1		BU4051FV, Multiplexer	AF
IC1904	VHiRQ5RW25B-1		RQ5RW25B, 2.5V Reg	AE
IC2800	VHiMM1323XV-1		MM1323XV, LCD Interface	AN
IC3401	VHiBH7277KV-1		BH7277KV, EQ/PLL IC	AX
IC3402	VHiTLC2940/-1		TLC2940, VCO IC	AM
IC3403	VHiTCSZ04U/-1		TCSZ04U, Inv. IC	AE
IC3404	VHiADC08351-1		ADC08351, A/D Conv IC	AN
IC3405	VHiTC4W53U/-1		TC4W53U, SW IC	AF
IC4401	RH-iX0707TAZZ		IX0707TA, Digital ADC/DAC Decoder/Encoder	BC
IC4461	VHiTC4W53U/-1		TC4W53U, VC TL SW	AF
IC4701	VHiMB88344F-1		MB88344F, 36ch D/A Converter	AV
IC7401	RH-iX0749TAZZ		IX0749TA, IEEE 1394 Controller	BA
IC7402	VHiTC7S08U/-1		TC7S08U, Buffer	AE
IC7701	RH-iX0712TAZZ		IX0712TA, CPU	BF
IC7702	RH-iX0823TAZZ		IX0823TA, 2MB Flash Memory	BB
IC7703	VHiS80925AN-1		S80925AN, Reset IC	AD

TRANSISTORS

Q151	VS2SC5383F/-1	2SC5383F	AB
Q401	VS2SC5383F/-1	2SC5383F	AB
Q402	VS2SC5383F/-1	2SC5383F	AB
Q701	VS2SA1989R/-1	2SA1989R	AB
Q702	VSRT1N144U/-1	RT1N144U	AB
Q703	VSRT1N441U/-1	RT1N441U	AB
Q704	VSRN4982///-1	RN4982	AC
Q750	VSHN2C01FU/-1	HN2C01FU	AC
Q900	VSCPH6701///-1	CPH6701	AE
Q910	VSCPH6701///-1	CPH6701	AE
Q920	VSCPH6701///-1	CPH6701	AE
Q930	VSXN09D57///-1	XN09D57	AE
Q940	VSXN09D57///-1	XN09D57	AE
Q950	VS2SC5383F/-1	2SC5383F	AB
Q951	VS2SC5383F/-1	2SC5383F	AB
Q960	VSCPH3109///-1	CPH3109	AD
Q970	VSCPH6701///-1	CPH6701	AE
Q980	VSCPH6701///-1	CPH6701	AE
Q990	VSXN09D57///-1	XN09D57	AE
Q1401	VSRT1N441U/-1	RT1N441U	AB
Q1405	VSRN1704///-1	RN1704	AC
Q1431	VSXN04391///-1	XN04391	AC
Q1432	VSHN1B04FU/-1	HN1B04FU	AC
Q1433	VS2SC5383F/-1	2SC5383F	AB
Q1434	VSHN1B04FU/-1	HN1B04FU	AC
Q1701	VSHN2C01FU/-1	HN2C01FU	AC
Q1800	VS3LN01S///-1	3LN01S	AC
Q1801	VSHN1B04FU/-1	HN1B04FU	AC
Q1802	VSHN1B04FU/-1	HN1B04FU	AC
Q1900	VSRN4990///-1	RN4990	AC
Q1903	VSHN2A01FU/-1	HN2A01FU	AC
Q1904	VS2SC5383F/-1	2SC5383F	AB
Q1907	VSND332P///-1	NDS332P	AD

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
C222	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C740	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C223	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C741	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C226	VCSAPR0JJ106M	10	6.3V Tantalum	AD	C742	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C227	VCSAPR0JJ106M	10	6.3V Tantalum	AD	C745	VCKYCZ1HB102K	1000p	50V Ceramic	AB
C228	VCSAPR0JJ106M	10	6.3V Tantalum	AD	C746	VCCCCZ1HH101J	100p	50V Ceramic	AB
C229	VCKYCZ1HB681K	680p	50V Ceramic	AB	C747	VCCCCZ1HH101J	100p	50V Ceramic	AB
C230	VCKYCZ1CB223K	0.022	16V Ceramic	AC	C750	VCKYCY1AF105Z	1	10V Ceramic	AC
C401	RC-KZ0083TAZZ	2.2	10V Ceramic	AD	C751	VCKYCY0JF105Z	1	6.3V Ceramic	AB
C402	VCKYTV1CF225Z	2.2	16V Ceramic	AC	C752	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C403	RC-KZ0083TAZZ	2.2	10V Ceramic	AD	C753	VCKYCY1CB104K	0.1	16V Ceramic	AB
C404	VCSAPR1AJ475M	4.7	10V Tantalum	AD	C754	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C405	VCKYTV1CB474K	0.47	16V Ceramic	AC	C755	VCKYCY1CB104K	0.1	16V Ceramic	AB
C407	RC-KZ0083TAZZ	2.2	10V Ceramic	AD	C756	VCKYCZ1HB102K	1000p	50V Ceramic	AB
C408	VCSAPR0JJ106M	10	6.3V Tantalum	AD	C757	VCKYCZ1EB682K	6800p	25V Ceramic	AB
C409	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C758	VCKYCY0JF105Z	1	6.3V Ceramic	AB
C411	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C759	VCKYCZ1EB682K	6800p	25V Ceramic	AB
C412	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C760	VCKYCZ1HB102K	1000p	50V Ceramic	AB
C413	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C761	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C416	VCKYCY0JB105K	1	6.3V Ceramic	AC	C762	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C417	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C763	VCKYCZ1HB332K	3300p	50V Ceramic	AA
C418	VCCCCZ1HH7R0D	7p	50V Ceramic	AB	C764	VCKYCZ1EB682K	6800p	25V Ceramic	AB
C419	VCCCCZ1HH7R0D	7p	50V Ceramic	AB	C765	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C420	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C766	VCKYCZ1HB332K	3300p	50V Ceramic	AA
C422	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C767	VCKYCZ1HB332K	3300p	50V Ceramic	AA
C424	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C768	VCKYTV1AB105K	1	10V Ceramic	AD
C427	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C769	VCKYCY1CF473Z	0.047	16V Ceramic	AB
C428	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C900	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C429	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C930	VCKYCZ1CB223K	0.022	16V Ceramic	AC
C433	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C931	VCKYCZ1CB223K	0.022	16V Ceramic	AC
C435	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C932	VCKYCY1CB104K	0.1	16V Ceramic	AB
C436	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C933	VCKYCZ1AB104K	0.1	10V Ceramic	AB
C444	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C934	VCKYCZ1HB471K	470p	50V Ceramic	AB
C447	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C935	VCKYCZ1HB102K	1000p	50V Ceramic	AB
C448	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C936	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C449	RC-KZ0083TAZZ	2.2	10V Ceramic	AD	C937	VCKYCZ1HB102K	1000p	50V Ceramic	AB
C450	RC-KZ0100TAZZ	Capacitor		AD	C938	VCKYCZ1HB102K	1000p	50V Ceramic	AB
C451	VCKYTV1AB105K	1	10V Ceramic	AD	C939	VCCCCZ1HH151J	150p	50V Ceramic	AB
C452	VCKYCY1CB104K	0.1	16V Ceramic	AB	C940	VCKYCY1AF105Z	1	10V Ceramic	AC
C456	VCSATA1AJ106M	10	10V Tantalum	AC	C941	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
C460	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C942	VCKYCY1CB104K	0.1	16V Ceramic	AB
C462	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C943	VCKYCZ1HB222K	2200p	50V Ceramic	AB
C463	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C944	VCKYCZ1CB103K	0.01	16V Ceramic	AB
C465	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C945	VCKYCZ1AB104K	0.1	10V Ceramic	AB
C467	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C946	VCKYCZ1HB471K	470p	50V Ceramic	AB
C468	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C947	VCKYCZ1HB471K	470p	50V Ceramic	AB
C470	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C948	VCKYCY1CB104K	0.1	16V Ceramic	AB
C473	VCKYCZ1AB104K	0.1	10V Ceramic	AB	C949	VCKYCZ1HB102K	1000p	50V Ceramic	AB
C474	VCKYCZ1AB104K	0.1	10V Ceramic	AB	C950	VCKYCZ1HB102K	1000p	50V Ceramic	AB
C701	VCKYTV1AB105K	1	10V Ceramic	AD	C951	VCKYCZ1HB102K	1000p	50V Ceramic	AB
C702	VCKYCZ1CB103K	0.01	16V Ceramic	AB	C952	VCKYCY1AF105Z	1	10V Ceramic	AC
C703	VCKYTV1AB105K	1	10V Ceramic	AD	C953	VCKYCZ1HB102K	1000p	50V Ceramic	AB
C704	VCKYCZ1HB102K	1000p	50V Ceramic	AB	C954	VCKYCZ1HB102K	1000p	50V Ceramic	AB
C705	VCKYCZ1HB102K	1000p	50V Ceramic	AB	C955	VCKYCZ1HB102K	1000p	50V Ceramic	AB
C706	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C960	RC-KZ0075TAZZ	2.2	16V Ceramic	AC
C708	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C961	RC-KZ0044TAZZ	4.7	10V Ceramic	AD
C709	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C962	VCKYTV1AB105K	1	10V Ceramic	AD
C710	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C963	RC-KZ0070TAZZ	4.7	16V Ceramic	AD
C712	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C964	RC-KZ0075TAZZ	2.2	16V Ceramic	AC
C714	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C965	RC-KZ0044TAZZ	4.7	10V Ceramic	AD
C715	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C966	RC-KZ0071TAZZ	2.2	10V Ceramic	AD
C717	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C967	RC-KZ0070TAZZ	4.7	16V Ceramic	AD
C718	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C968	RC-KZ0072TAZZ	1	25V Ceramic	AC
C721	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C969	VCKYTV1CB105K	1	16V Ceramic	AC
C722	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C970	VCKYTV1AB105K	1	10V Ceramic	AD
C724	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C971	RC-KZ0072TAZZ	1	25V Ceramic	AC
C728	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C972	VCKYTV1EB104K	0.1	25V Ceramic	AB
C729	VCCCCZ1HH220J	22p	50V Ceramic	AB	C973	VCKYTV1EB104K	0.1	25V Ceramic	AB
C730	VCCCCZ1HH390J	39p	50V Ceramic	AB	C974	VCKYTV1CF105Z	1	16V Ceramic	AB
C731	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C975	VCKYTV1CF105Z	1	16V Ceramic	AB
C732	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C981	RC-KZ0075TAZZ	2.2	16V Ceramic	AC
C733	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C982	RC-KZ0044TAZZ	4.7	10V Ceramic	AD
C734	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	C984	RC-KZ0073TAZZ	3.3	10V Ceramic	AE
C735	VCKYCZ1HB102K	1000p	50V Ceramic	AB	C985	RC-KZ0071TAZZ	2.2	10V Ceramic	AD
C736	VCKYCZ1HB102K	1000p	50V Ceramic	AB	C986	RC-KZ0070TAZZ	4.7	16V Ceramic	AD
C737	VCKYCZ1HB102K	1000p	50V Ceramic	AB	C987	RC-KZ0073TAZZ	3.3	10V Ceramic	AE

