

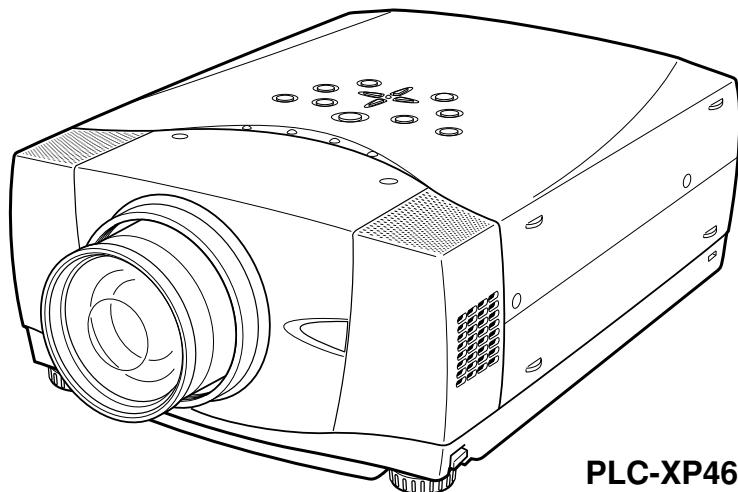
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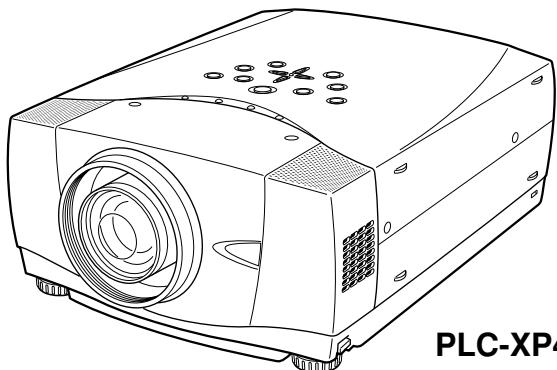
## SERVICE MANUAL Multimedia Projector Model No. PLC-XP46/XP46L PLC-XP41/XP41L

U.S.A., Canada,  
Europe, Asia, Africa

Original Version



PLC-XP46



PLC-XP41

**Chassis No. MA8-XP4600  
MA8-XP46L00  
MB8-XP4100  
MB8-XP41L00**

**NOTE:** Match the Chassis No. on the unit's back cover with the Chassis No. in the Service Manual.

If the Original Version Service Manual Chassis No. does not match the unit's, additional Service Literature is required. You must refer to "Notices" to the Original Service Manual prior to servicing the unit.

Note:

Models PLC-XP46L and PLC-XP41L do not provide projection lens.

**PRODUCT CODE**

- 1 122 108 20 (MA8AA)
- 1 122 108 80 (MA8AM)
- 1 122 109 20 (PA8AA)
- 1 122 110 20 (MB8AA)
- 1 122 110 80 (MB8AM)
- 1 122 111 20 (PB8AA)

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# ■ Safety Instructions

## SAFETY PRECAUTIONS

### WARNING:

The chassis of this projector is isolated (COLD) from AC line by using the converter transformer. Primary side of the converter and lamp power supply unit circuit is connected to the AC line and it is hot, which hot circuit is identified with the line (  ) in the schematic diagram. For continued product safety and protection of personnel injury, servicing should be made with qualified personnel.

The following precautions must be observed.

- 1: An isolation transformer should be connected in the power line between the projector and the AC line before any service is performed on the projector.
- 2: Comply with all caution and safety-related notes provided on the cabinet back, cabinet bottom, inside the cabinet or on the chassis.
- 3: When replacing a chassis in the cabinet, always be certain that all the protective devices are installed properly, such as, control knobs, adjustment covers or shields, barriers, etc.

DO NOT OPERATE THIS PROJECTOR WITHOUT THE PROTECTIVE SHIELD IN POSITION AND PROPERLY SECURED.

- 4: Before replacing the cabinet cover, thoroughly inspect the inside of the cabinet to see that no stray parts or tools have been left inside.

Before returning any projector to the customer, the service personnel must be sure it is completely safe to operate without danger of electric shock.

## PRODUCT SAFETY NOTICE

Product safety should be considered when a component replacement is made in any area of the projector. Components indicated by mark  in the parts list and the schematic diagram designate components in which safety can be of special significance. It is, therefore, particularly recommended that the replacement of these parts must be made by exactly the same parts.

## SERVICE PERSONNEL WARNING

Eye damage may result from directly viewing the light produced by the Lamp used in this equipment. Always turn off Lamp before opening cover. The Ultraviolet radiation eye protection required during this servicing.  
Never turn the power on without the lamp to avoid electric-shock or damage of the devices since the stabilizer generates high voltages(15kV - 25kV) at its starts.  
Since the lamp is very high temperature during units operation replacement of the lamp should be done at least 45 minutes after the power has been turned off, to allow the lamp cool-off.

### **DO NOT ATTEMPT TO SERVICING THE REMOTE CONTROL UNIT.**

Laser Beam may be leaked out when in disassemble the Unit. As the Laser Beam used in this Remote control unit is harmful to the eyes.

### **CAUTION**

  
LASER RADIATION  
DO NOT STARE INTO BEAM  
CLASS 2 LASER PRODUCT  
LASER-STRÄHLING  
NICHT IN DEN STRAHL BLICKEN  
LASER KLASSE 2  
レーザ放電クラス2レーザ製品  
ビームをのぞき込まないごと  
IEC60825-1, Am.1 1997  
MAX OUTPUT (最大出力) : 1 mW  
WAVE LENGTH (波長) : 650±20nm  
This product is complied with 21 CFR part 1040.10

LASER RADIATION  
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MAX OUTPUT (最大出力) : 1 mW  
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## ■ Specifications

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Projector Type	Multi-media Projector
Dimensions (W x H x D)	12.6" x 6.6" x 18.5" (319mm x 168mm x 470mm) (PLC-XP46) 12.6" x 6.6" x 16.8" (319mm x 168mm x 429.5mm) (PLC-XP41/X46L/X41L)
Net Weight	18.5 lbs (8.4 kg) (PLC-XP46), 17.4 lbs (7.9 kg) (PLC-XP41), 15.7 lbs (7.1 kg) (PLC-X46L/X41L)
LCD Panel System	1.3" TFT Active Matrix type, 3 panels
Panel Resolution	1024 x 768 dots
Number of Pixels	2,359,296 (1024 x 768 x 3 panels)
Color System	6 color system (PAL, SECAM, NTSC, NTSC4.43, PAL-M and PAL-N)
High Definition TV Signals	480i, 480p, 575i, 575p, 720p, 1035i and 1080i
Scanning Frequency	H-sync. 15 ~ 100kHz, V-sync. 50 ~ 100Hz
Projection Image Size (diagonal)	Adjustable from 31" to 400"
Horizontal Resolution	800 TV lines (HDTV)
Projection Lens	F 1.7 ~ 2.0 lens with f=48.2mm ~ 62.6mm with motor zoom and focus (PLC-XP46) F 1.8 ~ 2.1 lens with f=48.4mm ~ 62.8mm with motor zoom and focus (PLC-XP41)
Throw Distance	4.6' ~ 48.3' (1.4m ~ 14.7m) (PLC-XP45), 4.6' ~ 47.3' (1.4m ~ 14.4m) (PLC-XP40)
Motorized Lens Shift	Up and Down
Projection Lamp	275watts
Input 1 Jacks	DVI Terminal (Digital), HDB 15-pin Terminal (Analog) and Stereo Mini Type Jack (Audio)
Input 2 Jacks	BNC Type x 5 (G or VIDEO/Y, B or Cb/Pb, R or Cr/Pr, H and V), Stereo Mini Type Jack (Audio)
Input 3 Jacks	RCA Type x 3 (VIDEO/Y, Cb/Pb, Cr/Pr), RCA Type x 2 (Audio R and L) and DIN 4-pin (S-Video)
Other Jacks	DIN 8-pin (Control port), USB port (Series B receptacle), Wired Remote Jack and Network Board Connector Jack
Built-in Speakers	2 speakers Stereo (R and L), 2 watts RMS (T.H.D. 10%)
Feet Adjustment	0° to 10.5°
Voltage and Power Consumption	AC 100 ~ 120V (4.8A Max. Ampere), 50/60Hz (The U.S.A and Canada) AC 200 ~ 240V (2.4A Max. Ampere), 50/60Hz (Continental Europe)
Operating Temperature	41 °F ~ 95 °F (5°C ~ 35°C)
Storage Temperature	14 °F ~ 140 °F (-10°C ~ 60°C)
Remote Control Transmitters	Wireless/Wired Remote Control, batteries AA, UM3 or R06 Type x 2

- The specifications are subject to change without notice.



This symbol on the nameplate means the product is Listed by Underwriters Laboratories Inc. It is designed and manufactured to meet rigid U.L. safety standards against risk of fire, casualty and electrical hazards.

## ■ Adjustments after Parts Replacement

● : Adjustment necessary ○ : Check necessary

		Disassembly / Replaced Parts								
		LCD/ Prism Ass'y	Condenser Lens	Relay Lens	Polarized glass			Power Board	Sub Power Board	Main Board
					R	G	B			
Optical Adjustments	Condenser lens adjustment	○	●							
	Relay lens adjustment	○		●						
	Contrast Adjustment				●					
	R-Contrast adjustment					●				
	G-Contrast adjustment						●			
	B-Contrast adjustment						●			
Electrical Adjustments	Output voltage adjustment							●		
	+16 V adjustment							●		
	Video center adjustment								●	
	NRS adjustment								●	
	PC pedestal adjustment								●	
	Black level adjustment								●	
	PC gain adjustment								●	
	PC gamma shift adjustment								●	
	HDTV pedestal adjustment								●	
	HDTV A/D input adjustment								●	
	HDTV Gain adjustment								●	
	Video pedestal adjustment								●	
	Video A/D input adjustment								●	
	A/D offset adjustment								●	
	Video gain adjustment								●	
	Video gamma shift adjustment								●	
	Common center adjustment	●							●	
	White balance adjustment	○							○	

# ■ Circuit Protections

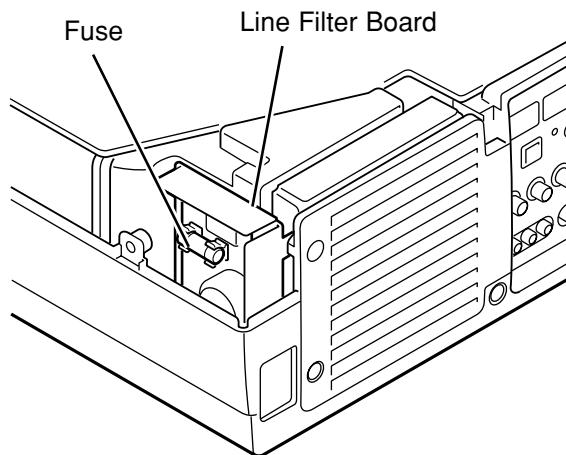
This projector is equipped with the following circuit protections to operate in safety. If the abnormality occurs inside the projector, it will automatically turn off by operating one of the following protection circuits.

## ● Fuse

The fuse is located inside of the projector. When either the LAMP indicator or the READY indicator is not illuminated, fuse may be opened. Check the fuse as following steps.

It should be used the specified fuse as follows;

**Fuse Part No.: 423 025 1201  
TYPE T8AH 250V FUSE  
LITTEL FUSE INC. TYPE 215008**



## How to replace the fuse

1. Remove the cabinet top following to "Mechanical Disassemblies".

2. Remove the fuse from fuse holder.

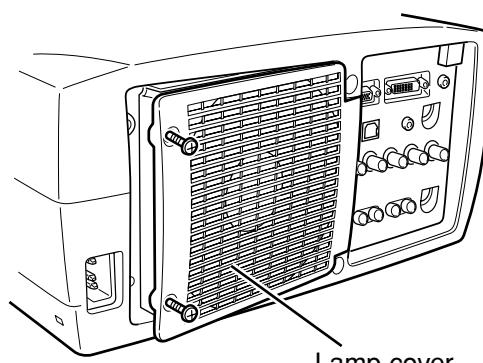
To install the fuse, take reversed step in the above.

## ● Thermal switch

There is the thermal switch (SW905) inside of the projector to prevent the internal temperature from rising abnormally. When the internal temperature reaches near 90°C, turn off the AC main power supply automatically.

The thermal switch is not reset to normal automatically even if the internal temperature becomes normal. Reset the thermal switch following procedure.

Check the resistance between terminals of thermal switch by using the tester. If it has high impedance, thermal switch may be in operative.



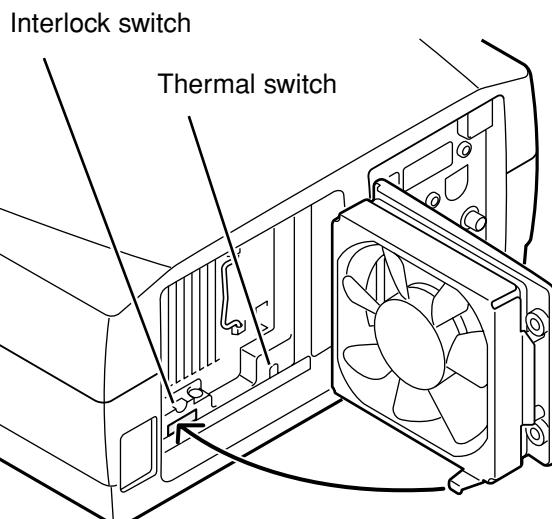
## How to reset the thermal switch

1. Loosen 2 screws and open the lamp cover.

2. Press the reset button on the thermal switch with a sharp-pointed tool.

### CAUTION:

Before press the reset button, disconnect the AC cord from the projector.



## ● Interlock switch

The interlock switch (SW902) cuts off the AC mains power supply when the lamp cover is removed. After opening the lamp cover for replacing the lamp ass'y, place the lamp cover correctly otherwise the projector can not turn on.