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
C988	RC-KZ0071TAZZ	2.2	10V Ceramic	AD	C1728	VCKYCY1AF105Z	1	10V Ceramic	AC
C989	RC-KZ0055TAZZ	3.3	16V Ceramic	AD	C1732	VCKYCY1AF105Z	1	10V Ceramic	AC
C990	RC-KZ0044TAZZ	4.7	10V Ceramic	AD	C1800	VCKYCV1HF103Z	0.01	50V Ceramic	AB
C991	RC-KZ0075TAZZ	2.2	16V Ceramic	AC	C1801	VCKYTV1EB104K	0.1	25V Ceramic	AB
C992	RC-KZ0069TAZZ	10	16V Ceramic	AE	C1803	VCKYCV1CB103K	0.01	16V Ceramic	AB
C993	RC-KZ0070TAZZ	4.7	16V Ceramic	AD	C1804	VCSATA1VJ155M	1.5	35V Tantalum	AC
C1402	VCSATE1AJ476M	47	10V Tantalum	AD	C1805	VCKYTV1EB104K	0.1	25V Ceramic	AB
C1404	VCKYCV1CB103K	0.01	16V Ceramic	AB	C1806	VCKYCV1HF103Z	0.01	50V Ceramic	AB
C1405	VCSATA0JJ106M	10	6.3V Tantalum	AD	C1808	VCSATA1VJ155M	1.5	35V Tantalum	AC
C1406	VCSATE0JJ107M	100	6.3V Tantalum	AE	C1809	VCKYTV1AB105K	1	10V Ceramic	AD
C1407	VCSATA0JJ156M	15	6.3V Tantalum	AC	C1810	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1408	VCKYCY1AF105Z	1	10V Ceramic	AC	C1901	VCKYCY1AF105Z	1	10V Ceramic	AC
C1409	VCKYCV1CB103K	0.01	16V Ceramic	AB	C1902	RC-KZ0071TAZZ	2.2	10V Ceramic	AD
C1410	VCKYCV1CB103K	0.01	16V Ceramic	AB	C1903	VCKYTV1EB104K	0.1	25V Ceramic	AB
C1411	VCSATE0JJ107M	100	6.3V Tantalum	AE	C1907	VCKYCY1AF105Z	1	10V Ceramic	AC
C1412	VCSATA0JJ156M	15	6.3V Tantalum	AC	C1908	VCKYTV1AB105K	1	10V Ceramic	AD
C1413	VCSAPROJJ106M	10	6.3V Tantalum	AD	C1909	VCKYCY1AF105Z	1	10V Ceramic	AC
C1414	VCKYCV1CB103K	0.01	16V Ceramic	AB	C1910	VCKYCY1AF105Z	1	10V Ceramic	AC
C1415	VCSATE1AJ476M	47	10V Tantalum	AD	C1911	VCKYTV1AB105K	1	10V Ceramic	AD
C1416	VCKYCV1CB103K	0.01	16V Ceramic	AB	C1912	RC-KZ0071TAZZ	2.2	10V Ceramic	AD
C1417	VCKYCV1AF104Z	0.1	10V Ceramic	AB	C1913	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1418	VCKYCV1CB103K	0.01	16V Ceramic	AB	C1914	VCKYCV1AB104K	0.1	10V Ceramic	AB
C1431	VCSATE1AJ476M	47	10V Tantalum	AD	C1915	VCKYCV1AB104K	0.1	10V Ceramic	AB
C1432	VCKYCV1CB103K	0.01	16V Ceramic	AB	C1916	VCSATE1AJ476M	47	10V Tantalum	AD
C1433	VCCCCZ1HH150J	15p	50V Ceramic	AB	C1919	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1434	VCCCCZ1HH680J	68p	50V Ceramic	AB	C1920	VCKYTV1AB105K	1	10V Ceramic	AD
C1435	VCKYCV1CB103K	0.01	16V Ceramic	AB	C1928	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1436	VCCCCZ1HH150J	15p	50V Ceramic	AB	C2800	VCKYTV1CB105K	1	16V Ceramic	AC
C1437	VCCCCZ1HH680J	68p	50V Ceramic	AB	C2801	VCSATA1AJ106M	10	10V Tantalum	AC
C1438	VCKYCY1AF105Z	1	10V Ceramic	AC	C2802	VCKYTV1AB105K	1	10V Ceramic	AD
C1439	VCKYCY1AF105Z	1	10V Ceramic	AC	C2803	VCKYTV1AB105K	1	10V Ceramic	AD
C1440	VCKYCV1CB103K	0.01	16V Ceramic	AB	C2804	VCKYTV1AB105K	1	10V Ceramic	AD
C1441	VCKYCY1AF105Z	1	10V Ceramic	AC	C3401	VCCCCZ1HH220J	22p	50V Ceramic	AB
C1601	VCSAPROJJ106M	10	6.3V Tantalum	AD	C3402	VCCCCZ1HH100D	10p	50V Ceramic	AB
C1602	VCKYCV1AF104Z	0.1	10V Ceramic	AB	C3403	VCCCCZ1HH560J	56p	50V Ceramic	AB
C1603	VCKYTV1AB105K	1	10V Ceramic	AD	C3405	VCCCCZ1HH560J	56p	50V Ceramic	AB
C1604	VCKYTV1AB105K	1	10V Ceramic	AD	C3407	VCKYCY0JB105K	1	6.3V Ceramic	AC
C1605	VCKYCV1AF104Z	0.1	10V Ceramic	AB	C3408	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1606	VCKYCV1AF104Z	0.1	10V Ceramic	AB	C3409	VCKYCV1HB471K	470p	50V Ceramic	AB
C1607	VCSAPROJJ106M	10	6.3V Tantalum	AD	C3410	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1608	VCSAPROJJ106M	10	6.3V Tantalum	AD	C3411	VCKYCV1HB471K	470p	50V Ceramic	AB
C1609	VCKYCV1HB222K	2200p	50V Ceramic	AB	C3412	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1610	VCKYCV1AF104Z	0.1	10V Ceramic	AB	C3413	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1611	VCKYTV1CB224K	0.22	16V Ceramic	AB	C3414	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1612	VCKYCV1AF104Z	0.1	10V Ceramic	AB	C3415	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1613	VCSATA1AJ475M	4.7	10V Tantalum	AC	C3416	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1614	VCKYCV1HB222K	2200p	50V Ceramic	AB	C3417	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1615	VCKYCV1AF104Z	0.1	10V Ceramic	AB	C3418	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1616	VCSATA1AJ475M	4.7	10V Tantalum	AC	C3419	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1617	VCKYTV1CB224K	0.22	16V Ceramic	AB	C3420	VCCCCZ1HH100D	10p	50V Ceramic	AB
C1702	VCKYCV1CB103K	0.01	16V Ceramic	AB	C3421	VCCCCZ1HH121J	120p	50V Ceramic	AB
C1703	VCKYCV1CB103K	0.01	16V Ceramic	AB	C3423	VCCCCZ1HH121J	120p	50V Ceramic	AB
C1704	VCKYTV1AB105K	1	10V Ceramic	AD	C3424	VCKYCV1CB103K	0.01	16V Ceramic	AB
C1706	VCKYCY1AF105Z	1	10V Ceramic	AC	C3425	VCSATE0JJ336M	33	6.3V Tantalum	AD
C1707	VCKYCY1CB104K	0.1	16V Ceramic	AB	C3426	VCKYCV1CB103K	0.01	16V Ceramic	AB
C1708	VCKYCV1AF104Z	0.1	10V Ceramic	AB	C3428	VCKYTV1CB224K	0.22	16V Ceramic	AB
C1709	VCKYCV1AF104Z	0.1	10V Ceramic	AB	C3429	VCKYCV1HB102K	1000p	50V Ceramic	AB
C1710	RC-KZ0083TAZZ	2.2	10V Ceramic	AD	C3430	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1711	VCKYCV1AF104Z	0.1	10V Ceramic	AB	C3431	VCKYCV1CB103K	0.01	16V Ceramic	AB
C1712	VCKYCV1AF104Z	0.1	10V Ceramic	AB	C3432	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1713	VCKYCY0JB105K	1	6.3V Ceramic	AC	C3433	VCKYCV1CB103K	0.01	16V Ceramic	AB
C1714	VCKYCV1AF104Z	0.1	10V Ceramic	AB	C3434	VCKYCV1CB103K	0.01	16V Ceramic	AB
C1715	VCKYCV1HB392K	3900p	50V Ceramic	AA	C3436	VCSATE0JJ336M	33	6.3V Tantalum	AD
C1716	VCKYCV1AF104Z	0.1	10V Ceramic	AB	C3440	VCCCCZ1HH150J	15p	50V Ceramic	AB
C1717	VCKYCV1HB392K	3900p	50V Ceramic	AA	C3441	VCCCCZ1HH820J	82p	50V Ceramic	AB
C1718	VCKYCV1HB392K	3900p	50V Ceramic	AA	C3442	VCCCCZ1HH820J	82p	50V Ceramic	AB
C1719	VCKYCV1AF104Z	0.1	10V Ceramic	AB	C3443	VCCCCZ1HH150J	15p	50V Ceramic	AB
C1720	VCKYCV1AF104Z	0.1	10V Ceramic	AB	C3444	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1721	VCKYCY0JF105Z	1	6.3V Ceramic	AB	C3452	VCKYCV1CB103K	0.01	16V Ceramic	AB
C1722	VCKYCV1AF104Z	0.1	10V Ceramic	AB	C3454	VCSATA1AJ106M	10	10V Tantalum	AC
C1723	VCKYCY0JF105Z	1	6.3V Ceramic	AB	C3455	VCKYCV1CB103K	0.01	16V Ceramic	AB
C1724	VCKYCY1CB473K	0.047	16V Ceramic	AA	C3456	VCSATA1AJ106M	10	10V Tantalum	AC
C1725	VCKYCV1EB472K	4700p	25V Ceramic	AB	C3457	VCKYCV1CB103K	0.01	16V Ceramic	AB
C1726	VCKYCY1AF105Z	1	10V Ceramic	AC	C3458	VCKYCV1AF104Z	0.1	10V Ceramic	AB
C1727	VCKYCV1AF104Z	0.1	10V Ceramic	AB	C3460	VCKYCV1AF104Z	0.1	10V Ceramic	AB

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
R404	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R724	VRK-SA1JF473J	47k	1/16W Metal Composition	AC
R405	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R725	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R406	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA	R726	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R407	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA	R727	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
R409	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R728	VRK-SA1JF102J	1k	1/16W Metal Composition	AB
R410	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R729	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
R411	VRS-CZ1JF154J	150k	1/16W Metal Oxide	AA	R730	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R412	VRS-CZ1JF334J	330k	1/16W Metal Oxide	AA	R731	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
R413	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R732	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R414	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R733	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R416	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA	R735	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R417	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA	R737	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA
R418	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA	R738	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R419	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R739	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA
R420	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R740	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R421	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R741	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
R422	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R742	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
R423	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R744	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R424	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA	R745	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R425	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R746	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R426	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R747	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R427	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R748	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R429	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R749	VRS-CZ1JF393J	39k	1/16W Metal Oxide	AA
R430	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R750	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R435	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA	R751	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA
R436	VRS-CZ1JF224J	220k	1/16W Metal Oxide	AA	R752	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R437	VRS-CZ1JF224J	220k	1/16W Metal Oxide	AA	R753	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R438	VRS-CZ1JF121J	120	1/16W Metal Oxide	AA	R754	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R440	VRS-CZ1JF393J	39k	1/16W Metal Oxide	AA	R755	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R441	VRS-CZ1JF563J	56k	1/16W Metal Oxide	AA	R756	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R442	VRS-CZ1JF114J	110k	1/16W Metal Oxide	AB	R757	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R443	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA	R759	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R446	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R760	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
R452	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R761	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
R453	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R762	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
R469	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R763	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA
R470	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R765	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
R471	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA	R769	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
R472	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R770	VRS-CZ1JF821J	820	1/16W Metal Oxide	AA
R476	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA	R771	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R477	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA	R900	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R478	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA	R901	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R480	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R902	VRS-CZ1JF104D	100k	1/16W Metal Oxide	AB
R483	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R903	VRS-CZ1JF433D	43k	1/16W Metal Oxide	AA
R701	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R904	VRS-CZ1JF563J	56k	1/16W Metal Oxide	AA
R702	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R905	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R703	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA	R906	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
R704	VRK-SA1JF224J	220k	1/16W Metal Composition	AC	R953	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB
R705	VRS-CZ1JF683J	68k	1/16W Metal Oxide	AA	R954	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R706	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R955	VRS-CZ1JF273J	27k	1/16W Metal Oxide	AA
R707	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA	R957	VRS-CZ1JF133D	13k	1/16W Metal Oxide	AA
R708	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R958	VRS-CZ1JF393D	39k	1/16W Metal Oxide	AB
R709	VRS-CZ1JF474D	470k	1/16W Metal Oxide	AA	R959	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R710	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R960	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R711	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R961	VRS-CZ1JF272D	2.7k	1/16W Metal Oxide	AB
R712	VRS-CZ1JF823D	82k	1/16W Metal Oxide	AB	R962	VRS-CZ1JF203D	20k	1/16W Metal Oxide	AA
R713	VRK-SA1JF102J	1k	1/16W Metal Composition	AB	R963	VRS-CZ1JF153D	15k	1/16W Metal Oxide	AB
R714	VRK-SA1JF332J	3.3k	1/16W Metal Composition	AB	R964	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB
R715	VRK-SA1JF102J	1k	1/16W Metal Composition	AB	R965	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R716	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R966	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA
R717	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA	R967	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB
R718	VRK-SA1JF102J	1k	1/16W Metal Composition	AB	R968	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R719	VRK-SB1FF102J	1k	0.0315W Metal Composition	AC	R969	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R720	VRK-SB1FF104J	100k	0.0315W Metal Composition	AD	R970	VRS-CZ1JF113D	11k	1/16W Metal Oxide	AA
R721	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA	R971	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R722	VRS-CZ1JF565J	5.6M	1/16W Metal Oxide	AA	R975	VRS-CZ1JF273D	27k	1/16W Metal Oxide	AA
R723	VRK-SA1JF102J	1k	1/16W Metal Composition	AB	R976	VRS-CZ1JF222D	2.2k	1/16W Metal Oxide	AA
					R977	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB
					R978	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB
					R979	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB
					R980	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA
					R981	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
					R982	VRS-CZ1JF273D	27k	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
R983	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB	R1805	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA
R984	VRS-CZ1JF222D	2.2k	1/16W Metal Oxide	AA	R1807	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA
R985	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB	R1808	VRS-CZ1JF100J	10	1/16W Metal Oxide	AA
R986	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB	R1809	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R987	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA	R1810	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R988	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R1811	VRS-CZ1JF100J	10	1/16W Metal Oxide	AA
R989	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R1812	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
R990	VRS-CY1JF221J	220	1/16W Metal Oxide	AA	R1814	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R993	VRS-CY1JF221J	220	1/16W Metal Oxide	AA	R1815	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
R995	VRS-CY1JF221J	220	1/16W Metal Oxide	AA	R1816	VRS-CZ1JF683J	68k	1/16W Metal Oxide	AA
R997	VRS-CY1JF221J	220	1/16W Metal Oxide	AA	R1818	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA
R1401	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R1819	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
R1402	VRS-CZ1JF470J	47	1/16W Metal Oxide	AA	R1900	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R1403	VRS-CZ1JF470J	47	1/16W Metal Oxide	AA	R1910	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R1404	VRS-CZ1JF270J	27	1/16W Metal Oxide	AA	R1911	VRS-CZ1JF203D	20k	1/16W Metal Oxide	AA
R1408	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R1913	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1409	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R1914	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB
R1413	VRS-CZ1JF470J	47	1/16W Metal Oxide	AA	R1916	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R1414	VRS-CZ1JF270J	27	1/16W Metal Oxide	AA	R1917	VRS-CZ1JF153D	15k	1/16W Metal Oxide	AB
R1415	VRS-CZ1JF225J	2.2M	1/16W Metal Oxide	AA	R1918	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA
R1417	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R1919	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R1418	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R1922	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1419	VRS-CZ1JF270J	27	1/16W Metal Oxide	AA	R1924	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1421	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB	R1927	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA
R1431	VRS-CZ1JF122J	1.2k	1/16W Metal Oxide	AA	R1928	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R1432	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA	R1932	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1433	VRS-CZ1JF561J	560	1/16W Metal Oxide	AA	R1937	VRS-CZ1JF220J	22	1/16W Metal Oxide	AA
R1434	VRS-CZ1JF561J	560	1/16W Metal Oxide	AA	R1938	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1435	VRS-CZ1JF122J	1.2k	1/16W Metal Oxide	AA	R1939	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1436	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA	R1954	VRS-CZ1JF202D	2k	1/16W Metal Oxide	AA
R1437	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA	R1955	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1438	VRS-CZ1JF122J	1.2k	1/16W Metal Oxide	AA	R1956	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1439	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA	R1957	VRS-CZ1JF273D	27k	1/16W Metal Oxide	AA
R1440	VRS-CZ1JF561J	560	1/16W Metal Oxide	AA	R1958	VRS-CZ1JF683J	68k	1/16W Metal Oxide	AA
R1441	VRS-CZ1JF561J	560	1/16W Metal Oxide	AA	R1959	VRS-CZ1JF334J	330k	1/16W Metal Oxide	AA
R1442	VRS-CZ1JF750J	75	1/16W Metal Oxide	AA	R1960	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA
R1451	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R1961	VRS-CZ1JF563J	56k	1/16W Metal Oxide	AA
R1452	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R1962	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA
R1461	VRS-CZ1JF683D	68k	1/16W Metal Oxide	AB	R1963	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R1462	VRS-CZ1JF104D	100k	1/16W Metal Oxide	AB	R1964	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R1602	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R1965	VRK-SB1FF333J	33k	0.0315W	AB
R1603	VRS-CZ1JF471J	470	1/16W Metal Oxide	AA				Metal Composition	
R1604	VRS-CZ1JF471J	470	1/16W Metal Oxide	AA	R1966	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R1662	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R1979	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1701	VRK-SA1JF100J	10	1/16W	AB	R1982	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
			Metal Composition		R2402	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1702	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R2403	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1703	VRS-CZ1JF124J	120k	1/16W Metal Oxide	AA	R2800	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1704	VRS-CZ1JF683J	68k	1/16W Metal Oxide	AA	R2801	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1705	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	R2802	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1706	VRS-CZ1JF1R0J	1	1/16W Metal Oxide	AA	R2803	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R1707	VRS-CZ1JF1R0J	1	1/16W Metal Oxide	AA	R2804	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R1708	VRS-CZ1JF1R0J	1	1/16W Metal Oxide	AA	R3401	VRS-CZ1JF121J	120	1/16W Metal Oxide	AA
R1709	VRS-CZ1JF1R0J	1	1/16W Metal Oxide	AA	R3402	VRS-CZ1JF123J	12k	1/16W Metal Oxide	AA
R1710	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA	R3404	VRS-CZ1JF471J	470	1/16W Metal Oxide	AA
R1711	VRS-CZ1JF331J	330	1/16W Metal Oxide	AA	R3405	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R1712	VRS-CZ1JF621J	620	1/16W Metal Oxide	AA	R3406	VRS-CZ1JF271J	270	1/16W Metal Oxide	AA
R1713	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R3407	VRS-CZ1JF181J	180	1/16W Metal Oxide	AA
R1714	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA	R3409	VRS-CZ1JF121J	120	1/16W Metal Oxide	AA
R1715	VRK-SA1JF182J	1.8k	1/16W	AC	R3410	VRS-CZ1JF151J	150	1/16W Metal Oxide	AA
			Metal Composition		R3411	VRS-CZ1JF391J	390	1/16W Metal Oxide	AA
R1716	VRK-SA1JF182J	1.8k	1/16W	AC	R3412	VRS-CZ1JF221J	220	1/16W Metal Oxide	AA
			Metal Composition		R3413	VRS-CZ1JF391J	390	1/16W Metal Oxide	AA
R1720	VRK-SA1JF390J	39	1/16W	AD	R3414	VRS-CZ1JF112J	1.1k	1/16W Metal Oxide	AA
			Metal Composition		R3415	VRS-CZ1JF151J	150	1/16W Metal Oxide	AA
R1721	VRK-SA1JF102J	1k	1/16W	AB	R3416	VRS-CZ1JF221J	220	1/16W Metal Oxide	AA
			Metal Composition		R3417	VRS-CZ1JF221J	220	1/16W Metal Oxide	AA
R1722	VRK-SA1JF472J	4.7k	1/16W	AD	R3418	VRS-CZ1JF181J	180	1/16W Metal Oxide	AA
			Metal Composition		R3419	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R1740	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R3420	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R1800	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA	R3421	VRS-CZ1JF183J	18k	1/16W Metal Oxide	AA
R1801	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R3423	VRS-CZ1JF182J	1.8k	1/16W Metal Oxide	AA
R1802	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA	R3424	VRS-CZ1JF151J	150	1/16W Metal Oxide	AA
R1803	VRS-CZ1JF243J	24k	1/16W Metal Oxide	AA	R3425	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
R1804	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA	R3426	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
R3427	VRS-CZ1JF122J	1.2k	1/16W Metal Oxide	AA	R4432	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
R3428	VRS-CZ1JF273D	27k	1/16W Metal Oxide	AA	R4435	VRS-CZ1JF330J	33	1/16W Metal Oxide	AA
R3429	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA	R4436	VRS-CZ1JF152J	1.5k	1/16W Metal Oxide	AA
R3432	VRS-CZ1JF333D	33k	1/16W Metal Oxide	AB	R4437	VRS-CZ1JF152J	1.5k	1/16W Metal Oxide	AA
R3434	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R4450	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R3435	VRS-CZ1JF122J	1.2k	1/16W Metal Oxide	AA	R4451	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R3436	VRS-CZ1JF182J	1.8k	1/16W Metal Oxide	AA	R4452	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA
R3437	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA	R4453	VRS-CZ1JF181J	180	1/16W Metal Oxide	AA
R3442	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA	R4454	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R3443	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA	R4456	VRS-CZ1JF151J	150	1/16W Metal Oxide	AA
R3445	VRS-CZ1JF182D	1.8k	1/16W Metal Oxide	AB	R4457	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3446	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB	R4460	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3449	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R4461	VRS-CZ1JF123D	12k	1/16W Metal Oxide	AA
R3450	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R4462	VRS-CZ1JF123D	12k	1/16W Metal Oxide	AA
R3451	VRS-CZ1JF334J	330k	1/16W Metal Oxide	AA	R4463	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA
R3452	VRS-CZ1JF121J	120	1/16W Metal Oxide	AA	R4464	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
R3453	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R4465	VRS-CZ1JF273D	27k	1/16W Metal Oxide	AA
R3454	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R4467	VRS-CZ1JF302D	3k	1/16W Metal Oxide	AA
R3455	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R4468	VRS-CZ1JF562D	5.6k	1/16W Metal Oxide	AB
R3457	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA	R4469	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA
R3458	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R4473	VRS-CZ1JF123J	12k	1/16W Metal Oxide	AA
R3459	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R4474	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R3460	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R4475	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA
R3462	VRS-CZ1JF271J	270	1/16W Metal Oxide	AA	R4476	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3463	VRS-CZ1JF122J	1.2k	1/16W Metal Oxide	AA	R4477	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R3464	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R4478	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
R3465	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	R4485	VRS-CZ1JF474J	470k	1/16W Metal Oxide	AA
R3466	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA	R4486	VRS-CZ1JF224J	220k	1/16W Metal Oxide	AA
R3467	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA	R4487	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA
R3468	VRS-CZ1JF100J	10	1/16W Metal Oxide	AA	R4488	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R3469	VRS-CZ1JF390J	39	1/16W Metal Oxide	AA	R4489	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA
R3470	VRS-CZ1JF331J	330	1/16W Metal Oxide	AA	R5800	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3471	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA	R5801	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3472	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA	R5802	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3473	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA	R5803	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3474	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R5804	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3475	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R5805	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3478	VRS-CZ1JF123J	12k	1/16W Metal Oxide	AA	R5806	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3479	VRS-CZ1JF183J	18k	1/16W Metal Oxide	AA	R5807	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3480	VRS-CZ1JF152J	1.5k	1/16W Metal Oxide	AA	R5808	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3481	VRS-CZ1JF181J	180	1/16W Metal Oxide	AA	R5809	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3482	VRS-CZ1JF562J	5.6k	1/16W Metal Oxide	AA	R5810	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3486	VRS-CZ1JF222D	2.2k	1/16W Metal Oxide	AA	R5811	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3488	VRS-CZ1JF681J	680	1/16W Metal Oxide	AA	R5812	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3489	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA	R5813	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3490	VRS-CZ1JF123J	12k	1/16W Metal Oxide	AA	R5817	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3494	VRS-CZ1JF182J	1.8k	1/16W Metal Oxide	AA	R5818	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3495	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R5819	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3496	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA	R5820	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R3497	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA	R5821	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R3498	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA	R5822	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
R3499	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R7401	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA
R4401	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R7402	VRS-CZ1JF561J	560	1/16W Metal Oxide	AA
R4402	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R7403	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA
R4403	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R7406	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
R4404	VRS-CZ1JF151J	150	1/16W Metal Oxide	AA	R7413	VRS-CZ1JF512D	5.1k	1/16W Metal Oxide	AA
R4405	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA	R7415	VRS-CZ1JF560D	56	1/16W Metal Oxide	AB
R4406	VRS-CZ1JF151J	150	1/16W Metal Oxide	AA	R7416	VRS-CZ1JF560D	56	1/16W Metal Oxide	AB
R4407	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA	R7417	VRS-CZ1JF560D	56	1/16W Metal Oxide	AB
R4408	VRS-CZ1JF151J	150	1/16W Metal Oxide	AA	R7418	VRS-CZ1JF560D	56	1/16W Metal Oxide	AB
R4409	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA	R7419	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA
R4410	VRS-CZ1JF151J	150	1/16W Metal Oxide	AA	R7420	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA
R4411	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA	R7421	VRS-CZ1JF472D	4.7k	1/16W Metal Oxide	AB
R4412	VRS-CZ1JF151J	150	1/16W Metal Oxide	AA	R7423	VRS-CZ1JF102D	1k	1/16W Metal Oxide	AA
R4413	VRS-CZ1JF272J	2.7k	1/16W Metal Oxide	AA	R7424	VRS-CZ1JF472D	4.7k	1/16W Metal Oxide	AB
R4414	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R7426	VRS-CZ1JF821D	820	1/16W Metal Oxide	AA
R4415	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA	R7427	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA
R4416	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	R7441	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA
R4420	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA	R7442	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA
R4421	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA	R7443	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA
R4422	VRS-CZ1JF123J	12k	1/16W Metal Oxide	AA	R7444	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA
R4423	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA	R7445	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA
R4424	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA	R7446	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA
R4425	VRS-CZ1JF123J	12k	1/16W Metal Oxide	AA	R7447	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA
R4431	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA	R7448	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
R7450	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R9994	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R7472	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	R9995	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
R7701	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA	MISCELLANEOUS PARTS				
R7702	VRS-CZ1JF273J	27k	1/16W Metal Oxide	AA	△ CP1	QFS-L1221TAZZ		Fuse, 1.25A 24V	AD
R7705	VRS-CZ1JF562J	5.6k	1/16W Metal Oxide	AA	△ CP2	QFS-L1221TAZZ		Fuse, 1.25A 24V	AD
R7707	VRS-CZ1JF104J	100k	1/16W Metal Oxide	AA	△ CP3	QFS-L1221TAZZ		Fuse, 1.25A 24V	AD
R7708	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA	FB202	RBLN-0049TAZZ		Balun, BLN-0049TA	AD
R7709	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA	FB456	RBLN-0057TAZZ		Balun, BLN-0057TA	AC
R7711	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA	FB701	RBLN-0120TAZZ		Balun, BLN-0120TA	AC
R7712	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA	FB702	RBLN-0120TAZZ		Balun, BLN-0120TA	AC
R7713	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA	FB1901	RBLN-0119TAZZ		Balun, BLN-0119TA	AC
R7714	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA	FB1902	RBLN-0119TAZZ		Balun, BLN-0119TA	AC
R7800	VRS-CZ1JF151J	150	1/16W Metal Oxide	AA	FB2401	RBLN-0120TAZZ		Balun, BLN-0120TA	AC
R7801	VRS-CZ1JF272D	2.7k	1/16W Metal Oxide	AB	FB2402	RBLN-0120TAZZ		Balun, BLN-0120TA	AC
R7802	VRS-CZ1JF151J	150	1/16W Metal Oxide	AA	FB2405	RBLN-0120TAZZ		Balun, BLN-0120TA	AC
R7803	VRS-CZ1JF272D	2.7k	1/16W Metal Oxide	AB	FB7401	RBLN-0057TAZZ		Balun, BLN-0057TA	AC
R7804	VRS-CZ1JF151J	150	1/16W Metal Oxide	AA	FB7402	RBLN-0057TAZZ		Balun, BLN-0057TA	AC
R7805	VRS-CZ1JF272D	2.7k	1/16W Metal Oxide	AB	J701	QJAKE0063TAZZ		Jack	AF
R7806	VRS-CZ1JF393D	39k	1/16W Metal Oxide	AB	J2401	QJAKE0074TAZZ		Jack, 10Pin	AH
R7807	VRS-CZ1JF303D	30k	1/16W Metal Oxide	AA	J7401	QJAKZ0072TAZZ		Jack, 4Pin	AG
R7808	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA	P151	QPLGN0288TAZZ		Plug, 2Pin	AE
R7809	VRS-CZ1JF393D	39k	1/16W Metal Oxide	AB	P6701	QPLGN0675TAZZ		Plug, 6Pin	AD
R7810	VRS-CZ1JF303D	30k	1/16W Metal Oxide	AA	SC800	QCNCW4080TAZZ		Connector, 40Pin	AF
R7811	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA	SC900	QCNCW2080TAZZ		Connector, 20Pin	AF
R7812	VRS-CZ1JF393D	39k	1/16W Metal Oxide	AB	SC1001	QCNCW8080TAZZ		Connector, 80Pin	AH
R7813	VRS-CZ1JF303D	30k	1/16W Metal Oxide	AA	SC2401	QCNCW1083TAZZ		Connector, 10Pin	AE
R7814	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA	SC3301	QCNCW8080TAZZ		Connector, 40Pin	AH
R7827	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA	DUNTK2919QA01 CAMERA HEAD PWB UNIT				
R7841	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA	INTEGRATED CIRCUITS				
R7843	VRS-CZ1JF393J	39k	1/16W Metal Oxide	AA	IC11	VHiCXD2478R-1		CXD2478R, Timing Generator	AV
R7846	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	IC101	VHiAN2108NF-1		AN2108NF, CDS/AGC	AS
R7847	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA	IC501	RH-iX0725TAZZ		IX0725TA, Lens μ-Com	AS
R7850	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	IC551	VHiMM1449XQ-1		MM1449XQ, Lens Driver	AT
R7851	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	IC552	VHiNJM2902V-1		NJM2902V, Hall-Device Driver/Amp Iris Drive	AD
R7852	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA	IC553	VHiNJM3414V-1		NJM3414V, Iris Drive	AF
R7853	VRK-SA1JF564J	560k	1/16W	AC	IC1001	VHiM24C04W6-1		M24C04W6, E ² PROM	AE
			Metal Composition		TRANSISTORS				
R7854	VRS-CZ1JF683J	68k	1/16W Metal Oxide	AA	Q1	VS2SK508///-1		2SK508	AE
R7855	VRS-CZ1JF823J	82k	1/16W Metal Oxide	AA	Q2	VS2SC4627CD-1		2SC4627CD	AB
R7856	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	Q11	VS2SC5383F/-1		2SC5383F	AB
R9924	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA	Q501	VSRT1N140U/-1		RT1N140U	AB
R9951	VRS-CZ1JF272D	2.7k	1/16W Metal Oxide	AB	Q502	VS2SA1362GR-1		2SA1362GR	AC
R9952	VRS-CZ1JF273D	27k	1/16W Metal Oxide	AA	Q503	VS2SA1362GR-1		2SA1362GR	AC
R9953	VRS-CZ1JF333D	33k	1/16W Metal Oxide	AB	DIODES				
R9954	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA	D1	VHDMC2852//-1		MC2852	AB
R9956	VRS-CZ1JF104D	100k	1/16W Metal Oxide	AB	D551	VHDMC2852//-1		MC2852	AB
R9957	VRS-CZ1JF682D	6.8k	1/16W Metal Oxide	AB	PACKAGED CIRCUIT				
R9959	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA	X11	RCRSZ0075TAZZ		Crystal, CRSZ0075TA	AQ
R9960	VRS-CZ1JF332J	3.3k	1/16W Metal Oxide	AA	COILS				
R9961	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA	CF501	RFiLC0070TAZZ		Filter, FiLC0070TA	AE
R9962	VRS-CZ1JF473D	47k	1/16W Metal Oxide	AB	L12	VPD9M100KR86N		Peaking, 10μH	AC
R9963	VRS-CZ1JF273D	27k	1/16W Metal Oxide	AA	L101	VPD9M470K4R1N		Peaking, 47μH	AC
R9964	VRS-CZ1JF683J	68k	1/16W Metal Oxide	AA	L501	VPD9M100KR86N		Peaking, 10μH	AC
R9965	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA	L551	VPD9M100KR86N		Peaking, 10μH	AC
R9966	VRS-CZ1JF123D	12k	1/16W Metal Oxide	AA	CAPACITORS				
R9967	VRS-CZ1JF912D	9.1k	1/16W Metal Oxide	AA	C1	VCKYTV1EB104K	0.1	25V Ceramic	AB
R9968	VRS-CZ1JF433J	43k	1/16W Metal Oxide	AA	C2	VCKYTV1EB104K	0.1	25V Ceramic	AB
R9969	VRS-CZ1JF104D	100k	1/16W Metal Oxide	AB	C3	VCKYCZ1CB103K	0.01	16V Ceramic	AB
R9973	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA	C4	VCSATA1CJ106M	10	16V Tantalum	AD
R9975	VRS-CZ1JF822J	8.2k	1/16W Metal Oxide	AA	C5	VCKYCZ1HB102K	1000p	50V Ceramic	AB
R9977	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA					
R9978	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA					
R9979	VRS-CZ1JF562J	5.6k	1/16W Metal Oxide	AA					
R9980	VRS-CZ1JF104D	100k	1/16W Metal Oxide	AB					
R9981	VRS-CZ1JF273J	27k	1/16W Metal Oxide	AA					
R9982	VRS-CZ1JF822D	8.2k	1/16W Metal Oxide	AA					
R9983	VRS-CZ1JF471J	470	1/16W Metal Oxide	AA					
R9984	VRS-CZ1JF104D	100k	1/16W Metal Oxide	AB					
R9985	VRS-CZ1JF243D	24k	1/16W Metal Oxide	AA					
R9986	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA					
R9987	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA					
R9988	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA					
R9990	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA					
R9991	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA					
R9992	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA					