## ● Warning temperature and power failure protection

The TEMP WARNING indicator flashes red and the projector will automatically turn off when the internal temperature of the projector exceeds the normal temperature or when stopping cooling fans or when the internal power supply lines are failed.

Check the following possible causes and wait until stopping the TEMP WARNING indicator flashing.

### Possible causes

- Air filter is clogged with dust particles. Remove dust from the air filter by following instructions in the "Air filter care and cleaning" below.
- Ventilation slots of the projector are blocked. In such an event, reposition the projector so that ventilation slots are not obstructed.
- Check if projector is used at higher temperature place (Normal operating temperature is 5 to 35 °C or 41 to 95°F)

If the TEMP WARNING indicator still continues to flash, there may be defects on cooling fans or power supply circuits. Please check fan operation and power supply lines referring to the "Power Supply Lines Chart".

### Air filter care and cleaning

The removable air filter prevents dust from accumulation on the surface of the projection lens and projection mirror. Should the air filter become clogged with dust particles, it will reduce the cooling fan's effectiveness and may result in internal heat build up and reduce the life of the projector.

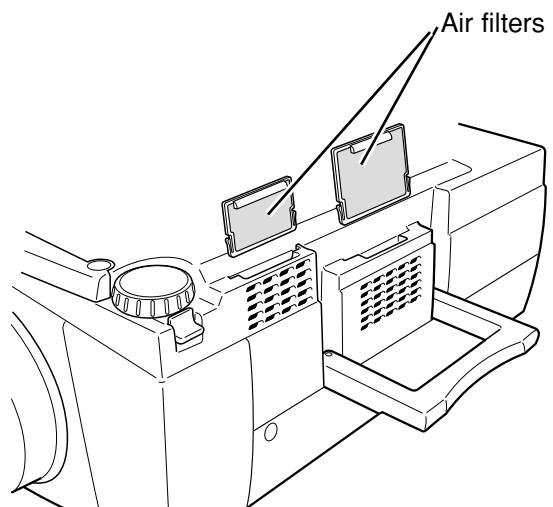
To clean up the air filters, follow the cleaning procedure below:

1. Turn the power off, and disconnect the AC power cord from the AC outlet.
2. Turn the projector up side down and remove an air filters by pulling the latches of them upward.
3. Clean the air filters with brush or wash out the dust and particles.
4. Replace each air filter properly. Make sure that the air filters are fully inserted.

### CAUTION:

Do not operate the projector with the air filter removed. The dust is stuck on the LCD panel and the mirror, and it may spoil the fine picture image.

Do not put the small parts into the air intake vents. It may result in the malfunction of the projector. The air filter is small parts. Take care that children don't eat or swallow it.



### RECOMMENDATION

We recommend to avoid dusty, smoky place for operating the projector. Using in dusty place may cause the picture of poor quality.

When using under the dusty or smoky conditions, dust may accumulate on the LCD panel and lens inside it, and may resultantly be projected on the screen together with the picture.

When the above symptoms are noticed, please clean up the LCD panel and lens following to the "Cleaning Method".

# ■ Mechanical Disassemblies

Mechanical disassemble should be made following procedures in numerical order.  
Following steps show the basic procedures, therefore unnecessary step may be ignored.

## Caution:

The parts and screws should be placed exactly the same position as the original otherwise it may cause loss of performance and product safety.

## 1 Cabinet Top removal

- 1 Remove 5 screws **A**, 2 screws **B**, and loosen 2 screws **C**, and then take the Cabinet Top upward off.

Note: If you want to remove the Cabinet Front-Top only, you do not need to remove screws **A**. Remove 2 screws **B** and Lens Front Cover.

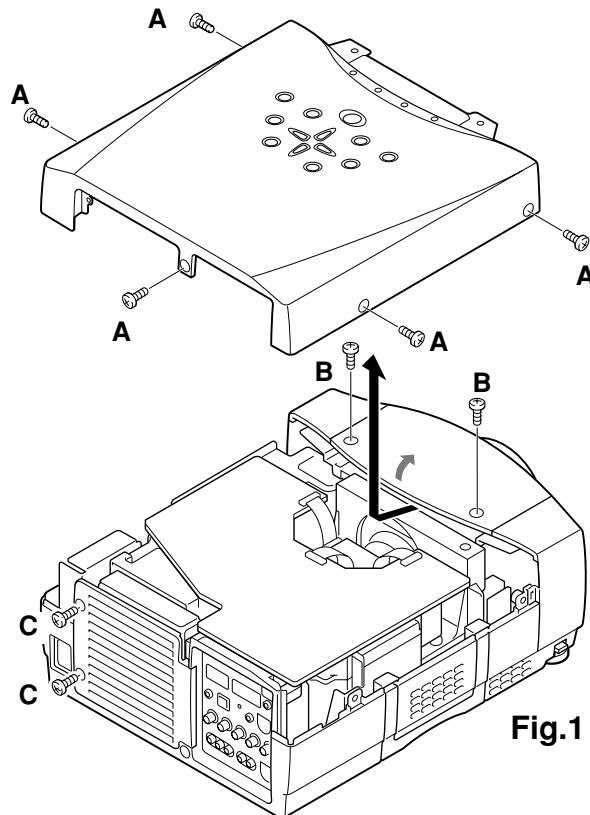


Fig.1

## 2 Cabinet Front removal

- 1 Turn the Lens Front Cover counter-clockwise and to take it off by pulling forward as shown in **Fig.2-1**.
- 2 Remove the Cabinet Front-Top, Lens Cover Holder and Lens Cover upward off.
- 3 Remove 2 screws **D** to take the Cabinet Front off.
- 4 Remove the RC Board and speakers on the Cabinet Front.

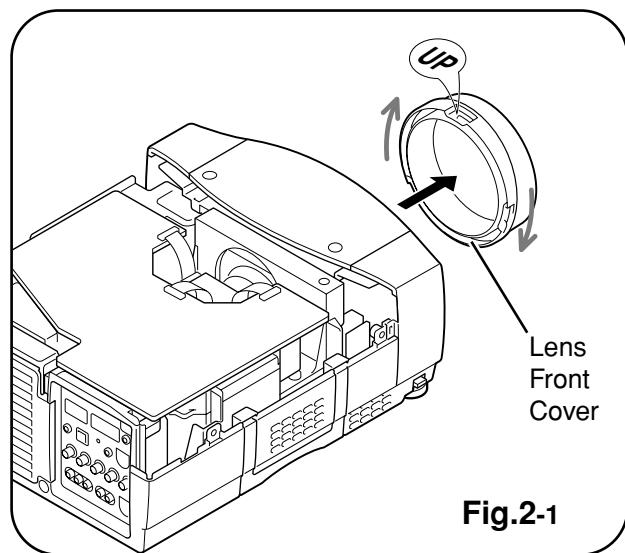


Fig.2-1

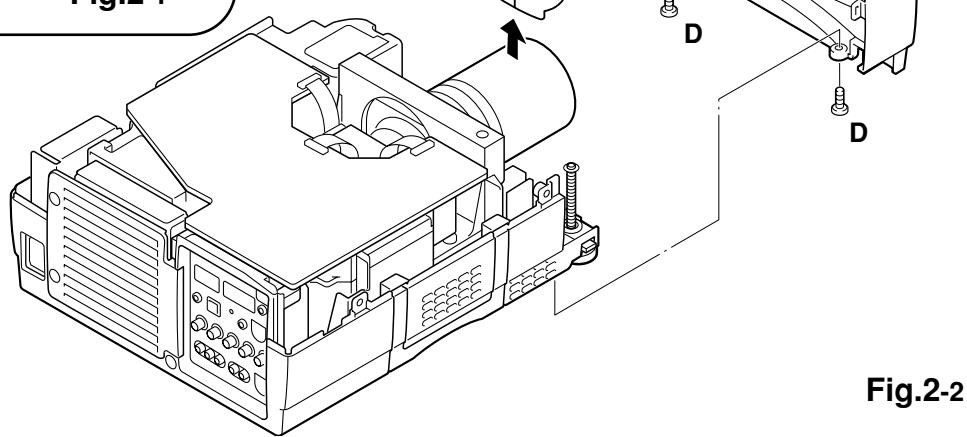
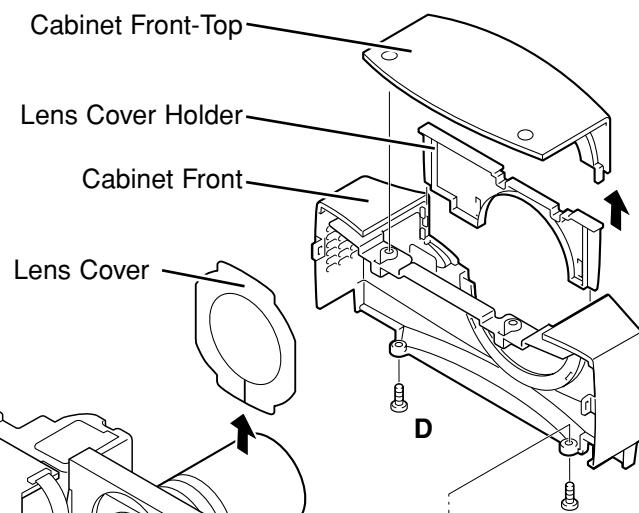


Fig.2-2

### 3 Main Board removal

- 1 Remove 7 screws to take the Main Board upward.

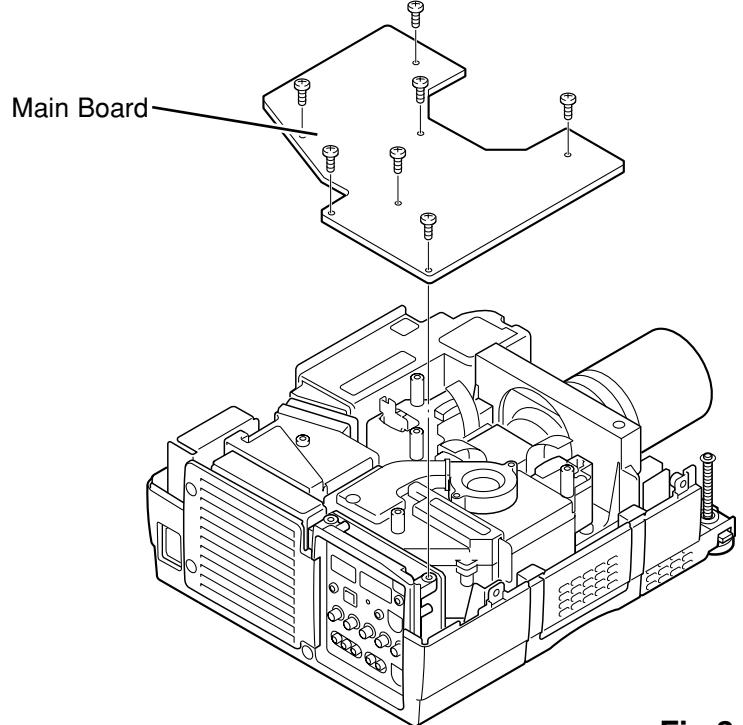


Fig.3

### 4 AV, I/F Board & Rear Panel removal

- 1 Remove 1 screw **A** and take the Rear Panel ass'y upward off.
- 2 Remove 4 screws **B** to take the fan (FN905) off.
- 3 Remove 5 screws **C** and 1 screw **D** to take AV Board from the Rear Panel ass'y off.
- 4 Remove 2 screws **E** and grounding leads and then pull up the I/F Board and Holder ass'y from the bottom cabinet.
- 5 Remove 4 screws **F** to take the I/F Board.