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
MISCELLANEOUS PARTS									
	PZETE0022TAZZ		Insulator	AA	C685	VCSATA0JJ156M	15	6.3V Tantalum	AC
	PZETE0024TAZZ		Insulator	AC	C686	VCSATA0JJ156M	15	6.3V Tantalum	AC
	PZETE0034TAZZ		Insulator	AA	C1502	VCKYCZ1CB223K	0.022	16V Ceramic	AC
P101	QPLGN0288TAZZ		Plug, 2Pin	AE	C1503	VCKYCZ1AB473K	0.047	10V Ceramic	AB
SC501	QSOCN3911TAN1		Socket, 39Pin	AG	C1504	VCKYCZ1HB332K	3300p	50V Ceramic	AA
SC502	QSOCN0660TAZZ		Socket, 6Pin	AC	C1505	VCSATA0GJ226M	22	4V Tantalum	AD
SC551	QSOCN2205TAN1		Socket, 22Pin	AF	C1506	RC-KZ0055TAZZ	3.3	10V Ceramic	AD
					C1507	VCCCCZ1HH101J	100p	50V Ceramic	AB
					C1508	VCKYCZ1CB223K	0.022	16V Ceramic	AC
					C1509	VCSATA0JJ156M	15	6.3V Tantalum	AC
DUNTK2920QA01 AUDIO I/O PWB UNIT					RESISTORS				
INTEGRATED CIRCUITS					R603	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
IC601	VHiBH7761KV-1		BH7761KV, Audio I/O	AS	R609	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
IC602	VHiNJM2143R-1		NJM2143R, Amp	AE	R610	VRS-CZ1JF562J	5.6k	1/16W Metal Oxide	AA
IC1501	VHiNJM2112V-1		NJM2112V, Op-Amp	AF	R613	VRS-CZ1JF683J	68k	1/16W Metal Oxide	AA
IC1502	VHiTC7S66U/-1		TC7S66U, Analog SW	AE	R614	VRK-SA1JF222J	2.2k	1/16W Metal Composition	AB
TRANSISTORS					R616	VRS-CZ1JF683J	68k	1/16W Metal Oxide	AA
Q601	VSFMG12////-1		FMG12	AD	R617	VRK-SA1JF222J	2.2k	1/16W Metal Composition	AB
Q602	VSRN4984////-1		RN4984	AC	R621	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
Q603	VSHN1B04FU/-1		HN1B04FU	AC	R623	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
Q604	VSHN2A01FU/-1		HN2A01FU	AC	R626	VRS-CZ1JF183J	18k	1/16W Metal Oxide	AA
Q605	VSRT1N441U/-1		RT1N441U	AB	R627	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA
Q606	VSRN4984////-1		RN4984	AC	R628	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
Q608	VSFMG12////-1		FMG12	AD	R629	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
Q1501	VS2SA1989R/-1		2SA1989R	AB	R630	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
COILS					R632	VRS-CZ1JF183J	18k	1/16W Metal Oxide	AA
L601	VPCCM101K2R1N		Peaking, 100μH	AC	R634	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA
L602	VPCBM220K1R3N		Peaking, 22μH	AC	R635	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
L603	VPCQM220K1R0N		Peaking, 22μH	AB	R636	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA
L1501	VPD9M220K2R0N		Peaking, 22μH	AC	R638	VRS-CZ1JF105J	1M	1/16W Metal Oxide	AA
CAPACITORS					R639	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
C603	VCKYTV1CF225Z	2.2	16V Ceramic	AC	R640	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA
C605	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	R641	VRS-CZ1JF562J	5.6k	1/16W Metal Oxide	AA
C606	VCKYCY1AF105Z	1	10V Ceramic	AC	R645	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA
C607	VCKYCY1CB104K	0.1	16V Ceramic	AB	R647	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
C608	VCKYCY1CB104K	0.1	16V Ceramic	AB	R652	VRS-CZ1JF334J	330k	1/16W Metal Oxide	AA
C609	VCKYCY1AF105Z	1	10V Ceramic	AC	R653	VRS-CZ1JF334J	330k	1/16W Metal Oxide	AA
C610	VCKYCZ1HB102K	1000p	50V Ceramic	AB	R654	VRS-CZ1JF273J	27k	1/16W Metal Oxide	AA
C611	VCKYCZ1HB102K	1000p	50V Ceramic	AB	R655	VRK-SA1JF223J	22k	1/16W Metal Composition	AB
C616	VCKYTV1CF225Z	2.2	16V Ceramic	AC	R656	VRS-CZ1JF563J	56k	1/16W Metal Oxide	AA
C617	VCKYCY1AF105Z	1	10V Ceramic	AC	R660	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
C618	VCKYCY1CB473K	0.047	16V Ceramic	AA	R661	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
C619	VCKYCY1CB473K	0.047	16V Ceramic	AA	R662	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
C621	VCKYCY1HB681K	680p	50V Ceramic	AA	R663	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
C623	VCKYCY1CB104K	0.1	16V Ceramic	AB	R666	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
C624	VCKYCZ1EB472K	4700p	25V Ceramic	AB	R667	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
C626	VCKYCY1HB681K	680p	50V Ceramic	AA	R668	VRS-CZ1JF183J	18k	1/16W Metal Oxide	AA
C628	VCKYCY1CB104K	0.1	16V Ceramic	AB	R669	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA
C629	VCKYCZ1EB472K	4700p	25V Ceramic	AB	R670	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
C631	VCSATA1AJ475M	4.7	10V Tantalum	AC	R671	VRS-CZ1JF183J	18k	1/16W Metal Oxide	AA
C632	VCSATA0JJ156M	15	6.3V Tantalum	AC	R672	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
C633	VCSATA0JJ156M	15	6.3V Tantalum	AC	R673	VRS-CZ1JF122J	1.2k	1/16W Metal Oxide	AA
C634	VCSATA1AJ106M	10	10V Tantalum	AC	R674	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
C635	VCSATE1AJ476M	47	10V Tantalum	AD	R675	VRS-CZ1JF333J	33k	1/16W Metal Oxide	AA
C636	VCSATE1AJ476M	47	10V Tantalum	AD	R676	VRS-CZ1JF122J	1.2k	1/16W Metal Oxide	AA
C637	VCKYCY1AF105Z	1	10V Ceramic	AC	R683	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
C638	VCSATA1AJ475M	4.7	10V Tantalum	AC	R685	VRS-CZ1JF563J	56k	1/16W Metal Oxide	AA
C639	VCSATA0JJ156M	15	6.3V Tantalum	AC	R686	VRS-CZ1JF563J	56k	1/16W Metal Oxide	AA
C640	VCSATE1AJ476M	47	10V Tantalum	AD	R687	VRS-CZ1JF121J	120	1/16W Metal Oxide	AA
C641	VCKYCY0JF105Z	1	6.3V Ceramic	AB	R688	VRS-CZ1JF121J	120	1/16W Metal Oxide	AA
C642	VCSATE0JJ107M	100	6.3V Tantalum	AE	R1501	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA
C643	VCKYCY1CB104K	0.1	16V Ceramic	AB	R1502	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA
C644	VCKYCY1CB104K	0.1	16V Ceramic	AB	R1503	VRS-CZ1JF223J	22k	1/16W Metal Oxide	AA
C645	VCKYCY1CB104K	0.1	16V Ceramic	AB	R1504	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
C646	VCKYCY1AF105Z	1	10V Ceramic	AC	R1505	VRS-CZ1JF474D	470k	1/16W Metal Oxide	AA
C647	VCKYCY1CB473K	0.047	16V Ceramic	AA	R1506	VRS-CZ1JF274J	270k	1/16W Metal Oxide	AA
C648	VCKYCY1CB473K	0.047	16V Ceramic	AA	R1507	VRS-CZ1JF474D	470k	1/16W Metal Oxide	AA
C649	VCKYCY1AF105Z	1	10V Ceramic	AC	R1508	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
					R1509	VRS-CZ1JF153J	15k	1/16W Metal Oxide	AA
					R1511	VRS-CZ1JF472J	4.7k	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
MISCELLANEOUS PARTS									
BAT2601	QTANS9044TAFW		Terminal	AC	C9808	VCKYCZ1CB103K	0.01	16V Ceramic	AB
BAT2602	QTANS9045TAFW		Terminal	AC	C9809	VCKYCZ1CB103K	0.01	16V Ceramic	AB
FB601	RBLN-0120TAZZ		Balun, BLN-0120TA	AC	C9810	RC-KZ0351CEZZ		Capacitor	AD
FB602	RBLN-0120TAZZ		Balun, BLN-0120TA	AC	C9811	VCKYCZ1AF104Z	0.1	10V Ceramic	AB
FB603	RBLN-0120TAZZ		Balun, BLN-0120TA	AC	C9812	VCKYCZ1AB104K	0.1	10V Ceramic	AB
J601	QJAKE0060TAZZ		Jack, 4Pin	AE	C9813	VCKYCZ1HB102K	1000p	50V Ceramic	AB
P601	QPLGN0374TAZZ		Plug, 3Pin	AC	RESISTORS				
P602	QPLGN0276TAZZ		Plug, 2Pin	AD	R3803	VRS-CZ1JF394J	390k	1/16W Metal Oxide	AA
P2604	QPLGN0276TAZZ		Plug, 2Pin	AD	R3804	VRK-SA1JF473J	47k	1/16W Metal Oxide	AC
P2605	QPLGN0276TAZZ		Plug, 2Pin	AD				Metal Composition	
SC2601	QSOCN2711TAN1		Socket, 27Pin	AG	R3805	VRS-CZ1JF394J	390k	1/16W Metal Oxide	AA
SC2602	QSOCN2711TAN1		Socket, 27Pin	AG	R3810	VRS-CZ1JF274J	270k	1/16W Metal Oxide	AA
SC2603	QSOCN2711TAN1		Socket, 27Pin	AG	R3811	VRS-CZ1JF274J	270k	1/16W Metal Oxide	AA
SC2606	QSOCN0660TAZZ		Socket, 6Pin	AC	R6800	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
SC2607	QSOCN3911TAN1		Socket, 39Pin	AG	R6801	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
S1501	RSNSG0005CEZZ		Gyro-Sensor	AX	R6802	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
DUNTK2921QA01 LCD PWB UNIT									
INTEGRATED CIRCUITS									
IC3800	VHiNJM2904V-1		NJM2904V, Buff	AF	R6803	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
IC8800	VHiVHCT04AT-1		VHCT04AT, Cmos Inv	AE	R6804	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
IC9800	VHiTA75S01F-1		TA75S01F, I Det	AD	R6805	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
TRANSISTORS									
Q3800	VSRN1704///-1		RN1704	AC	R6806	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA
Q3801	VSRN4990///-1		RN4990	AC	R6807	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA
Q3802	VSRN4990///-1		RN4990	AC	R6808	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA
Q8800	VSRN1704///-1		RN1704	AC	R6809	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
Q8801	VSRN1704///-1		RN1704	AC	R6810	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
Q8803	VSRT1N441U/-1		RT1N441U	AB	R6811	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
Q9800	VS2SC5383F/-1		2SC5383F	AB	R6812	VRS-CZ1JF000J	0	1/16W Metal Oxide	AA
Q9801	VSCPH3209//1		CPH3209	AD	R6813	VRS-CZ1JF221J	220	1/16W Metal Oxide	AA
Q9802	VSCPH3209//1		CPH3209	AD	R8808	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
Q9803	VSHN1B04FU/-1		HN1B04FU	AC	R8809	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
DIODE									
D9800	RH-EX0161TAZZ		Zener, EX0161TA	AD	R8810	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
PACKAGED CIRCUIT									
TH9800	VHHT1103K44-1		Thermistor	AD	R8811	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
COILS AND TRANSFORMER									
L8800	VPD9M470J6R6N		Peaking, 47µH	AC	R8812	VRS-CZ1JF273D	27k	1/16W Metal Oxide	AA
L9800	RCiLP0327TAZZ		Coil, CiLP0327TA	AD	R8813	VRS-CZ1JF183D	18k	1/16W Metal Oxide	AB
L9801	RCiLP0331TAZZ		Coil, CiLP0331TA	AD	R8814	VRS-CZ1JF512J	5.1k	1/16W Metal Oxide	AB
△ T9800	RTRNZ0150TAZZ		Power Transformer	AL	R8815	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
CAPACITORS									
C3800	VCKYTV1AB105K	1	10V Ceramic	AD	R8816	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
C3803	VCCCCZ1HH101J	100p	50V Ceramic	AB	R9800	VRS-CZ1JF121J	120	1/16W Metal Oxide	AA
C3804	VCCCCZ1HH101J	100p	50V Ceramic	AB	R9801	VRS-CZ1JF152J	1.5k	1/16W Metal Oxide	AA
C3805	VCKYTV1AB105K	1	10V Ceramic	AD	R9802	VRS-CZ1JF152J	1.5k	1/16W Metal Oxide	AA
C3806	VCKYCZ1CB223K	0.022	16V Ceramic	AC	R9803	VRS-CZ1JF362D	3.6k	1/16W Metal Oxide	AB
C3807	VCKYCZ1CB223K	0.022	16V Ceramic	AC	R9804	VRS-CZ1JF472D	4.7k	1/16W Metal Oxide	AB
C8800	VCKYCZ1CB103K	0.01	16V Ceramic	AB	R9805	VRS-CZ1JF182D	1.8k	1/16W Metal Oxide	AB
C8801	VCKYCZ1CB103K	0.01	16V Ceramic	AB	R9806	VRS-CZ1JF103D	10k	1/16W Metal Oxide	AB
C8802	VCKYCZ1CB103K	0.01	16V Ceramic	AB	R9807	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
C8803	VCKYCZ1HF103Z	0.01	50V Ceramic	AB	R9808	VRS-CZ1JF271D	270	1/16W Metal Oxide	AB
C8804	VCKYCZ1CB103K	0.01	16V Ceramic	AB	R9809	VRS-CZ1JF271D	270	1/16W Metal Oxide	AB
C8806	VCKYCZ1HF103Z	0.01	50V Ceramic	AB	R9810	VRS-CY1JFR22J	0.22	1/16W Metal Oxide	AA
C8808	VCKYCZ1CB103K	0.01	16V Ceramic	AB	R9811	VRS-CY1JFR22J	0.22	1/16W Metal Oxide	AA
C8809	VCSATA1AJ106M	10	10V Tantalum	AC	R9812	VRS-CZ1JF102D	1k	1/16W Metal Oxide	AA
C9800	RC-KZ0055TAZZ	3.3	10V Ceramic	AD	R9813	VRS-CZ1JF183D	18k	1/16W Metal Oxide	AB
C9801	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	R9814	VRS-CZ1JF101J	100	1/16W Metal Oxide	AA
C9802	VCKYCZ1AF104Z	0.1	10V Ceramic	AB	R9817	VRS-CZ1JF103J	10k	1/16W Metal Oxide	AA
C9803	VCKYCZ1CB103K	0.01	16V Ceramic	AB	R9818	VRS-CZ1JF473J	47k	1/16W Metal Oxide	AA
C9804	RC-CZ0057TAZZ	0.015	25V Ceramic	AD	MISCELLANEOUS PARTS				
C9807	VCKYCY1HB332K	3300p	50V Ceramic	AA	FB3800	RBLN-0028TAZZ		Balun, BLN-0028TA	AB
					FB3801	RBLN-0028TAZZ		Balun, BLN-0028TA	AB
					FB8800	RBLN-0028TAZZ		Balun, BLN-0028TA	AB
					FB9800	RBLN-0028TAZZ		Balun, BLN-0028TA	AB
					SC8800	QSOCN1105TAN1		Socket, 11Pin	AE
					SC8801	QSOCN1106TAN1		Socket, 11Pin	AE
					SC8802	QSOCN1106TAN1		Socket, 11Pin	AE
					SC8803	QSOCN2406TAN1		Socket, 24Pin	AF
					SC8804	QSOCN0606TAN1		Socket, 6Pin	AK
					SC9800	QSOCN1019TAN1		Socket, 10Pin	AG