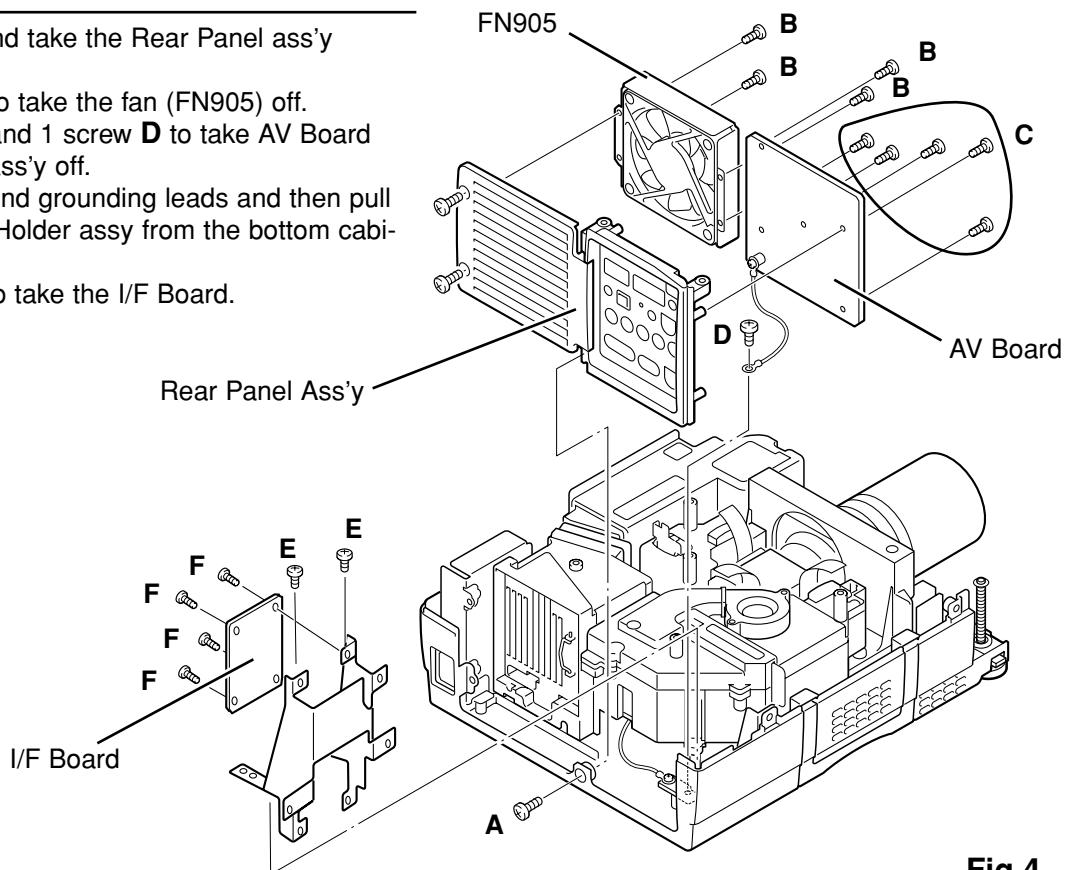


Fig.4

## 5 Lamp Ballast Unit removal

1 Remove 4 screws **A** to take the Ballast Cover upward off.

2 Remove 2 screws **B** to take the Fan (FN903) off.

3 Remove the Sub Power Board and Drive Board by pulling them upward.

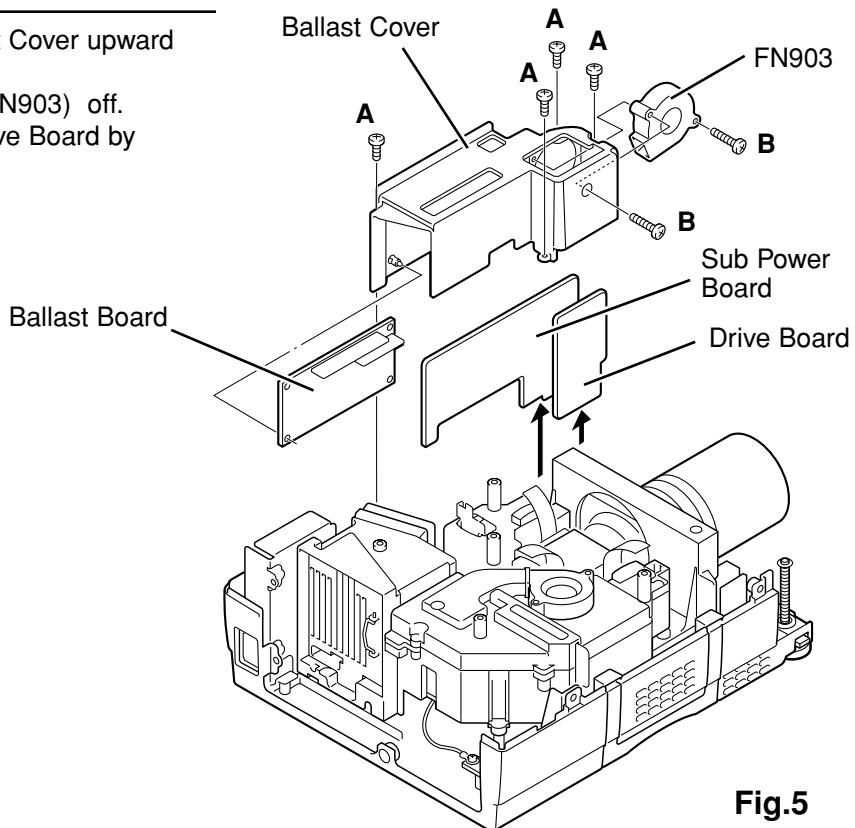


Fig.5

## 6 Optical Unit removal

1 Remove 1 screw **A** and then remove the holder.

2 Remove 2 screws **B** and 4 screws **C**(small) and pull the Optical Unit upward off.

3 Remove 4 screws **D** to take the Fan (FN908) off.

4 Remove 1 screws **E** to take the Fan (FN904) off and 2 screws **F** to take the air duct off.

5 Remove 3 screws **G** to take the Fan (FN907) off.

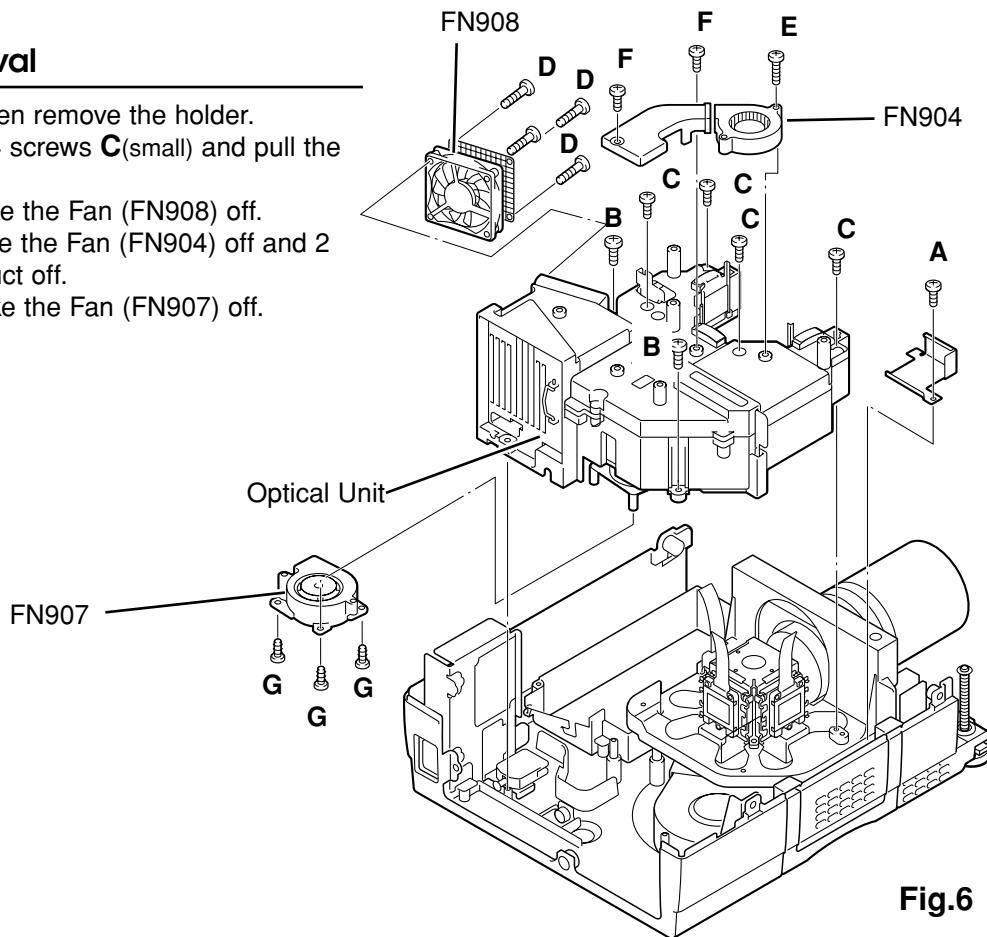


Fig.6

## 7 Prism Base removal

- 1 Remove 2 screws **A** to take the Prism Base ass'y upward off.
- 2 Remove 2 screws **B** to take the Lens Shift Motor and Sensor SW Holder from the Base.

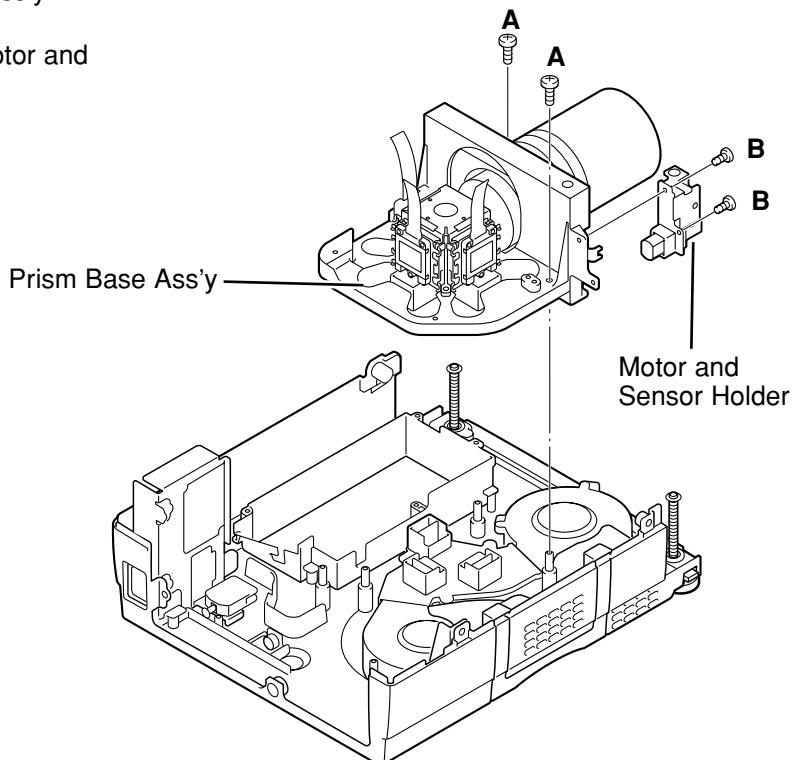


Fig.7

## 8 Power Board removal

- 1 Remove 3 screws **A** to take the Power Board off.
- 2 Remove 4 screws **B** to take Holder off from the cabinet bottom.

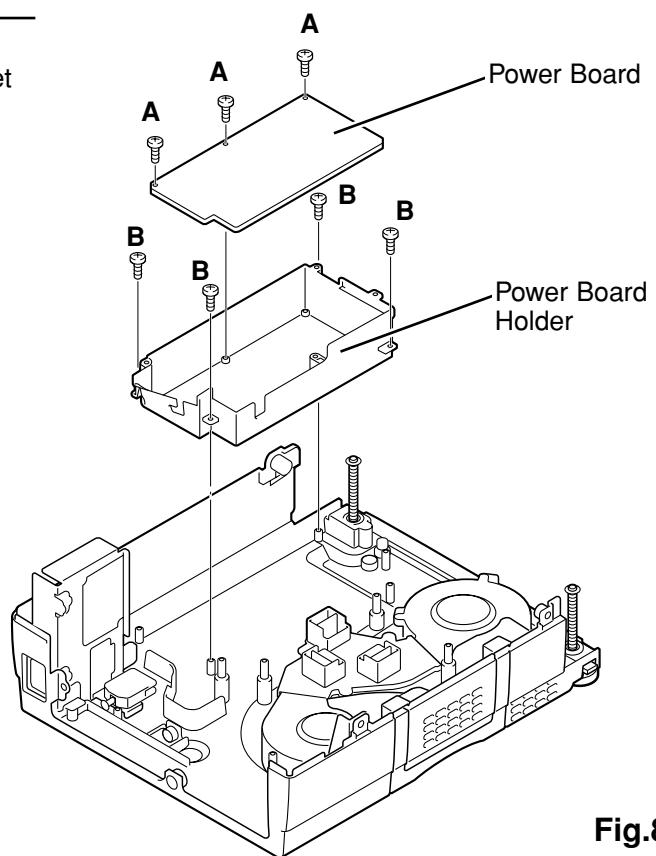


Fig.8

## 9 Line Filter Board & Interlock SW & Thermal SW removal

- 1 Remove 1 screw **A** to take Interlock Switch(SW905).
- 2 Remove 2 screws **B** to take Filter Board Holder and remove 2 screws **C** to take Filter Board from the Holder.
- 3 Remove 1 screw **D** to take Thermal Switch(SW902).

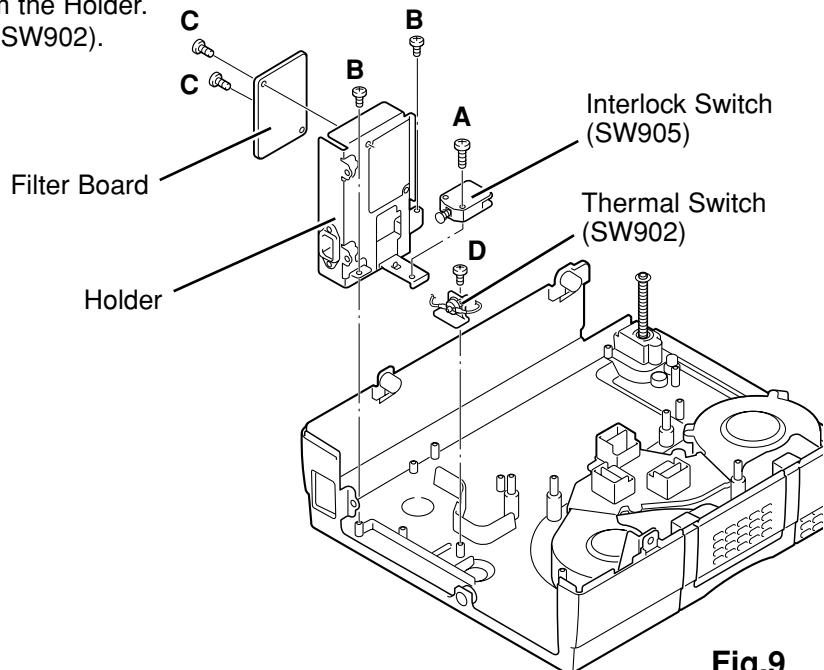


Fig.9

## 10 Fans (FN901, FN902) removal

- 1 Remove 4 screws **A** to take Air-duct Top off.
- 2 Remove 1 screw **B** (small) and 1 screw **C** (big) to take Duct Cover-A.
- 3 Remove 2 screws **D** to take Fan (FN901) off.
- 4 Remove 2 screws **E** (small) and 2 screws **F** (big) to take Air-duct-A and Fan (FN902) off.

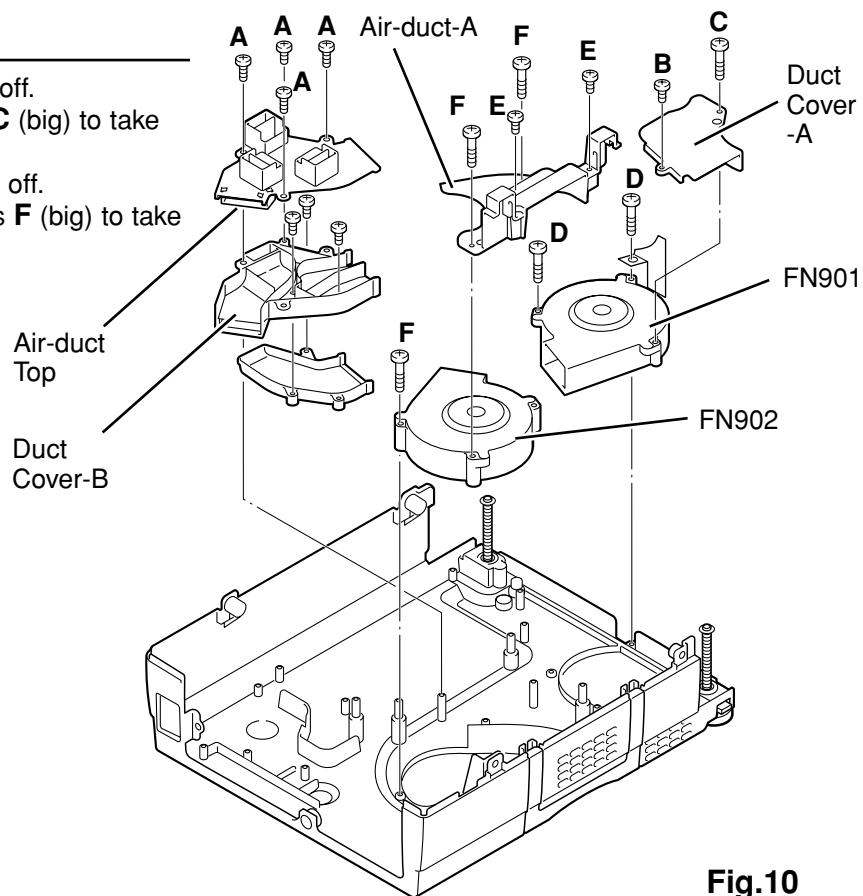


Fig.10

## ■ Optical Parts Disassemblies

Before taking this procedure, remove Cabinet Top and Main Board following to the "Mechanical Disassemblies". Disassembly requires a 2.0mm or 2.5mm hex wrench and a slot screwdriver.

### Projection Lens removal

- 1 Remove Cabinet Front-Top following to the chapter "Mechanical Disassemblies".
- 2 Loosen 2 screws **A** with 2.5mm hex wrench.
- 3 Unhook 2 hooks **B** on the both side of the lens and remove the Projection Lens ass'y off.

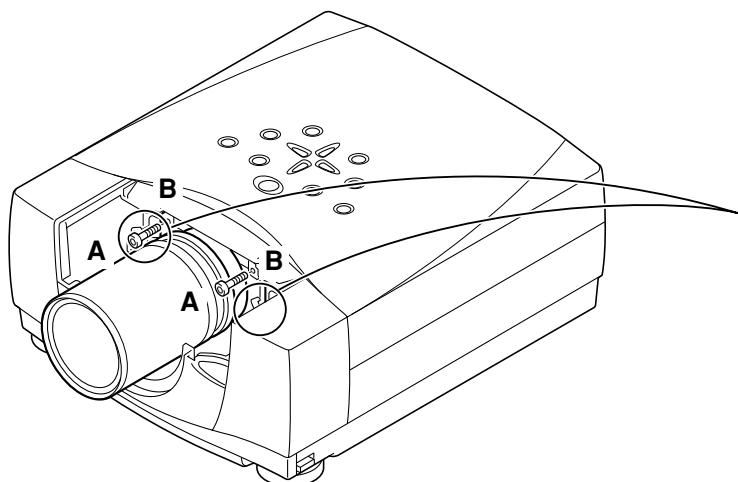


Fig.1

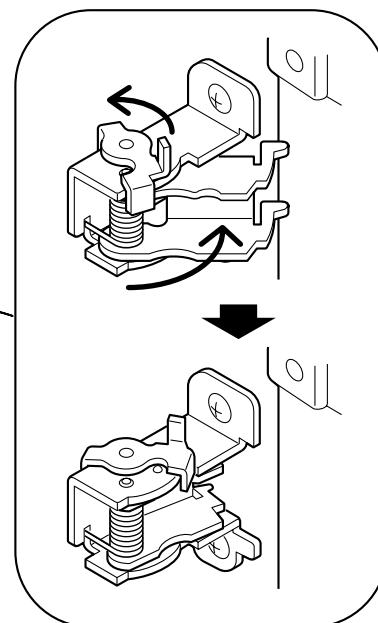


Fig.1-2

### Polarized Glass-In removal

- 1 Remove each hex screw and pull the Polarized Glass-In ass'y upward.
- 2 Remove a stopper and take the glass off upward.

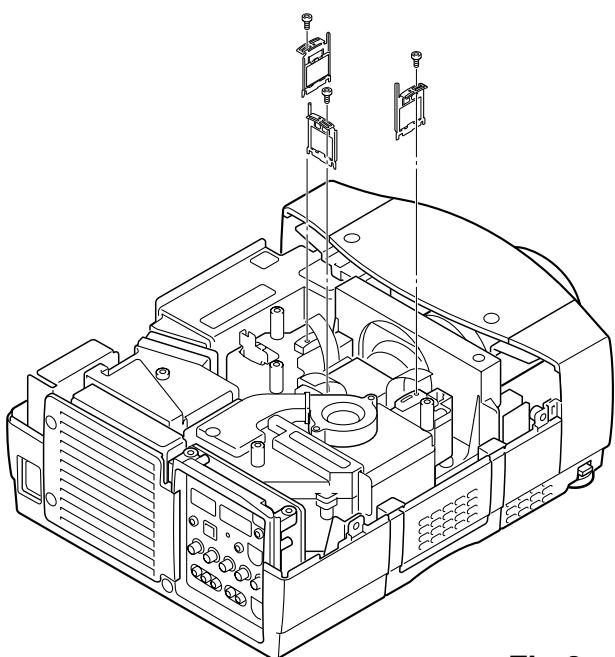


Fig.2-1

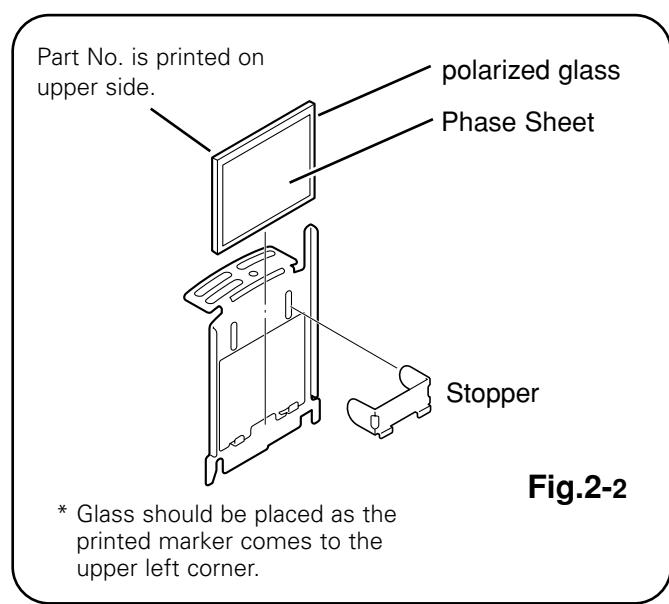


Fig.2-2

## Relay Lens disassembly

**1** Remove 2 hex screws **A** and pull the Relay Lens ass'y upward.

**2** Remove 2 screws **B** to take the Lens off from the holder.

Note:

There is no mounting direction of the lens.

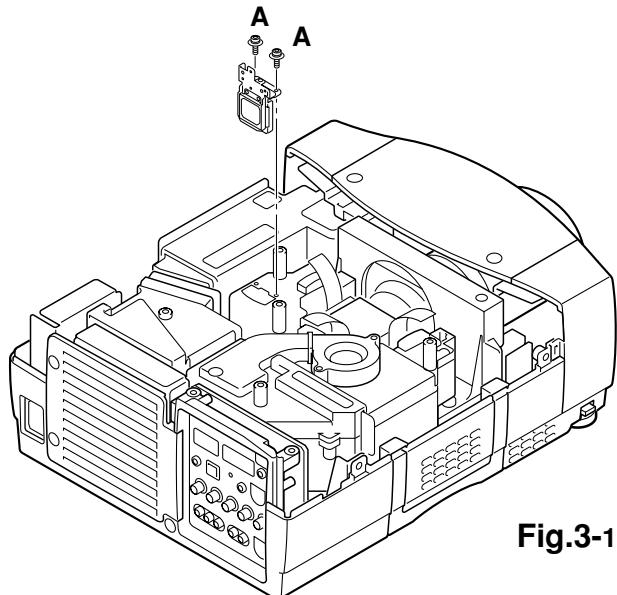


Fig.3-1

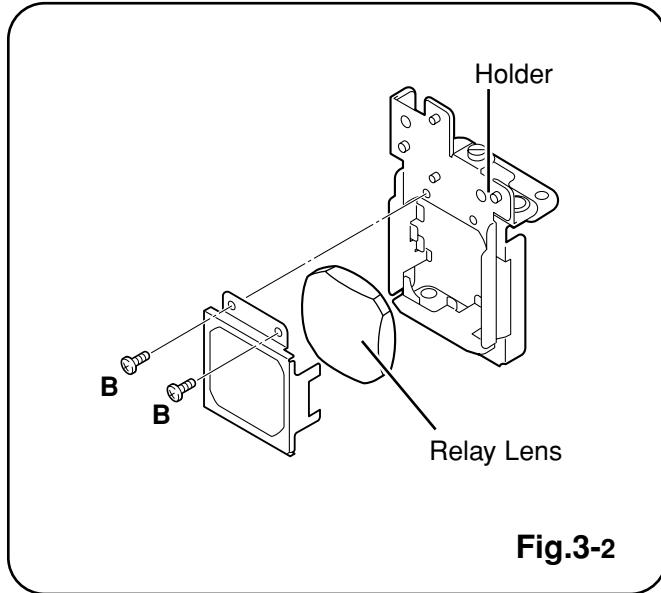


Fig.3-2

## Polarized Glass-Out and Wide view Glass removal

**1** Remove 4 hex screws **A** and take the LCD/Prism ass'y off upward.

**2** Remove 3 screws **B** and take the Glass Holder, and then pull the polarized Glass-Out and the wide view glass upwards off. These glasses are mounted for R, G and B LCD panels respectively.

Note:

To avoid the CG and focus alignments slipping off, please be careful to handle the LCD/Prism ass'y.

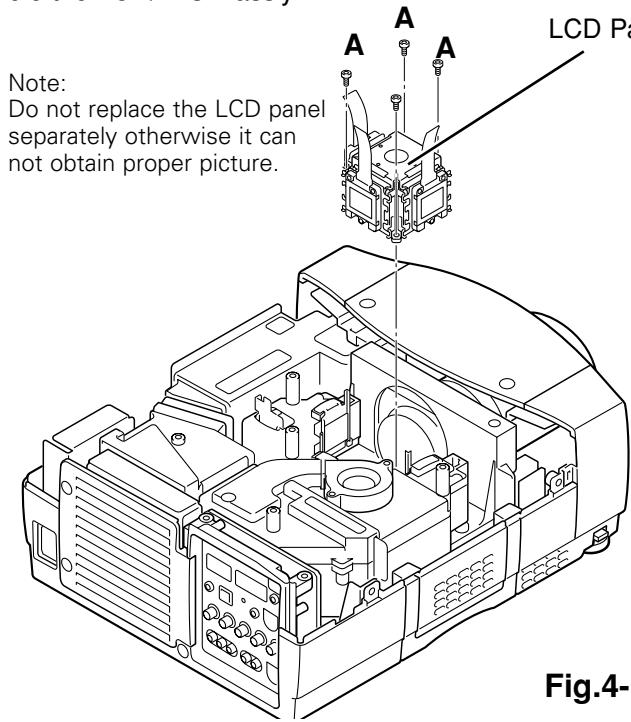
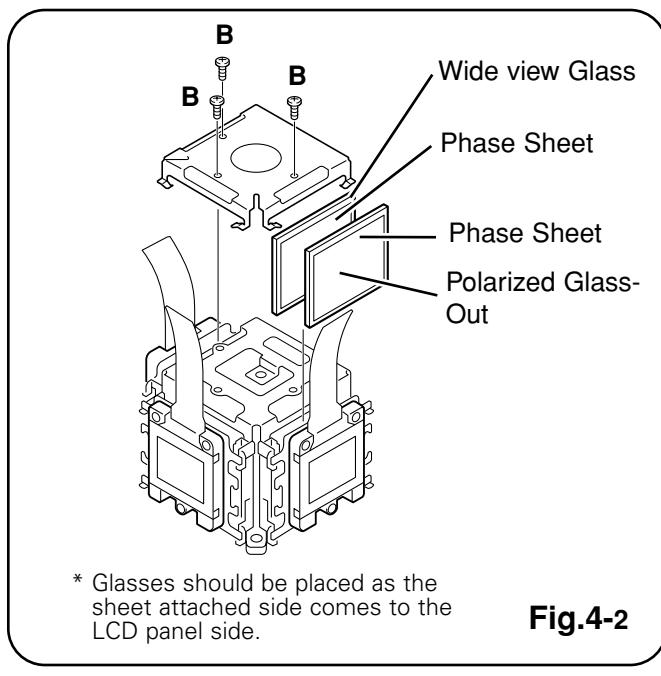


Fig.4-1



\* Glasses should be placed as the sheet attached side comes to the LCD panel side.

Fig.4-2

## Optical Unit Top removal

- 1 Remove 7 screws to take the Optical Unit Top off upward.