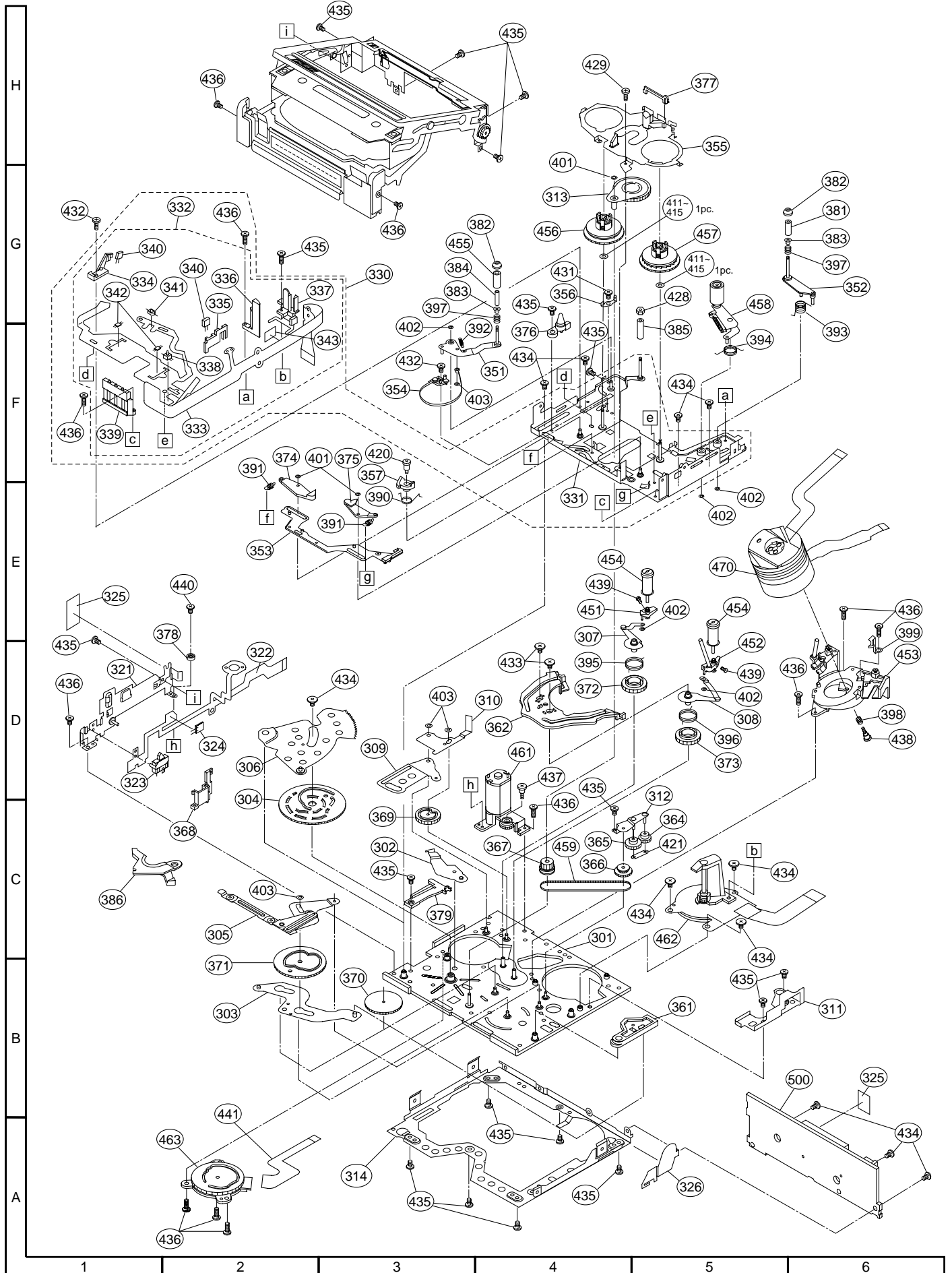
Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
RAMP-0032TANO HEAD AMP PWB UNIT									
INTEGRATED CIRCUITS									
IC301	VHiBH7275KV-1		BH7275KV, REC/PB Amp IC	AU	R321	VRS-CZ1JF682J	6.8k	1/16W Metal Oxide	AA
IC302	VHiM24C04W6-1		M24C04W6, E ² PROM IC	AE	R324	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
TRANSISTORS									
Q302	VS2SC4738Y/-1		2SC4738Y	AA	R330	VRS-CZ1JF563J	56k	1/16W Metal Oxide	AA
	or				R332	VRS-CZ1JF102J	1k	1/16W Metal Oxide	AA
	VS2SC4617B/-1		2SC4617B	AA	R333	VRS-CZ1JF222J	2.2k	1/16W Metal Oxide	AA
	or				R377	VRS-CZ1JF000J	0		AA
Q303	VS2SC5383F/-1		2SC5383F	AB	R380	VRS-TV1JD100J	10k	1/16W Metal Oxide	AA
	VS2SC4738Y/-1		2SC4738Y	AA	MISCELLANEOUS PARTS				
	or				P306	QCNCM8082TAZZ		Plug, 80Pin	AK
	VS2SC4617B/-1		2SC4617B	AA	P1008	QCNCM8082TAZZ		Connector, 80Pin	AK
	or				SC301	QSOCN0806TAN1		Connector, 8Pin	AL
	VS2SC5383F/-1		2SC5383F	AB	SC302	QSOCN0606TAN1		Connector, 6Pin	AK
	VS2SC4738Y/-1		2SC4738Y	AA	SC303	QSOCN1005TAN1		Connector, 10Pin	AF
	or				SC304	QSOCN0705TAN1		Connector, 7Pin	AK
	VS2SC4617B/-1		2SC4617B	AA	SC305	QSOCN1887TAZZ		Connector, 18Pin	AD
	or				SC306	QSOCN1886TAZZ		Connector, 18Pin	AD
	VS2SC5383F/-1		2SC5383F	AB	SC1007	QCNCW8080TAZZ		Connector, 80Pin	AH
COIL									
L301	VPAWM4R7MR70N		Coil, 4.7μH	AC					
CAPACITORS									
C301	VCKYCZ1HB102K		1000p 50V Ceramic	AB					
C302	VCKYCZ1HF103Z		0.01 50V Ceramic	AB					
C303	VCSATE1AJ336M		33 10V Tantalum	AG					
C304	VCKYCZ1AF104Z		0.1 10V Ceramic	AB					
C305	VCCCCY1HH331J		330p 50V Ceramic	AA					
C306	VCKYCZ1HB102K		1000p 50V Ceramic	AB					
C307	VCCCCY1HH331J		330p 50V Ceramic	AA					
C308	VCKYCZ1AF104Z		0.1 10V Ceramic	AB					
C309	VCKYCZ1HB102K		1000p 50V Ceramic	AB					
C310	VCKYCY1HF103Z		0.01 50V Ceramic	AB					
C311	VCKYCZ1HF103Z		0.01 50V Ceramic	AB					
C312	VCKYCZ1HB102K		1000p 50V Ceramic	AB					
C313	VCKYCZ1HB102K		1000p 50V Ceramic	AB					
C314	VCKYCZ1AF104Z		0.1 10V Ceramic	AB					
C315	VCKYCZ1HB102K		1000p 50V Ceramic	AB					
C318	VCKYCZ1HB102K		1000p 50V Ceramic	AB					
C319	VCKYCZ1AF104Z		0.1 10V Ceramic	AB					
C320	VCKYCZ1AF104Z		0.1 10V Ceramic	AB					
C321	VCKYCZ1HB102K		1000p 50V Ceramic	AB					
C322	VCKYCY0JB105K		1 22V Ceramic	AC					
C323	VCKYCZ1HB102K		1000p 50V Ceramic	AB					
C324	VCKYCZ1HF103Z		0.01 50V Ceramic	AB					
C327	VCKYCZ1EB472K		4700P 25V Ceramic	AB					
C329	VCSATE1AJ336M		33 10 Tantalum	AG					
C330	VCKYCZ1HF103Z		0.01 50V Ceramic	AB					
C331	VCKYCZ1AF104Z		0.1 10V Ceramic	AB					
C332	VCKYCZ1EB472K		4700p 25V Ceramic	AB					
C333	VCKYCZ1CB822K		8200p 16V Ceramic	AB					
C340	VCCCCZ1HH5R0C		5p 50V Ceramic	AC					
C342	VCCCCZ1HH5R0C		5p 50V Ceramic	AC					
C343	VCKYCZ1AF104Z		0.1 10V Ceramic	AB					
C344	VCKYCZ1AF104Z		0.1 10V Ceramic	AB					
C345	VCKYCZ1AF104Z		0.1 10V Ceramic	AB					
RESISTORS									
R304	VRS-CZ1JF222J		2.2k 1/16W Metal Oxide	AA					
R308	VRS-CZ1JF122J		1.2k 1/16W Metal Oxide	AA					
R309	VRS-CZ1JF512J		5.1k	AB					
R310	VRS-CZ1JF433J		43k 1/16W Metal Oxide	AA					
R311	VRS-CZ1JF101J		100 1/16W Metal Oxide	AA					
R312	VRS-CZ1JF102J		1k 1/16W Metal Oxide	AA					
R313	VRS-CZ1JF822J		8.2k	AA					
R314	VRS-CZ1JF101J		100 1/16W Metal Oxide	AA					
R315	VRS-CZ1JF102J		1k 1/16W Metal Oxide	AA					
R316	VRS-CZ1JF473J		47k	AA					
R317	VRS-CZ1JF563J		51k 1/16W Metal Oxide	AA					
R318	VRS-CZ1JF513J		51k	AA					
R319	VRS-CZ1JF182J		1.8k 1/16W Metal Oxide	AA					
R320	VRS-CZ1JF182J		1.8k 1/16W Metal Oxide	AA					