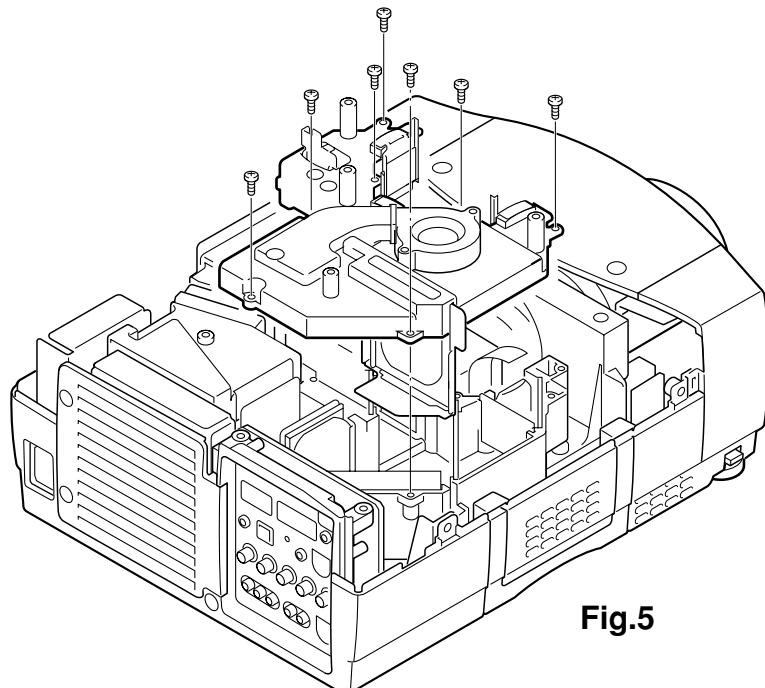


Fig.5

## Condenser Lens disassembly

- 1 Remove 2 hex screws **A** and take the Condenser Lens ass'y.
- 2 Release 4 hooks **B** to take the Lens off from the holder.

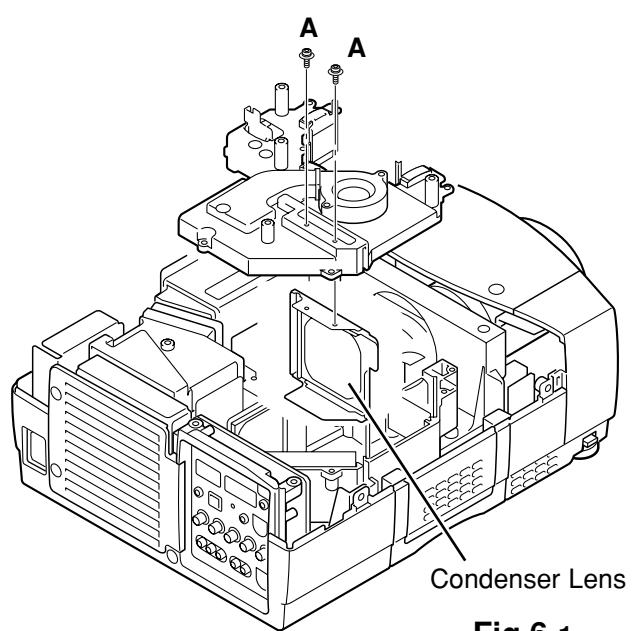


Fig.6-1

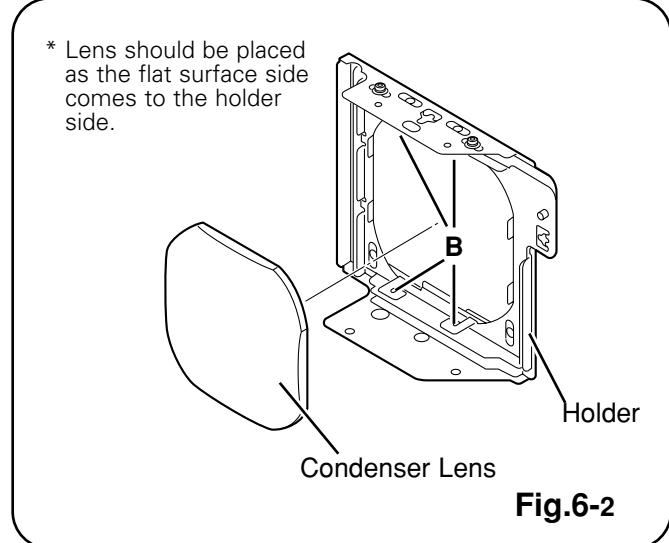


Fig.6-2

## Locations and Directions

When the optical parts in the optical unit mounting or assembling, the parts must be mounted in the specified location and direction as shown in figure below.

Key No.	Description
1	Condenser lens (R)
2	Condenser lens
3	Condenser lens
4	Mirror (B)
5	Optical filter (UV cut)
6	Dichroic mirror (B)
7	Dichroic mirror (G)
8	Mirror (W)
9	Condenser lens (IN)
10	PBS (prism beam splitter)
11	Integrator lens (OUT)
12	Integrator lens (IN)
13	Relay lens (IN)
14	Mirror (R)

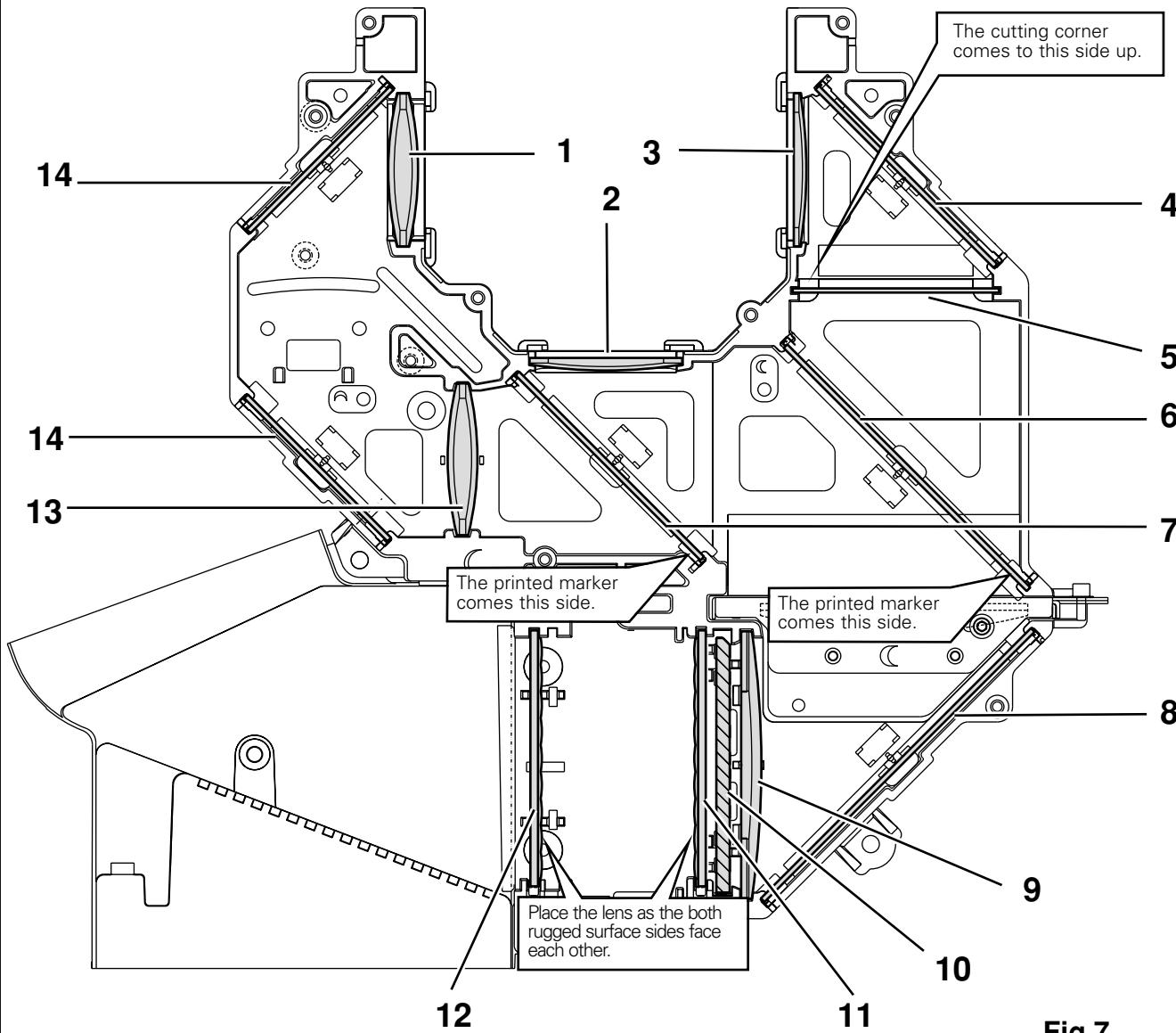


Fig.7

## ■ LCD Panel/Prism Ass'y Replacement

### IMPORTANT NOTICE on LCD Panel/Prism Ass'y Replacement

LCD panels used for this model can not be replaced separately. Do not disassemble the LCD Panel/Prism Ass'y. These LCD panels are installed with precision at the factory. When replacing the LCD panel, should be replaced whole of the LCD panels and prism ass'y at once.

After replacing LCD Panel/Prism ass'y, please check the following adjustments.

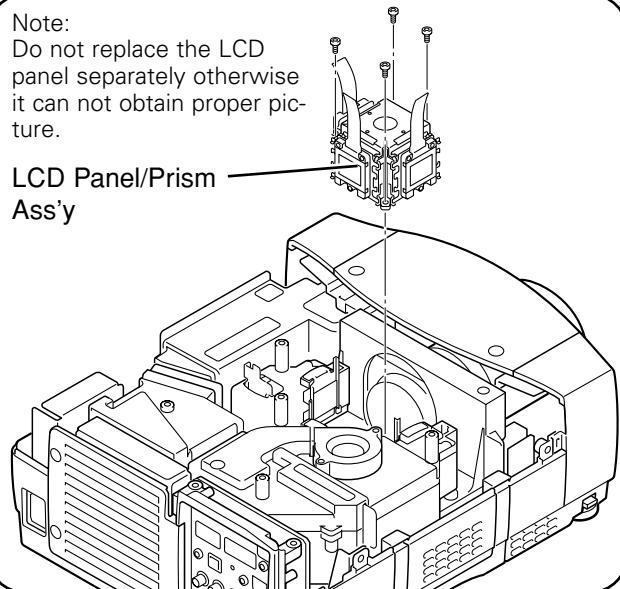
- Check the "Condenser Lens Adjustment" and "Relay Lens Adjustment" following to chapter "Optical Adjustment".
- Check the "White Balance Adjustment" and "Common Centre Adjustment" following to chapter "Electrical Adjustment".
- Check the white uniformity on the screen.  
If you find the color shading, please adjust the white uniformity by using the proper computer and "Color Shading Correction" software supplied separately. The software can be ordered as follows;

**COLOR SHADING CORRECTION SOFTWARE**  
Service Parts No. 645 051 2308

### LCD Panel/Prism Ass'y removal

- 1 Remove the cabinet top and main board following to "Mechanical Disassemblies".
- 2 Remove 4 screws by using the 2.0 mm hex driver and take the LCD Panel/Prism ass'y off upward from the optical unit.

Note:  
Do not replace the LCD panel separately otherwise it can not obtain proper picture.



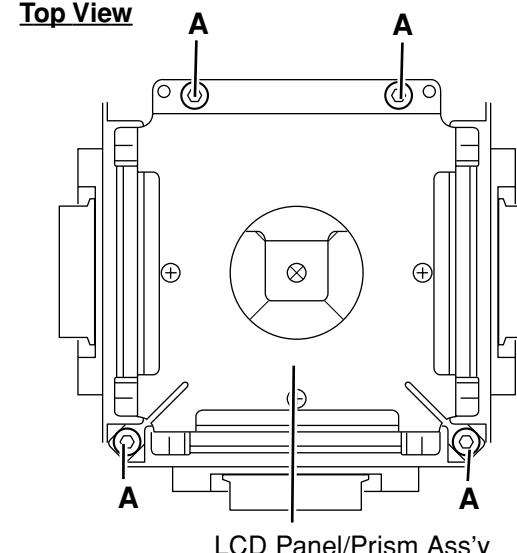
### Note on LCD Panel/Prism Ass'y Mounting

After replacing or installing the LCD Panel/Prism ass'y, please make sure to obtain the best focus in both TELE and WIDE zoom. If the focus adjustment is required, please adjust the positioning of LCD Panel/Prism Ass'y by following the below procedure.

#### Mounting Procedure:

- 1 Loosen 4 screws **A** on the LCD Panel/Prism ass'y with 2.0 mm hex driver.
- 2 Turn the projector on and project the image with WIDE zoom, and adjust the FOCUS control to obtain the best focus.
- 3 Turn the ZOOM control to the TELE position.
- 4 Move the LCD Panel/Prism Ass'y backward or forward (about 0mm ~ 0.8mm) to obtain the proper focus.  
Confirm the focus at TELE and WIDE zoom.
- 5 Tighten 4 screws **A** to fix the LCD Panel/Prism ass'y.

#### Top View



# ■ Lamp Replacement

## WARNING:

- For continued safety, replace with a lamp assembly of the same type.
- Allow the projector to cool for at least 45 minutes before you open the lamp cover. The inside of the projector can become very hot.
- Do not drop the lamp module or touch the glass bulb! The glass can shatter and cause injury.

## Procedure

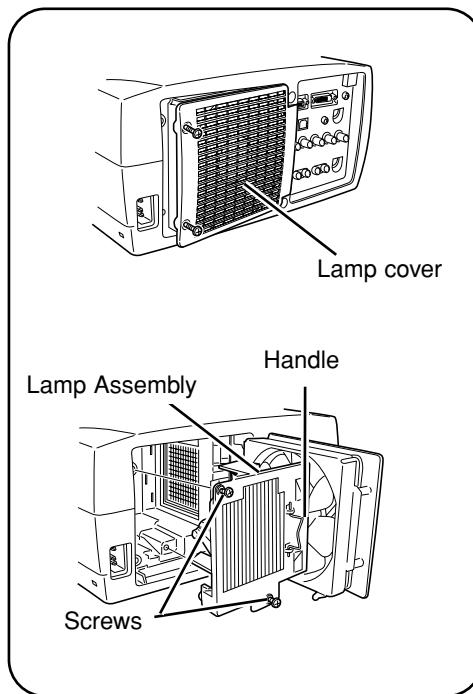
- 1 Turn off the projector and disconnect the AC cord. Allow the projector to cool for at least 45 minutes.
- 2 Loosen 2 screws with a screwdriver and open the lamp cover.
- 3 Loosen 2 screws and pull out the lamp assembly by grasping the handle.
- 4 Replace the lamp assembly securely and tighten 2 screws.
- 5 Close the lamp cover and tighten 2 screws.
- 6 Connect the AC cord to the projector and turn on.

## 7 Reset the Lamp Replace Counter, see below explanation.

### Note:

- Do not reset the Lamp Replace Counter, except after lamp is replaced.
- The projector can not be turned-on with lamp cover removed, because when the lamp cover is removed, the interlock switch is also released to switch off the mains power for safety.

**ORDER REPLACEMENT LAMP**  
Type No. Service Parts No.  
**POA-LMP47** 610 297 3891



## How to reset Lamp Replace Counter

- 1 Turn the projector on, and press the **MENU** button and the on-screen menu will appear. Press the **POINT LEFT/RIGHT** buttons to move a red frame pointer to **SETTING** menu icon.
- 2 Press the **POINT DOWN** button to move a red frame pointer to "Lamp counter reset" and then press the **SELECT** button. The message "Lamp replace counter reset?" is displayed. Move the pointer to [Yes] and then press the **SELECT** button.
- 3 Another confirmation dialog box appears and select [Yes] to reset Lamp Replace Counter .

*Please refer to the owners manual for further information.*

## Recommendation

Should the air filter become clogged with dust particles, it will reduce the cooling fan's effectiveness and may result in internal heat build up and short lamp life. We recommend cleaning the air filter after the projection lamp is replaced.

Refer to "Air Filter Cleaning".

## How to check Lamp Replace Counter

The LAMP REPLACEMENT indicator will illuminate when the Lamp Replace Counter reaches 1000 hours. This is to indicate that lamp replacement is required.

You can check the lamp replace counter following to below procedure.

- 1 Press and hold the pointer **UP** on the projector for more than 20 seconds.
- 2 The Lamp replace Counter is displayed on top left corner of the screen briefly.

Normal	123 h
Eco	105 h
Total	228 h

Lamp replace counter data

## ■ Optical Adjustments

Before taking optical adjustments below, remove the Cabinet Top and Main Board following to the "Mechanical Disassemblies"

Adjustments require a 2.0mm hex wrench and a slot screwdriver.

Note: Do not disconnect connectors K8L, K8X, K8D, K8G and K8E on the main board, because the projector can not turn on due to operate the power failure protection.

### Contrast adjustment

#### [Before Adjustment]

- Input a 100% of black raster signal.

#### [R/G/B-CONTRAST ADJUSTMENT]

- 1 Loosen a screw **A** (Fig.1-1/1-2) on the polarized glass mounting base which you intend to adjust.
- 2 Turn the polarized glass mounting base as shown in Fig.1-1 to obtain the darkest brightness on the screen.
- 3 Tighten the screw **A** to fix the polarized glass mounting base.

Repeat steps 1 to 3 for remaining polarized glasses.

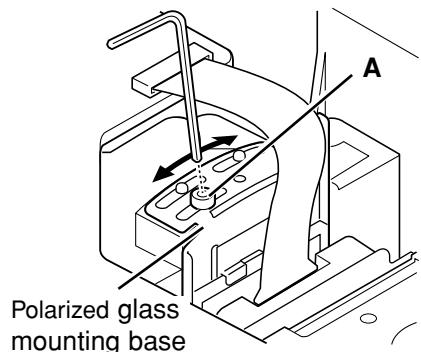


Fig.1-1

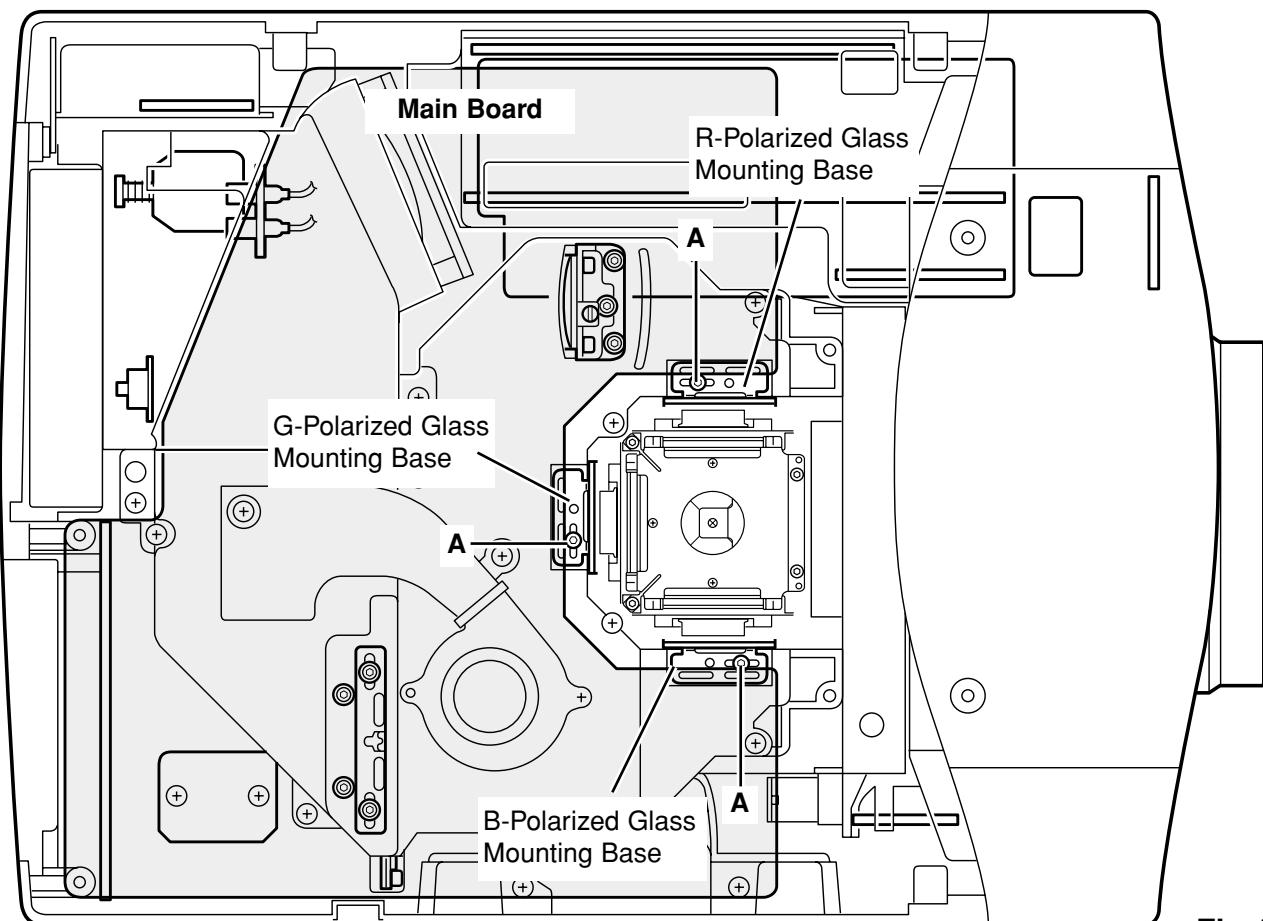


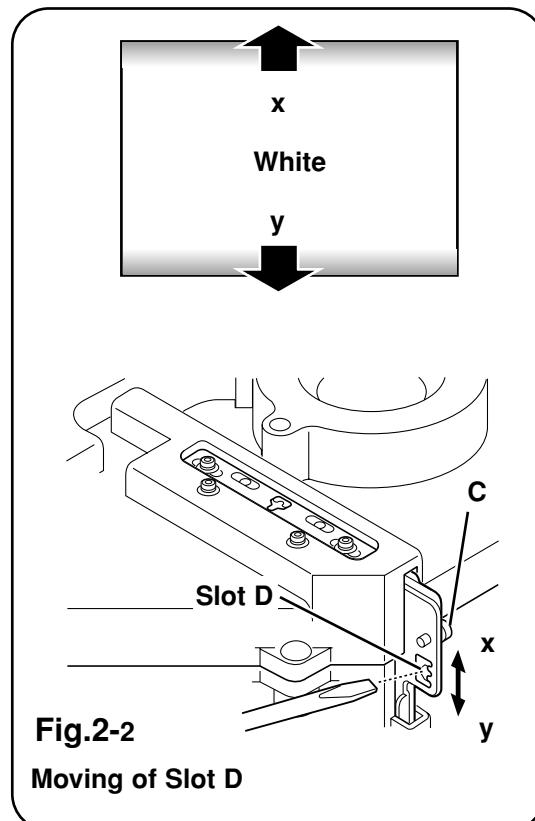
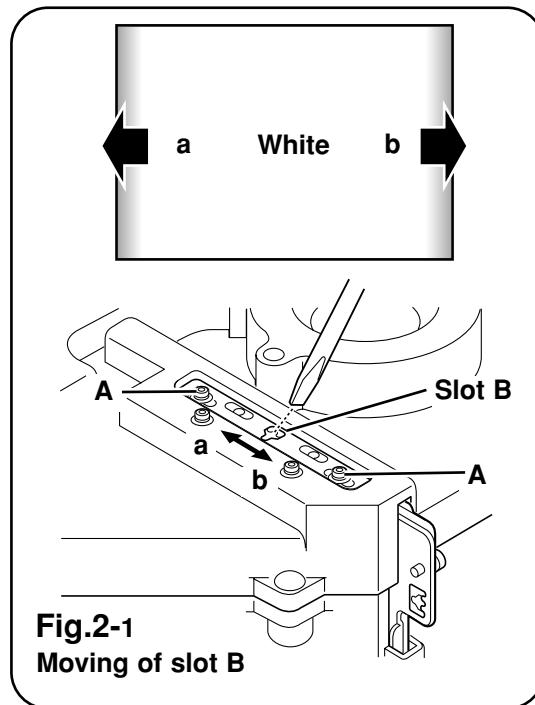
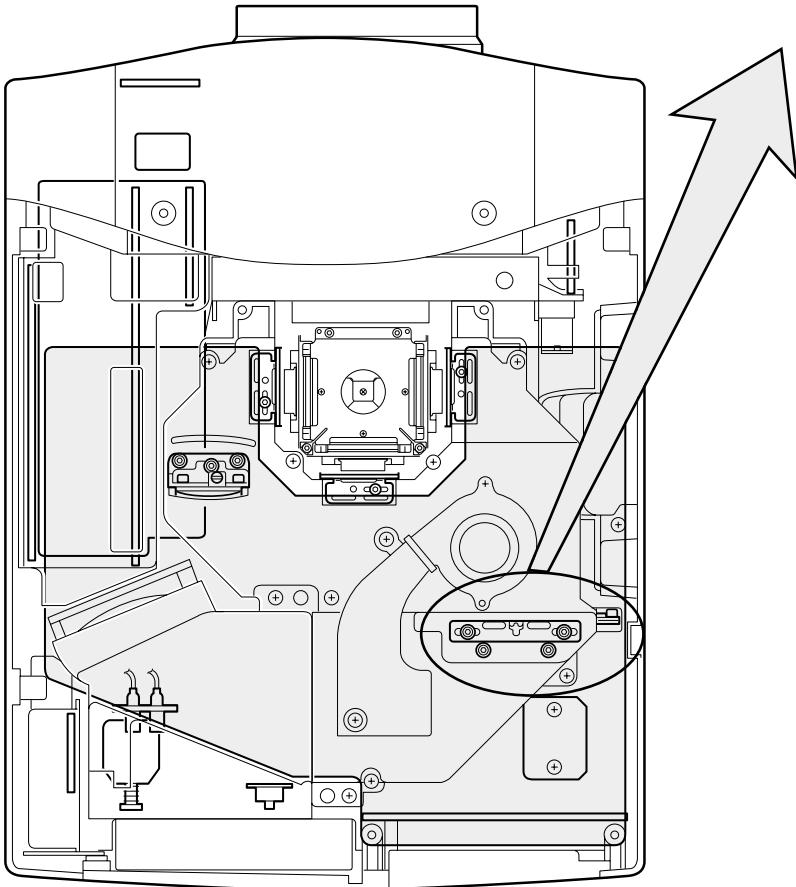
Fig.1-2

## Condenser Lens adjustment

- 1 Turn the projector on by a state of without FPC cables.
- 2 Adjust the adjustment base of condenser lens ass'y to make color uniformity in white.
  - 1) If the shading appears on the left or right of the screen as shown in **Fig.2-1**, loosen 2 screws **A** with the 2.0mm hex driver, and adjust the slot **B** to make color uniformity in green by using a slot screwdriver.
  - 2) If the shading appears on the top or bottom of the screen as shown in **Fig.2-2**, loosen 1 screw **C** with the 2.0mm hex driver, and adjust the slot **D** to make color uniformity in green by using a slot screwdriver
- 3 Tighten screws **A** and **C** to fix the Condenser lens unit.