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
MECHANISM PARTS									
301	DMECV0063GE65		Mechanism Ass'y	—	392	MSPRT0418GEFJ		T Arm SPR.	AB
302	LCHSM0167GEZZ		Main Chassis Ass'y	AQ	393	MSPRD0178GEFJ		Tu Guide Arm SPR.	AB
303	MLEVF0501GEFW		Eject Lever	AD	394	MSPRD0179GEFJ		Pinch Lever Return SPR.	AB
304	MLEVF0502GEFW		Pinch Control Lever	AD	395	MSPRD0180GEFJ		S Pressure SPR.	AB
305	NGERH3050GEFW		Main Cam	AD	396	MSPRD0181GEFJ		Tu Pressure SPR.	AB
306	MLEVF0503GEZZ		Shifter Drive Lever Ass'y	AE	397	MSPRC0220GEFJ		Guide Adjustment SPR.	AA
307	MLEVF0505GEFW		Loading Lever	AD	398	MSPRC0221GEFJ		Drum Fixing SPR.	AA
308	MARMM0130GEZZ		S Loading Arm Ass'y	AF	399	MSPRP0185GEZZ		PB Guide SPR.	AC
309	MARMM0131GEZZ		Tu Loading Arm Ass'y	AF	401	LX-WZ1071GE02		CW ø 0.7 ø 1.8t0.1	AC
310	MLEVF0508GEFW		T Arm Control Lever	AD	402	LX-WZ1104GE06		CW ø 0.7 ø 2.2t0.25	AB
311	MLEVF0509GEFW		AHC Control Lever	AC	403	LX-WZ1029GE00		CW ø 1.2 ø 3t0.25	AA
312	LANGG9106GEFW		Tu Guide Cam	AD	411	LZ-WZ1105GE00		W ø 1.2 ø 2.5t0.13	AA
313	LANGF9016GEZZ		Intermediate Gear	AG	412	LZ-WZ1106GE00		W ø 1.2 ø 2.5t0.2	AA
			ANG Ass'y		413	XWHJZ12-03025		W ø 1.2 ø 2.5t0.3	AA
314	MARMM0132GEZZ		Swing Arm Ass'y	AG	414	XWHJZ12-04025		W ø 1.2 ø 2.5t0.4	AA
			Mechanism Fixing Angle Ass'y	AH	415	XWHJZ12-05025		W ø 1.2 ø 2.5t0.5	AA
321	LANGQ1044GEZZ		Down SW-ANG Ass'y	AE	420	LX-BZ3202GEFF		Swing Arm Release Lever Fixing Screw	AC
322	QPWBH5781GEZZ		Dew Sensor FPC	AH	421	LHLDZ2025GEZZ		Intermediate Gear Stopper	AB
323	QSW-M0016TAZZ		Down SW	AD	428	LX-NZ0102GEFW		S Guide Hexagon Nut	AC
324	RDTCH0039GEZZ		Dew Sensor	AD	429	LX-BZ3203GEFF		Type 1 Minuteness	AB
325	ZTAPEZ212010M		Cap FPC Stopper	AB	431	LX-BZ3135GEFF		Screw M1.4 x L1	AA
326	LANGG9109GEFW		Cap FPC Stopper	AC	432	LX-BZ3201GEFF		Screw M1.4 x L1	AA
330	CCHSS0047GE02		Slide Chassis Ass'y with FPC Sensor	AZ	433	LX-BZ3132GEFF		Special Head	AB
331	LCHSS0047GEZZ		Slide Chassis Ass'y	AQ	434	LX-BZ3131GEFN		Screw M1.4 x L2	AA
332	CPWBH5782GE01		Sensor FPC Ass'y	AX	437	LX-HZ3089GEFF		Screw M1.4 x L1.5	AA
333	QPWBH5782GEZZ		Sensor FPC	AN	437	LX-HZ3076GEFF		Screw M1.4 x L1.6	AA
334	LHLDP1174GEZZ		S-LED Holder	AC	437	LX-HZ3088GEFF		S Tight Screw M1.4 x L2	AA
335	LHLDP1175GEZZ		Tu-LED Holder	AC	437	LX-HZ3088GEFF		S Tight Screw M1.4 x L3	AA
336	PGiDM0157GEZZ		Lid Opener	AB	438	LX-BZ3225GEFF		L Motor Installation Screw	AB
337	LHLDZ2023GEZZ		Sensor FPC Guide	AB	439	LX-BZ3181GEFN		Drum Installation Screw	AC
338	QSW-M0047GEZZ		Recognition SW	AE	440	LX-HZ3084GEFF		GR Lock Screw	AD
339	QTANZ0003GEZZ		Mic Contact	AE	441	QPWBH5780GEZZ		S Tight Screw M1.4 x L4	AC
340	RH-PX0180TAZZ		Cassette LED	AE	441	QPWBH5780GEZZ		Mode FPC	AE
341	RH-PX0181TAZZ		S/E Sensor	AF	451	LPOLM0065GEZZ		Sup Pole Base Ass'y	AK
342	RDTCM0002TAZZ		Reel Sensor	AE	452	LPOLM0066GEZZ		Tu Pole Base Ass'y	AK
343	PSHEP0015GEZZ		Sensor FPC Reinforcing Plate	AB	453	CGiDM0158GE01		Drum Base Ass'y	AN
351	MLEVF0510GEZZ		Tension Arm Ass'y	AG	454	NROLM0046GEZZ		Guide Roller Ass'y	AM
352	MLEVF0511GEZZ		Tu Guide Arm Ass'y	AG	455	NROLM0045GEZZ		T Roller Ass'y	AK
353	MLEVF0512GEZZ		Brake Shifter Ass'y	AE	456	NDAiV1076GEZZ		S Reel Base Ass'y	AM
354	LBNDK3022GEZZ		Tension Band Ass'y	AF	457	NDAiV1077GEZZ		Tu Reel Base Ass'y	AK
355	LANGA0073GEZZ		Reel Cover Ass'y	AG	458	MLEVF0526GEZZ		Pinch Lever Ass'y	AP
356	LANGJ0038GEFW		T Spring Hanging ANG	AC	459	NBLTT0016GEZZ		Timing Belt	AD
357	MLEVP0302GEZZ		Swing Arm Release Lever	AC	461	RMOTM1080GEZZ		L Motor Ass'y	AQ
361	MLEVP0296GEZZ		Pinch Drive Lever	AB	462	RMOTV1023GEZZ		Capstan Motor	AY
362	PGiDM0156GEZZ		Guide Rail	AC	463	QSW-R0039GEZZ		Mode SW	AE
364	NGERH1300GEZZ		Intermediate Gear A Ass'y	AE	470	DDRMV0061GE04		Drum Ass'y	BZ
365	NGERH1301GEZZ		Intermediate Gear B Ass'y	AB	500	RAMP-0032TAN0		Head Amp PWB Unit	—
366	NPLYV0164GEZZ		Intermediate Pulley Ass'y	AC	CASSETTE CONTROL PARTS				
367	NPLYV0165GEZZ		Center Pulley Ass'y	AC	600	CHLDX3080GE08		Cassette Control Ass'y	AY
368	PCOVP1024GEZZ		Down SW Cover	AB	601	LHLDX3080GEZZ		Housing Ass'y	AW
369	NGERH1302GEZZ		AHC Cam	AB	604	CLEVF0524GE01		Top Cover Ass'y	AT
370	NGERH1303GEZZ		Coupling Gear	AB	606	LANGF9647GEZZ		Side Board Ass'y	AG
371	NGERH1304GEZZ		Sub Cam	AC	607	MSPRB0001GEFJ		UP-Spring	AD
372	NGERH1305GEZZ		S Loading Gear	AC	608	LX-HZ3089GEFF		S Tight Screw M1.4 x L2	AA
373	NGERH1306GEZZ		Tu Loading Gear	AC	609	PDMP-0016GEZZ		Damper	AE
374	MLEVP0308GEZZ		S Main Brake	AB	610	TLABH0556GEZZ		Cassette Control Caution Label	AD
375	MLEVP0309GEZZ		Tu Main Brake	AB	611	TLABH0557GEZZ		Cassette Control Lock Label	AD
376	LHLDX1033GEZZ		S Cassette Stay	AB	614	ZTAPEZ211004M		FPC Shield Tape	AB
377	LHLDZ2024GEZZ		FPC Cover	AB	617	PGiDM0160GEZZ		Cassette Lid Guide L	AC
378	PGiDM0166GEZZ		SL Chassis Holder-S	AC	618	PGiDM0161GEZZ		Cassette Lid Guide R	AC
379	PGiDM0167GEZZ		Lock Lever Guide	AC					
381	PGiDP0031GEFW		Tu Pole	AD					
382	PGiDS0046GEFW		T Roller Upper Flange	AE					
383	PGiDS0047GEFW		T Roller Bottom Flange	AE					
384	NSFTL0761GEFW		T Roller Inner	AE					
385	PGiDP0042GEFW		S Guide Sleeve	AD					
386	PGiDM0170GEZZ		Slide Chassis Guide	AC					
390	MSPRD0184GEFJ		Swing Arm Release SPR.	AC					
391	MSPRT0417GEFJ		Main Brake SPR.	AB					