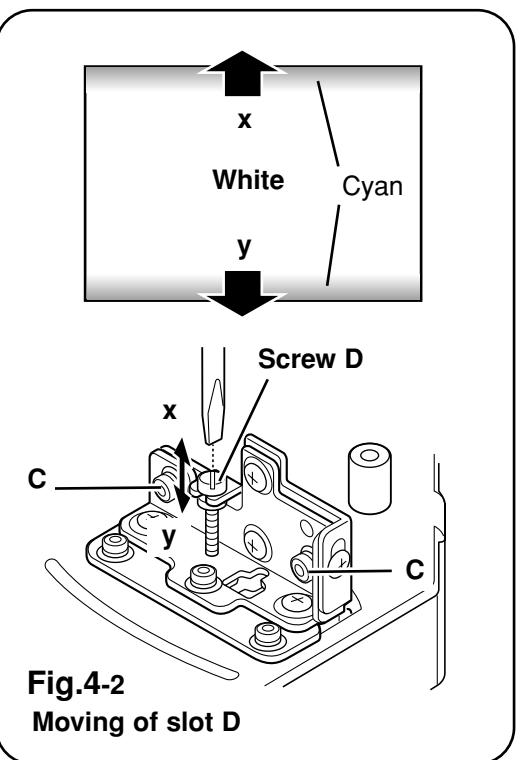
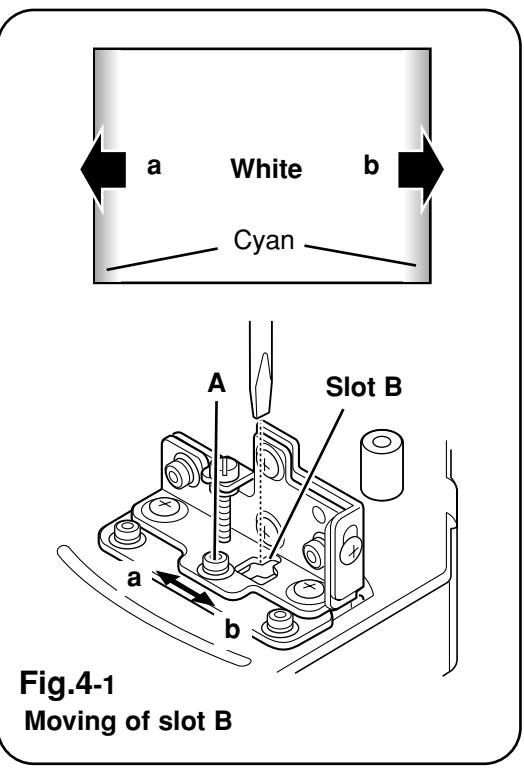
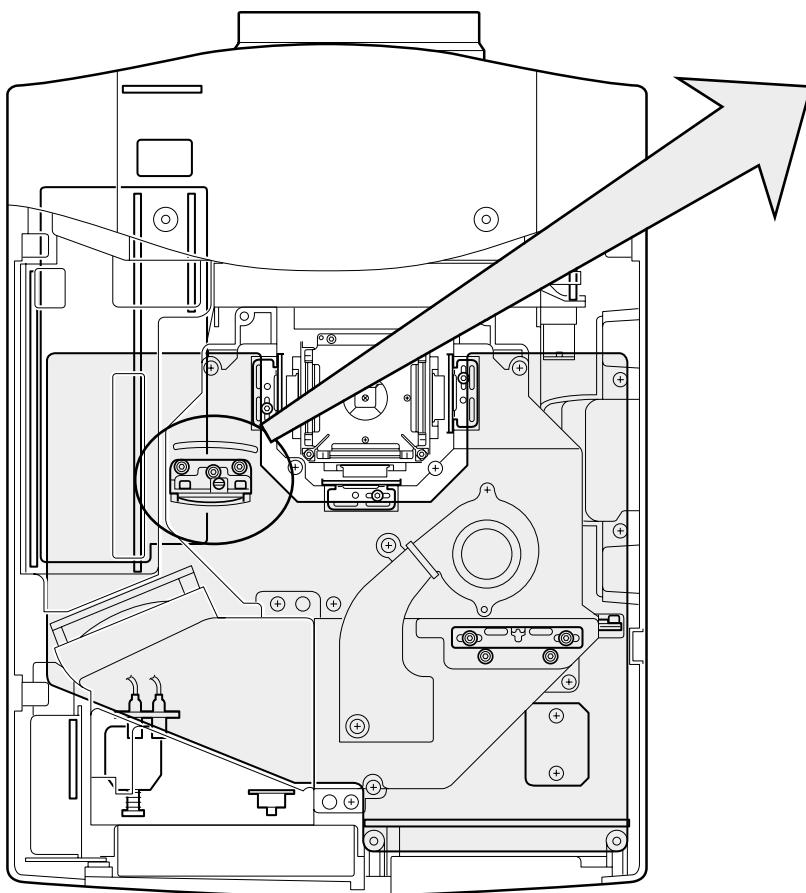
Note:

The relay lens adjustment must be carried out after completing this adjustment.



## Relay lens-Out adjustment

- 1 Turn the projector on by a state of without FPC cables.
- 2 Adjust the adjustment base of relay lens ass'y to make color uniformity in white.
  - 1) If the cyan bar appears on the left or right of the screen as shown in **Fig.4-1**, loosen 1 screw **A** with the 2.0mm hex driver, and adjust the slot **B** to make color uniformity in white by using a slot screwdriver.
  - 2) If the cyan bar appears on the top or bottom of the screen as shown in **Fig.4-2**, loosen 2 screws **C** with the 2.0mm hex driver, and adjust the screw **D** to make color uniformity in white by using a slot screwdriver.
- 3 Tighten the screws **A** and **C** to fix the relay lens unit.



# ■ Electrical Adjustments

## ● Service Adjustment Menu Operation

### To enter the service mode

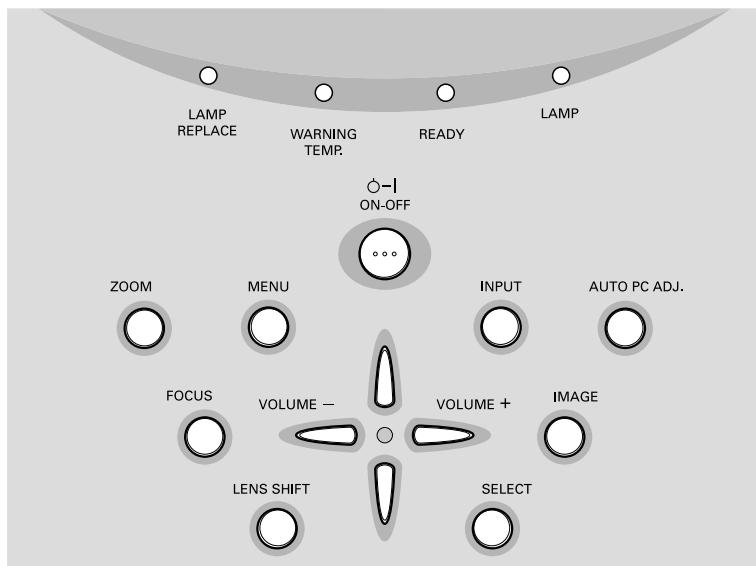
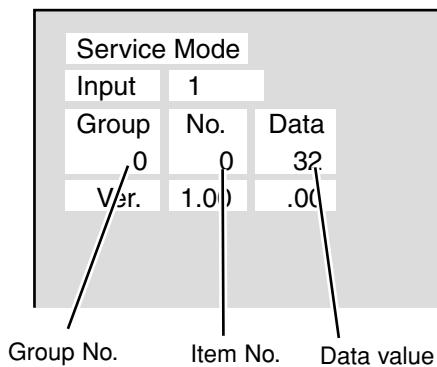
To enter the “Service Mode”, press and hold the **MENU** and **IMAGE** button on the projector at the same time for more than 3 seconds. The service menu appears on the screen as follows.

### To adjust service data

Select the adjustment group no. by pressing the **MENU button**, and select the adjustment item no. by pressing the pointer **UP** or **DOWN button**, and change the data value by pressing the **VOLUME –** or **VOLUME + button**. Refer to the “Service Adjustment Data Table” for further description of adjustment group no., item no. and data value.

### To exit the service mode

To exit the service mode, press the **POWER ON-OFF button** on the projector or remote control unit.



## ● Memory IC Replacement

IC808 on the main board stores the data for the service adjustments, and should not be replaced except for the case of defective device.

If replaced, it should be performed the re-adjustments following to the “Electrical Adjustments”.

The data of lamp replacement monitor timer is stored in the IC808.

Please note that the lamp replace counter is reset when the memory IC (IC808) is replaced.

(Lamp replace counter can not be set to the previous value.)

ments following to the “Electrical Adjustments”.  
Please note that the lamp replace counter is reset.

### ● Caution of Main Board replacement (in the case IC808 is not defective)

When the main board is replaced, IC808 should be replaced with the one on previous main board. After replacement, it should be required to perform the re-adjustments following to the “Electrical Adjustments”.  
In this case, the lamp replace counter can be kept the value as before.

### ● Caution to memory IC replacement

When IC808 is replaced with new one, the CPU writes down the default data of the service adjustments to the replaced IC, refer to the service adjustment table. As these data are not the same data as factory shipped data, it should be required to perform the re-adjust-

## ● Circuit Adjustments

**CAUTION:** The each circuit has been made by the fine adjustment at factory. Do not attempt to adjust the following adjustments except requiring the readjustments in servicing otherwise it may cause loss of performance and product safety.

### [Adjustment Condition]

- Input signal

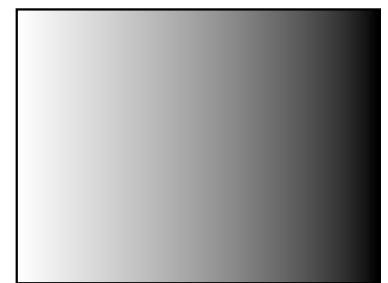
- |                              |                                                                                                |
|------------------------------|------------------------------------------------------------------------------------------------|
| Video signal .....           | 1.0Vp-p/75Ω terminated, 16 steps gray scale (Composite video signal)                           |
| Computer signal .....        | 0.7Vp-p/75Ω terminated, 16 steps gray scale pattern (XGA)                                      |
| Component Video signal ..... | 0.7Vp-p/75Ω terminated, 16 steps gray scale (Component video signal with 480p or 1080i format) |

- Picture control mode ..... “STANDARD” mode unless otherwise noted.

**Note:**

\* Please refer to “Service Adjustment Menu Operation” for entering to the service mode and adjusting the service data.

16 steps gray scale pattern



### Output Voltage adjustment

After replacing the Power Board readjust the Output voltage adjustment as follows.

1. Connect a digital voltmeter to pin 1 (+) of **K6A** and chassis ground (-).
2. Adjust the voltage by using **VR601** on the power board as following.

<u>AC Input</u>	<u>Reading</u>
230V	370 ±2Vdc
or 120V	340 ±2Vdc

**Caution:**

Be sure to connect the lamp when taking this adjustment.

### Video Center adjustment

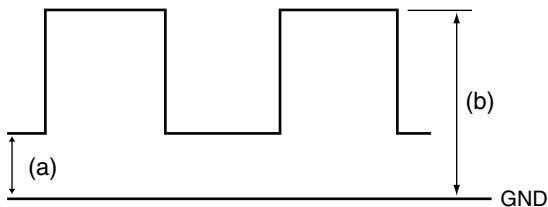
1. Receive the 16-step gray scale computer signal with **Input 1 [COMPUTER]** mode.
2. Enter the service mode.
3. Connect a digital voltmeter to test point “**TP531**” (+) and chassis ground (-).
4. Select group no. “**5**”, item no. “**1**” and change data value to adjust the voltage to be **7.50 ±0.1Vdc**.
5. Connect a digital voltmeter to test point “**TP501**” (+) and chassis ground (-).
6. Select item no. “**0**” and change data value to adjust the voltage to be **7.50 ±0.1Vdc**.
7. Connect a digital voltmeter to test point “**TP561**” (+) and chassis ground (-).
8. Select item no. “**2**” and change data value to adjust the voltage to be **7.50 ±0.1Vdc**.

### +16V adjustment

1. Receive the 16-step gray scale video signal with **Input 3 [VIDEO]** mode.
2. Connect a digital voltmeter to pin 3 (+) of **CN6A** and chassis ground (-).
3. Adjust the voltage to be **15.8 ±0.1Vdc** by using **VR681** on the power board.

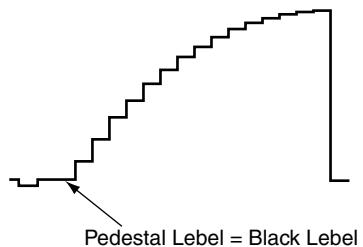
## NRS adjustment

1. Receive the a6-step gray scale computer signal with **Input 1 [COMPUTER]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point “**TP3671**” (+) and chassis ground (-).
4. Select group no. “**5**”, item no. “**6**” and change data value to adjust amplitude “a” to be  **$2.0 \pm 0.1V$** .
5. Select item no. “**7**” and change data value to adjust amplitude “b” to be  **$6.5 \pm 0.1V$** .



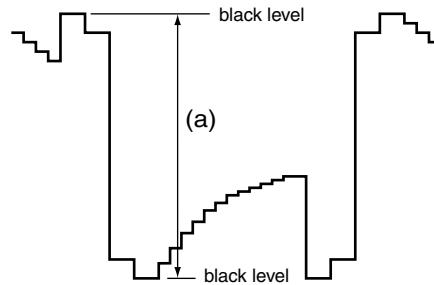
## PC Pedestal adjustment

1. Receive the 16-step gray scale computer signal with **Input 1 [COMPUTER]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point “**TP531**” (+) and chassis ground (-).
4. Select group no. “**5**”, item no. “**16**” and change data value to adjust the pedestal level and black level to be the same level.
5. Connect an oscilloscope to test point “**TP501**” (+) and chassis ground (-).
6. Select item no. “**15**” and change data value to adjust the pedestal level and black level to be the same level.
7. Connect an oscilloscope to test point “**TP561**” (+) and chassis ground (-).
8. Select item no. “**17**” and change data value to adjust the pedestal level and black level to be the same level.