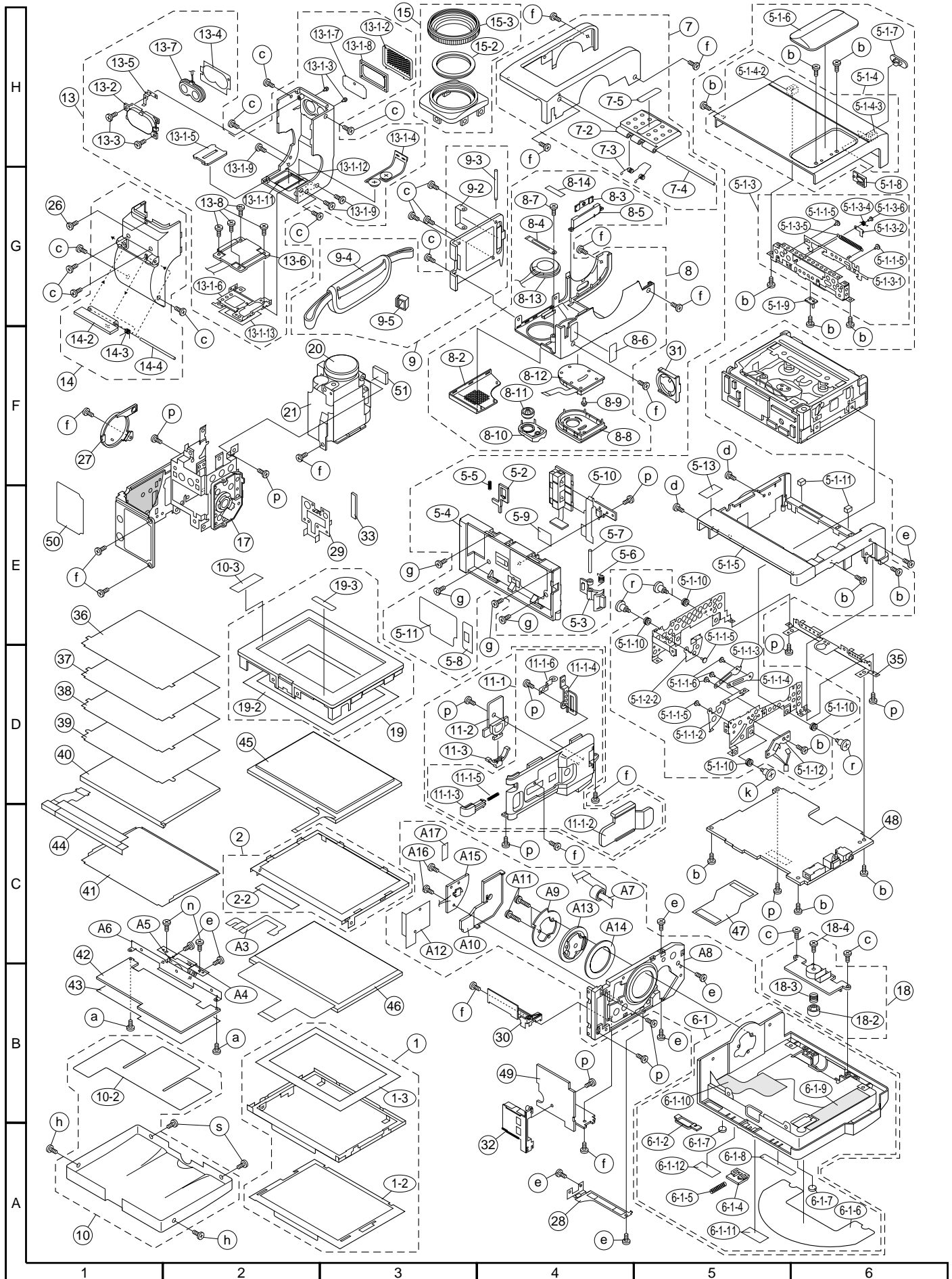
Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
CABINET PARTS LIST					A14	PSPAZ0294TAZZ		Spacer	AF
1	CANGK0482TA01		KS, LCD Shield Rear	AL	A15	QSW-Z0335TAZZ		Camera Turn SW	AG
1-2	PSHEP0132TAZZ		Light Shield Sheet	AE	A16	XiPSF17P03000		M1.7 x 3 Black Small Screw	AA
1-3	PTPEH0021TAZZ		LCD Fixing Double-sided Adhesive Tape	AD	A17	PSHEP0145TAZZ		FPC Tape	AB
2	CANGK0483TA01		KS, LCD Shield Front	AG	7	CCABC6215TAK1		Camera Front Cabinet Complete	AQ
2-2	PZETE0025TAZZ		Insulation Sheet E	AA	7-2	GCOVA1638TAKA		Camera Front Grip	AF
5-1-1-2	LANGK0487TAFW		Stay A	AD	7-3	MSPRD0069TAFJ		Grip Spring	AC
5-1-1-3	LANGK0488TAFW		Stay B	AC	7-4	NSFTZ0125TAFW		Grip Shaft	AD
5-1-1-4	LANGK0489TAFW		Stay C	AC	7-5	PSHEP0134TAZZ		Grip Slide Sheet	AC
5-1-1-5	NSFTZ0115TAFW		Caulking A	AC	8	DCABD6113TAK1		Camera Rear Cabinet Complete	AS
5-1-1-6	NSFTZ0117TAFW		Caulking C	AC	8-2	GCOVA1639TASA		Camera Rear Grip	AG
5-1-2-2	LANGK0490TAFW		Stay D	AE	8-3	JBTN-0310TASA		Lock Release Button	AE
5-1-3	CANGK0493TA01		Lock Fixing ANG Complete	AP	8-4	LANGK0513TAFW		Speaker ANG	AC
5-1-3-1	LANGK0491TAFW		Lock ANG	AD	8-5	LHLDZ1527TAZZ		Button Holder	AD
5-1-3-2	LANGK0492TAFW		Temporary Lock Angle	AC	8-6	TLABH0417TAZZ		Lithium Replacement Label	AB
5-1-3-4	MSPRD0067TAFJ		V Lid Temporary Lock Spring	AB	8-7	LX-HZ0050TAFJ		M1.7 x 4 Black Tap	AA
5-1-3-5	MSPRT0055TAFJ		V Lid Lock Spring	AC	8-8	GCOVA1677TAKA		Power Switch Cover	AF
5-1-3-6	NSFTZ0118TAFW		Caulking D	AC	8-9	GCOVA1645TAZZ		LED Cover	AC
5-1-4	CFTAC3008TA01		V Lid Complete	AX	8-10	JKNBP0186TASA		Power Knob	AE
5-1-4-2	LHLDZ3044TAZZ		V Lid Caulking R	AE	8-11	JBTN-0311TASA		Pen Input Button	AG
5-1-4-3	LHLDZ3045TAZZ		V Lid Caulking L	AE	8-12	QSW-Z0330TAZZ		Power SW Unit	AP
5-1-5	DCABA6215TAK2		V Frame(FD1U/UT/UW)		8-13	VSP0020P-968N		Speaker	AL
5-1-5	DCABA6215TAK3		V Frame(FD1UK)		8-14	PCOVP9080TAZZ		Sheet	AA
5-1-6	GCOVA1631TASA		Grip Cover	AH	9	CCOVA1628TAK1		Camera Side Cover Complete	AR
5-1-7	JBTN-0308TASA		Lock Button	AF	9-2	LANGK0440TAFW		Shoulder Belt Fitting C	AC
5-1-8	LHLDZ1522TAZZ		Lock Button Holder	AC	9-3	NSFTZ0126TAFW		Strap Shaft B	AB
5-1-9	LHLDZ1523TAZZ		Mechanism Pad Holder	AC	9-4	UBNDT0125TAZZ		Hand Strap	AL
5-1-10	PSPAG0124TA00		Mechanism Floating Rubber	AC	9-5	LHLDE1003TASA		Holder	AD
5-1-11	PSPAZ0295TAZZ		V Lid Cushion	AA	10	CCOVA3070TA01		LCD Cover Ass'y (FD1UT/UK/UW)	AV
5-1-12	QSW-Z0333TAZZ		Eject Detection SW PWB	AK	10	CCOVA3070TA02		LCD Cover Ass'y(FD1U)	AV
5-2	JBTN-0309TASA		LCD Detection Button	AD	10-2	PZETE0026TAZZ		Insulation Sheet F	AC
5-3	JKNBP0184TASA		Battery Lock Knob	AD	10-3	TLABS0102TAZZ		Lightning Label(FD1U)	AD
5-4	LHLDZ1521TAKA		Battery Holder	AF	11-1	DCOVA1675TAK1		VCR Side Cover Ass'y	AS
5-5	MSPRC0125TAFJ		LCD Detection Button Spring	AB	11-1-2	GCOVA1635TASA		Terminal Cover	AE
5-6	MSPRD0066TAFJ		Battery Lock Spring	AC	11-1-3	GCOVH1248TASA		Hole Cover	AD
5-7	NSFTZ0119TAFW		Shaft for Knob	AB	11-1-4	LANGK0494TAFW		Shoulder Fitting V	AE
5-8	PSHEP0129TAZZ		Lock Knob Cover Sheet	AB	11-1-5	MSPRC0127TAFJ		Spring for Hole Cover	AB
5-9	PSHEP0130TAZZ		Temporary Lock Cover Sheet	AB	11-1-6	QEARP0258TAFW		Shoulder Fitting Earth Plate	AC
5-10	QTANZ0143TAZZ		Battery Terminal Unit	AU	11-2	QSW-Z0332TAZZ		JOG Switch	AM
5-11	TLABH0414TAZZ		Battery Caution Label	AD	11-3	JKNBP0161TASB		Jog Knob	AE
5-13	TLABZ0501TAZZ		Real Product Label(FD1UK)	AC	13	DCABE6045TAK1		Camera Upper Cabinet Service	AX
6-1	DCABB6232TA01		L Cabinet Ass'y (FD1U)	BD	13-1-2	GCOVA3073TASA		Microphone Decoration Cover	AK
6-1	DCABB6232TA02		L Cabinet Ass'y (FD1UT/UK/UW)	BD	13-1-3	GLEGP0021TASA		Lens Decoration Leg	AD
6-1-2	GCOVA1634TASA		R/C Cover	AD	13-1-4	JBTN-0312TASA		Start/Stop Button	AG
6-1-4	JKNBP0185TASA		LCD Lock Knob	AG	13-1-5	JKNBP0188TASA		Zoom Lever	AE
6-1-5	MSPRC0124TAFJ		LCD Lock Spring	AB	13-1-6	LANGK0515TAFW		Zoom SW Holding ANG	AK
6-1-6	PSHEP0163TAZZ		Protection Sheet	AF	13-1-7	PCOVP9076TAZZ		Microphone Sheet	AB
6-1-7	PSPAZ0262TAZZ		LCD Holding Rubber	AA	13-1-8	PCOVP9078TAZZ		Microphone Sound Insulation Sheet B	AB
6-1-8	TLABH0416TAZZ		Pen Input Caution Label	AD	13-1-9	XiPSC17P02000		M1.7 x 2 Silver Small Screw	AA
6-1-9	PZETE0028TAZZ		Main PWB Insulation Sheet A	AB	13-1-11	PSHEZ0012TAZZ		Zoom Slide Sheet A	AB
6-1-10	PZETE0029TAZZ		Main PWB Insulation Sheet B	AB	13-1-12	PSHEZ0013TAZZ		Zoom Slide Sheet B	AB
6-1-11	TLABH0418TAZZ		UL/FCC Label(FD1U)	AD	13-1-13	PSHEZ0014TAZZ		Zoom Slide Sheet C	AB
6-1-12	TLABH0423TAZZ		DOC Label(FD1U)	AD	13-2	LHLDZ1525TAZZ		Microphone Holder	AD
A3	CPWBH2923TA01		LCD Tilt FPC	AS	13-3	LX-HZ0050TAFJ		M1.7 x 4 Black Tap	AA
A4	GCOVA1641TASA		LCD Hinge Cover A	AE	13-4	PCOVP9077TAZZ		Microphone Sound Insulation Sheet A	AC
A5	GCOVA1642TASA		LCD Hinge Cover B	AE	13-5	QEARP0259TAFW		Microphone Earth Plate	AC
A6	LANGK0517TAZZ		LCD Hinge Unit	AW	13-6	QSW-Z0331TAZZ		Zoom Unit	AP
A7	CPWBH2922TA01		Camera Tilt FPC	AX	13-7	RMiCC0088TAZZ		Microphone Unit	AR
A8	LANGK0484TAFV		Camera Frame C	AR	13-8	XiPSF17P02000		M1.7 x 2 Black Small Screw	AA
A9	LANGK0495TAFW		Stopper Angle	AC	14	CCABF6200TAK1		Camera Lower Cabinet Ass'y	AS
A10	LHLDZ1526TAZZ		FPC Holder C	AD	14-2	GCOVA3074TASA		Grip Holding Cover	AM
A11	LX-BZ0238TAFD		M1.7 x 5 Small Screw	AB					
A12	PGiDH0011TAZZ		FPC Guide	AF					
A13	PSPAZ0293TAZZ		Camera Tilt Spacer	AE					

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
14-3	MSPRD0068TAFJ		Grip Holding Spring	AB	SUPPLIED ACCESSORIES				
14-4	NSFTZ0127TAFW		Holding Shaft	AB	ACCESSORIES				
15	CCOVA1632TA01		Lens Front Cover Ass'y	AT	GCOVH1250TASA			Lens Cap	AE
15-2	GCOVA1633TASA		Lens Front Decoration Cover	AE	QACCB0016TAZZ			AC Cable(FD1UW)	AV
15-3	GCOVA3072TASA		Lens Hood	AM	QACCZ0052TAZZ			AC Cable(FD1UK)	AM
17	DCOVA3071TA01		Camera Frame Ass'y	BC	QCNW-1927TAZZ			AV/S Cable	AT
18	CCOVA1636TA01		Pop-up Cover Ass'y	AK	QCNW-1926TAZZ			DC Cable	AT
18-2	MLEVP0043TASA		Pop-up Lever	AC	RRMCG0095TASA			Remote Control	AR
18-3	MSPRC0126TAFJ		Pop-up Spring	AB	TiNS-6038TAZZ			Operation Manual (FD1UT)	
18-4	LX-HZ0075TAFD		Special Screw	AA	TiNS-6039TAZZ			Operation Manual (FD1UK)	
19	CCOVA1676TAK1		LCD Front Cover Complete	AP	TiNSE0369TAZZ			Operation Manual (FD1U/UW)	
19-2	QEARP0257TAZZ		LCD Earth Plate	AE	UADP-0294TAZZ			AC Adaptor(FD1U)	BM
19-3	TLABH0415TAZZ		Inversion Caution Label	AD	UADP-0295TAZZ			AC Adaptor(FD1UT)	BN
20	CLNSA0135TA03		Lens	BS	UADP-0296TA01			AC Adaptor(FD1UK)	BP
21	DUNTK2919QA01		Camera Head PWB Unit	—	UADP-0296TAZZ			AC Adaptor(FD1UW)	BN
26	XASSN17P04000		M1.7 x 4 Flat Head Nickel Screw	AA	UBNDS0023TAZZ			Shoulder Strap	AH
27	GCOVA1640TASA		Decoration Cover	AH	UBATL0011TAZZ			Lithium Battery(CR2025)	AE
28	LANGK0511TAFW		Camera Frame Coupling Metal	AD	UBATL0015TAZZ			Lithium Battery(CR1616)	AE
29	LANGK0512TAFW		Camera Head PWB Fixture	AD	UBATi0062TAZZ			Battery	BE
30	LHLDZ1528TAZZ		Camera PWB Holder	AD	GDAl-1058TAZZ			Tripod Stand	AL
31	LHLDZ1529TAZZ		Lithium Holder	AD	UPENP0001TAZZ			Hand-held Pen	AF
32	LHLDZ1530TAZZ		PWB Holder	AD	RCORF0050TAZZ			Ferrite Core for S_video/video/audio Cable	
33	PTPEH0036TAZZ		PWB Double-sided Adhesive Tape	AB	RCORF0037TAZZ			Ferrite Core for DC Cable	AM
35	LANGK0519TAFW		Lock Holding ANG	AF	RCORF0061CEZZ			Ferrite Core for Connecting Cable of Earphones	
36	PSHEP0092TAZZ		Reflection Deflection Plate	AN	QCNW-2014TAZZ			Ferrite Core for DV Cable	AG
37	PSHEP0104TAZZ		Wide-angle Sheet	AD	ACCESSORIES				
38	PSHEP0093TAZZ		Prism Sheet	AH	(NOT REPLACEMENT ITEM)				
39	PSHEP0090TAZZ		Diffusion Sheet	AD	TGANE0044TAZZ			Guarantee Card (FD1U)	AC
40	PGiDM0030TAZZ		Light Guide Plate	AH	TGANZ0013TAZZ			Guarantee Card (FD1UT)	AN
41	PMiR-0026TAZZ		Reflection Sheet	AD	TGANZ0022TAZZ			Guarantee Card (FD1UW)	AL
42	DUNTK2921QA01		LCD PWB Unit	—	TLABK0001TAZZ			No Card	AA
43	PSLDM9150TAZZ		Shield Sheet	AC	PACKING PARTS				
44	CLMPV0049RM04		Lamp Ass'y	AZ	(NOT REPLACEMENT ITEM)				
45	QSW-Z0339TAZZ		Touch Panel	BK	SPAKC7547TAZZ			Packing Case (FD1U/UT)	—
46	RLCDV0039TAZZ		LCD Panel	AD	SPAKC7556TAZZ			Packing Case (FD1UK)	—
47	CPWBH2925TA01		Main H/A Relay Flexible	AR	SPAKC7557TAZZ			Packing Case (FD1UW)	—
48	DUNTK2976QA00		Main PWB Unit	—	SPAKA6359TAZZ			Packing Top ADD.	—
49	DUNTK2920QA01		Audio I/O PWB Unit	—	SPAKA6356TAZZ			Packing Bottom ADD.	—
50	TLABM2122TAZZ		Model Label(FD1U)	AD	SPAKA6362TAZZ			Packing	—
50	TLABM2125TAZZ		Model Label(FD1UT)		SPAKP6068TAZZ			Wrapping Paper	—
50	TLABM2126TAZZ		Model Label(FD1UW)		SSAKA0087TAZZ			Polyethylene Bag	—
50	TLABM2127TAZZ		Model Label(FD1UK)		SPAKP6108TAZZ			Side Pad	—
51	PSPA0313TAZZ		Microphone Sound Insulation Spacer	AB					
a	XiPSC17P02000		M1.7 x 2 Silver Small Screw	AA					
b	XiPSC17P03000		M1.7 x 3 Silver Small Screw	AA					
c	XiPSC17P04000		M1.7 x 4 Silver Small Screw	AA					
d	XiPSC17P05000		M1.7 x 5 Silver Small Screw	AA					
e	XiPSF17P02000		M1.7 x 2 Black Small Screw	AA					
f	LX-BZ0224TAFD		M1.7 x 2.5 Chrome	AA					
g	LX-BZ0222TAFD		M1.7 x 3 Black with A-Lock	AB					
h	LX-BZ0221TAFD		M1.7 x 3 Chrome with A-Lock	AB					
k	LX-BZ0231TAFE		Mechanism Floating Screw	AB					
n	XiPSF20P04000		M2.0 x 4 Black Small Screw	AA					
p	LX-HZ0050TAFD		M1.7 x 4 Black P Tight Screw	AA					
r	LX-BZ0232TAFD		Mechanism Floating Screw	AB					
s	XAPSH17P02000		M1.7 x 2 Chrome Matting	AB					

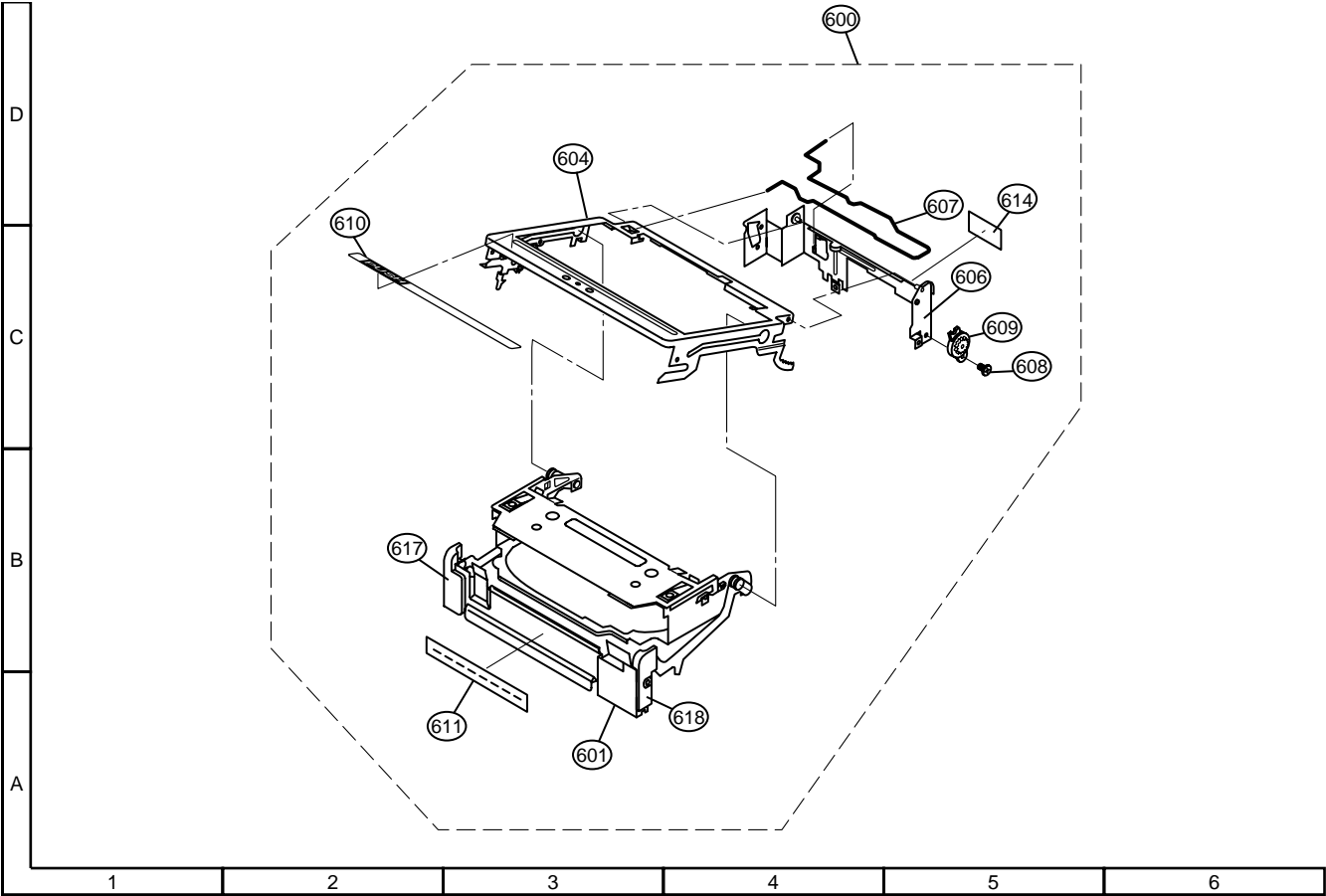
MECHANISM CHASSIS EXPLODED VIEW



CABINET EXPLODED VIEW



CASSETTE CONTROL EXPLOOD VIEW



VL-FD1U SERVICE JIG SPECIFICATIONS

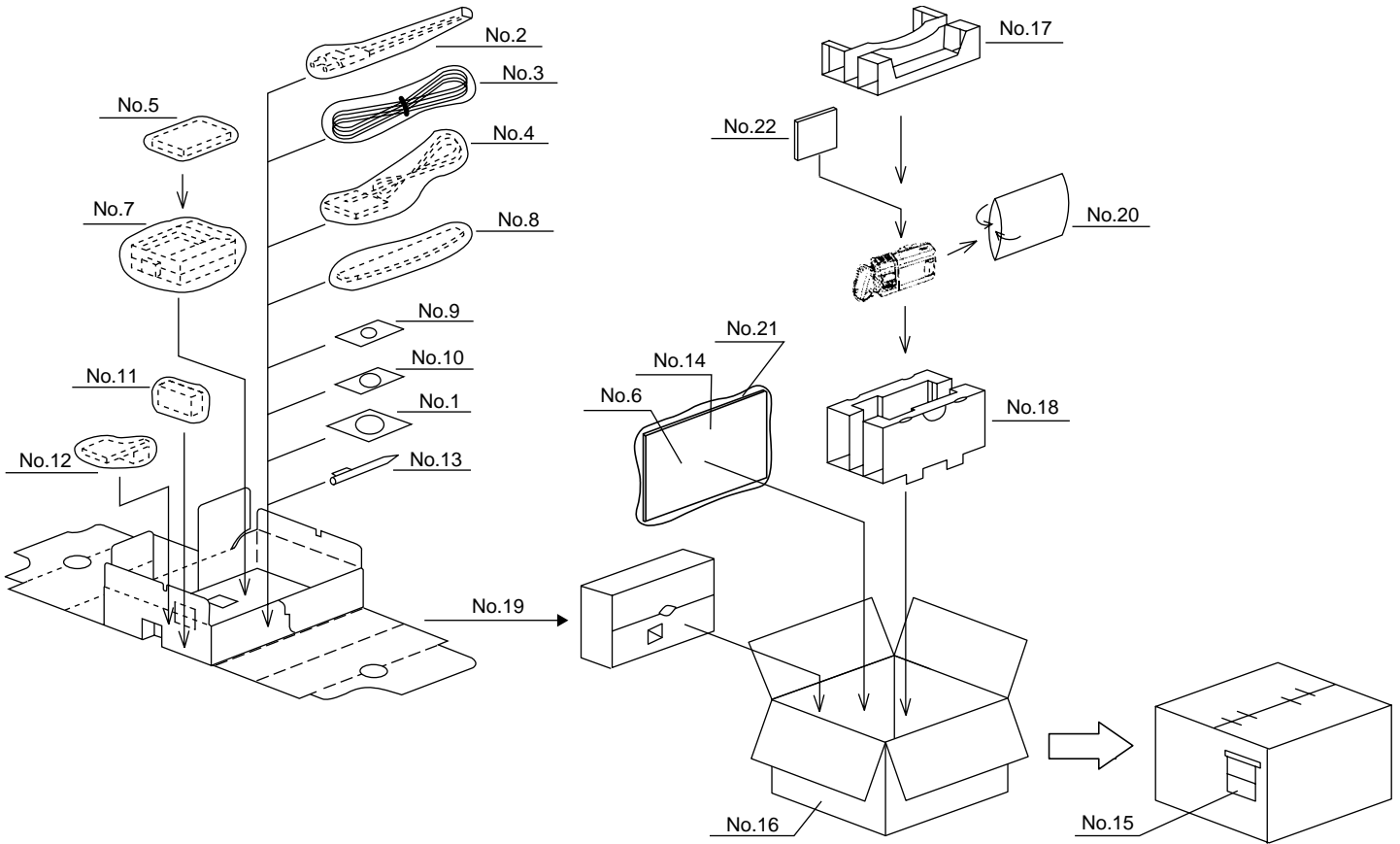
1-1. Adjusting jigs for checking the mechanism

No.	Name	New part	Type number, Application	Part code	Code
1	PB-use cassette torque meter		1mN-m/15mN-m	9DASD-1015	DB
2	Torque gauge		For use in VS-REW take up torque adjustment	JiGTG0045	CN
3	Torque gauge head		For use with the above torque gauge	9EQTGH-DH5000	BW
4	Tension gauge 4N		For measuring of pinch roller pressure	JiGSG0400	BK
5	Dial tension gauge		PTG-10	9DAPTG-10-10W	CA
6	Torque screwdriver 150mN-m		No. 0 cross bit	JiGTD1500RTDH	CB5
7	Master plane		For checking the reel base height	9EQMP-VLPD1	CL
8	Height adjustment jig		For height adjusting	9DAHG-PD1	BZ
9	Height adjustment screwdriver		For guide roller adjustment. For Tu guide adjustment. For T roller adjustment. Bit shape.	9EQDRIVER-DH5	BC
10	Alignment tape - I		For tape running adjustment	VR3-GAZXS	CF
11	Alignment tape - II		For Switching Point adjustment	VR3-GTZQS	CG
12	For hexagon nut opposite side 3mm bit		For S guide hexagon nut installation.	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		Cosumo Hydro HV22	9EQ-OIL-HV22	AE
2	Cleaning paper		Dusper Σ (SIGMA) ozu Co., LTD	JiGDUSPER	AP
3	Grease: Moly Coat YM-103		Dow coaming	99FGREASE-YM103	AH

18. PACKING OF THE SET



ACCESSORIES

No.	Model	Parts Code	Description	Remarks
1	- Common parts -	GCOVH1250TASA	Lens Cap	
2	FD1UW	QACCB0016TAZZ	AC Cable	⚠
	FD1UK	QACCZ0052TAZZ	AC Cable	⚠
3	- Common parts -	QCNW-1927TAZZ	AV/S Cable	
4	- Common parts -	QCNW-1926TAZZ	DC Cable	
5	- Common parts -	RRMCG0095TASA	Remote Control	
6	FD1UT	TiNS-6038TAZZ	Operation Manual	
	FD1UK	TiNS-6039TAZZ	Operation Manual	
	FD1U/UW	TiNSE0369TAZZ	Operation Manual	
7	FD1U	UADP-0294TAZZ	AC Adaptor	⚠
	FD1UT	UADP-0295TAZZ	AC Adaptor	⚠
	FD1UK	UADP-0296TA01	AC Adaptor	⚠
	FD1UW	UADP-0296TAZZ	AC Adaptor	⚠
8	- Common parts -	UBNDS0023TAZZ	Shoulder Strap	
9	- Common parts -	UBATL0011TAZZ	Lithium Battery(CR2025)	
10	- Common parts -	UBATL0015TAZZ	Lithium Battery(CR1616)	
11	- Common parts -	UBAi0062TAZZ	Battery	
12	- Common parts -	GDAi-1058TAZZ	Tripod Stand	
13	- Common parts -	UPENP0001TAZZ	Hand-held Pen	

ACCESSORIES (NOT REPLACEMENT ITEM)

No.	Model	Parts Code	Description	Remarks
14	FD1U	TGAN0044TAZZ	Guarantee Card	★
	FD1UT	TGANZ0013TAZZ	Guarantee Card	★
	FD1UW	TGANZ0022TAZZ	Guarantee Card	★
15	- Common parts -	TLABK0001TAZZ	No Card	★

PACKING PARTS (NOT REPLACEMENT ITEM)

No.	Model	Parts Code	Description	Remarks
16	FD1U/UT	SPAKC7547TAZZ	Packing Case	★
	FD1UK	SPAKC7556TAZZ	Packing Case	★
	FD1UW	SPAKC7557TAZZ	Packing Case	★
17	- Common parts -	SPAKA6359TAZZ	Packing Top ADD.	★
18	- Common parts -	SPAKA6356TAZZ	Packing Bottom ADD.	★
19	- Common parts -	SPAKA6362TAZZ	Packing	★
20	- Common parts -	SPAKP6068TAZZ	Wrapping Paper	★
21	- Common parts -	SSAKA0087TAZZ	Polyethylene Bag	★
22	- Common parts -	SPAKP6108TAZZ	Side Pad	★

MARK ★ Not Replacement Item

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