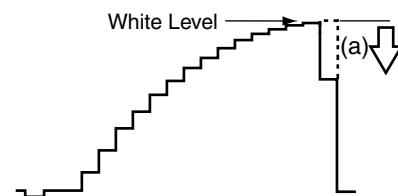
## Black Level adjustment

1. Receive the 16-step gray scale computer signal with **Input 1 [COMPUTER]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point “**TP531**” (+) and chassis ground (-).
4. Select group no. “**5**”, item no. “**4**” and change data value to adjust amplitude “a” to be  **$10.0 \pm 0.1V$** .
5. Connect an oscilloscope to test point “**TP501**” (+) and chassis ground (-).
6. Select item no. “**3**” and change data value to adjust amplitude “a” to be  **$10.0 \pm 0.1V$** .
7. Connect an oscilloscope to test point “**TP561**” (+) and chassis ground (-).
8. Select item no. “**5**” and change data value to adjust amplitude “a” to be  **$10.0 \pm 0.1V$** .



## PC Gain adjustment

1. Receive the 16-step gray scale computer signal with **Input 1 [COMPUTER]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point “**TP531**” (+) and chassis ground (-).
4. Select group no. “**4**”, item no. “**4**” and set data value to “600”, and then decrease data to adjust waveform “a” to be minimum amplitude.
5. Connect an oscilloscope to test point “**TP501**” (+) and chassis ground (-).
6. Select item no. “**5**” and set data value to “600”, and then decrease data to adjust waveform “a” to be minimum amplitude.
7. Connect an oscilloscope to test point “**TP561**” (+) and chassis ground (-).
8. Select item no. “**3**” and set data value to “580”, and then decrease data to adjust waveform “a” to be minimum amplitude.



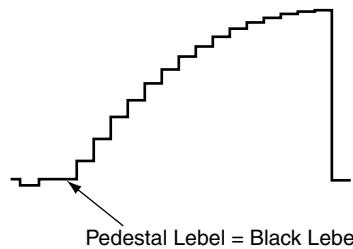
## PC Gamma Shift adjustment

1. Receive the 16-step gray scale computer signal with **Input 1 [COMPUTER]** mode.
2. Enter the service mode.
3. Select group no. “**4**”, item no. “**6**” and change data value to reproduce the proper gray scale picture on the screen.

## HDTV Pedestal adjustment

### [480p-PEDESTAL ADJUSTMENT]

1. Receive the 16-step gray scale component signal [480p] with **Input 3 [COMPONENT]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point “**TP21G**” (+) and chassis ground (-).
4. Select group no. “**3**”, item no. “**1**” and change data value to adjust the pedestal level and black level to be the same level.
5. Connect an oscilloscope to test point “**TP21B**” (+) and chassis ground (-).
6. Select group no. “**5**”, item no. “**14**” and change data value to adjust the pedestal level and black level to be the same level.
7. Connect an oscilloscope to test point “**TP21R**” (+) and chassis ground (-).
8. Select item no. “**13**” and change data value to adjust the pedestal level and black level to be the same level.



### [1080i-PEDESTAL ADJUSTMENT]

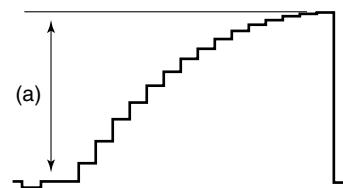
1. Receive the 16-step gray scale component signal [1080i] with **Input 3 [COMPONENT]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point “**TP21G**” (+) and chassis ground (-).
4. Select group no. “**3**”, item no. “**1**” and change data value to adjust the pedestal level and black level to be the same level.
5. Connect an oscilloscope to test point “**TP21B**” (+) and chassis ground (-).
6. Select item no. “**14**” and change data value to adjust the pedestal level and black level to be the same level.
7. Connect an oscilloscope to test point “**TP21R**” (+) and chassis ground (-).

8. Select item no. “**13**” and change data value to adjust the pedestal level and black level to be the same level.

## HDTV A/D Input adjustment

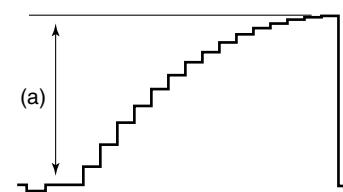
### [480p-A/D INPUT ADJUSTMENT]

1. Receive the 16-step gray scale component signal [480p] with **Input 3 [COMPONENT]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point “**TP21G**” (+) and chassis ground (-).
4. Select group no. “**3**”, item no. “**0**” and change data value to adjust amplitude “a” to be **0.9 ±0.1V**.
5. Connect an oscilloscope to test point “**TP21B**” (+) and chassis ground (-).
6. Select item no. “**4**” and change data value to adjust amplitude “a” to be **0.9 ±0.1V**.
7. Connect an oscilloscope to test point “**TP21R**” (+) and chassis ground (-).
8. Select item no. “**2**” and change data value to adjust amplitude “a” to be **0.9 ±0.1V**.



### [1080i-A/D INPUT ADJUSTMENT]

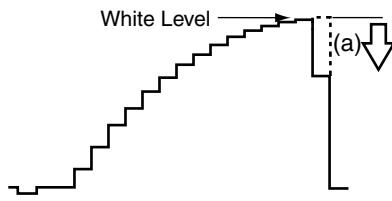
1. Receive the 16-step gray scale component signal [1080i] with **Input 3 [COMPONENT]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point “**TP21G**” (+) and chassis ground (-).
4. Select group no. “**3**”, item no. “**0**” and change data value to adjust amplitude “a” to be **0.9 ±0.1V**.
5. Connect an oscilloscope to test point “**TP21B**” (+) and chassis ground (-).
6. Select item no. “**4**” and change data value to adjust amplitude “a” to be **0.9 ±0.1V**.
7. Connect an oscilloscope to test point “**TP21R**” (+) and chassis ground (-).
8. Select item no. “**2**” and change data value to adjust amplitude “a” to be **0.9 ±0.1V**.



Note: This adjustment should be done after HDTV Pedestal adjustment.

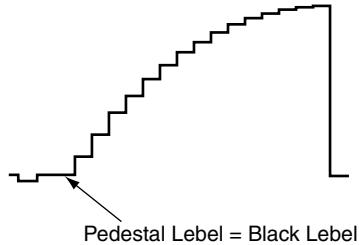
## HDTV Gain adjustment

1. Receive the 16-step gray scale component signal [1080i] with **Input 3 [COMPONENT]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point “**TP531**” (+) and chassis ground (-).
4. Select group no. “**4**”, item no. “**4**” and set data value to “600”, and then decrease data to adjust waveform “a” to be minimum amplitude.
5. Connect an oscilloscope to test point “**TP501**” (+) and chassis ground (-).
6. Select item no. “**5**” and set data value to “600”, and then decrease data to adjust waveform “a” to be minimum amplitude.
7. Connect an oscilloscope to test point “**TP561**” (+) and chassis ground (-).
8. Select item no. “**3**” and set data value to “600”, and then decrease data to adjust waveform “a” to be minimum amplitude.



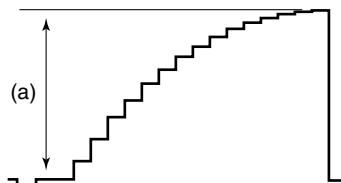
## VIDEO Pedestal adjustment

1. Receive the 16-step gray scale video signal with **Input 3 [VIDEO]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point “**TP4151G**” (+) and chassis ground (-).
4. Select group no. “**3**”, item no. “**1**” and change data value to adjust the pedestal level and black level to be the same level.
5. Connect an oscilloscope to test point “**TP4151B**” (+) and chassis ground (-).
6. Select group no. “**5**”, item no. “**14**” and change data value to adjust the pedestal level and black level to be the same level.
7. Connect an oscilloscope to test point “**TP4151R**” (+) and chassis ground (-).
8. Select item no. “**13**” and change data value to adjust the pedestal level and black level to be the same level.



## VIDEO A/D Input adjustment

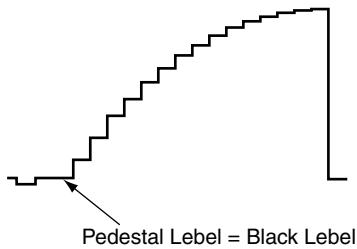
1. Receive the 16-step gray scale video signal with **Input 3 [VIDEO]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point “**TP4151G**” (+) and chassis ground (-).
4. Select group no. “**3**”, item no. “**0**” and change data value to adjust amplitude “a” to be  **$0.8 \pm 0.1V$** .
5. Connect an oscilloscope to test point “**TP4151B**” (+) and chassis ground (-).
6. Select item no. “**4**” and change data value to adjust amplitude “a” to be  **$0.8 \pm 0.1V$** .
7. Connect an oscilloscope to test point “**TP4151R**” (+) and chassis ground (-).
8. Select item no. “**2**” and change data value to adjust amplitude “a” to be  **$0.8 \pm 0.1V$** .



Note: This adjustment should be done after VIDEO Pedestal adjustment.

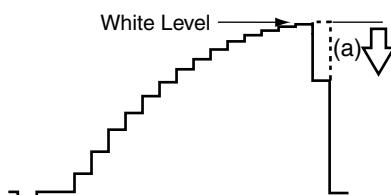
## A/D Offset adjustment

1. Receive the 16-step gray scale video signal with **Input 3 [VIDEO]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point "TP531" (+) and chassis ground (-).
4. Select group no. "6", item no. "11" and change data value to adjust the pedestal level and black level to be the same level.
5. Connect an oscilloscope to test point "TP501" (+) and chassis ground (-).
6. Select item no. "12" and change data value to adjust the pedestal level and black level to be the same level.
7. Connect an oscilloscope to test point "TP561" (+) and chassis ground (-).
8. Select item no. "10" and change data value to adjust the pedestal level and black level to be the same level.



## Video Gain adjustment

1. Receive the 16-step gray scale video signal with **Input 3 [VIDEO]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point "TP531" (+) and chassis ground (-).
4. Select group no. "4", item no. "4" and set data value to "600", and then decrease data to adjust waveform "a" to be minimum amplitude.
5. Connect an oscilloscope to test point "TP501" (+) and chassis ground (-).
6. Select item no. "5" and set data value to "600", and then decrease data to adjust waveform "a" to be minimum amplitude.
7. Connect an oscilloscope to test point "TP561" (+) and chassis ground (-).
8. Select item no. "3" and set data value to "580", and then decrease data to adjust waveform "a" to be minimum amplitude.



## Video Gamma Shift adjustment

1. Receive the 16-step gray scale video signal with **Input 3 [VIDEO]** mode.
2. Enter the service mode.
3. Select group no. "4", item no. "6" and change data value to reproduce the proper gray scale picture on the screen.

## Common Center adjustment

1. Receive the 16-step gray scale computer signal with **Input 1 [COMPUTER]** mode.
2. Enter the service mode.
3. Project only green light component to the screen.
4. Select group no. "5", item no. "11" and change data value to obtain the minimum flicker on the screen.
5. Project only blue light component to the screen.
6. Select item no. "12" and change data value to obtain the minimum flicker on the screen.
7. Project only red light component to the screen.
8. Select item no. "10" and change data value to obtain the minimum flicker on the screen.

## White Balance adjustment

### [PC WHITE BALANCE ADJUSTMENT]

1. Receive the 16-step gray scale computer signal with **Input 1 [COMPUTER]** mode.
2. Enter the service mode.
3. Select group no. "4", item no. "7" (Red) or "8" (Blue), and change data values respectively to make a proper white balance.

### [AV WHITE BALANCE ADJUSTMENT]

4. Receive the 16-step gray scale video signal with **Input 3 [VIDEO]** mode.
5. Enter the service mode.
6. Select group no. "4", item no. "7" (Red) or "8" (Blue), and change data values respectively to make a proper white balance.

Confirm that the same white balance is obtained in video and computer input.

## NOTE ON WHITE UNIFORMITY ADJUSTMENT

If you find the color shading on the screen, please adjust the white uniformity by using the proper computer and "Color Shading Correction" software supplied separately. The software can be ordered as follows;

**COLOR SHADING CORRECTION SOFTWARE**  
Service Parts No. 645 051 2308

## Electrical Adjustments

### ● Service Adjustment Data Table

These initial values are the reference data written from the CPU ROM to memory IC when replaced new memory IC. The adjustment items indicated with “\*” are required to readjust following to the “Electrical adjustments”. Other items should be used with the initial data value.

No.	Adjustment Item	Initial Value	Range	Input source / Description
<b>Group: 0 TC90A26</b>				
0	Y-EQ_GAIN	3	0 ~ 3	
1	Y-EQ_N_C_LIM	3	0 ~ 3	
2	V-ENH_GAIN	4	0 ~ 7	
3	V_ENH_CORING	2	0 ~ 3	
4	NTSC443_SW	1	0 ~ 1	Input signal setting 0:NTSC4.43 1:PAL60 (Only effective for NTSC4.43 signal inputs)
<b>Group: 1 uPD64082</b>				
0	NRMD	0	0 ~ 3	
1	HDP	4	0 ~ 7	
2	CDL	4	0 ~ 7	
3	DYCOR	4	0 ~ 15	
4	DYGAIN	15	0 ~ 15	
5	DCCOR	2	0 ~ 15	
6	DCGAIN	13	0 ~ 15	
7	YNRK	0	0 or 1	
8	YNRINV	0	0 or 1	
9	YNRLIM	0	0 ~ 3	
10	CNRK	0	0 or 1	
11	CNRINV	0	0 or 1	
12	CNRLIM	0	0 ~ 3	
13	VAPGAIN	2	0 ~ 15	
14	VAPINV	2	0 ~ 15	
15	YPFT	3	0 ~ 3	
16	YPFG	9	0 ~ 15	
17	V1PSEL	3	0 ~ 3	
18	VEGSEL	3	0 ~ 3	
19	CC3N	0	0 or 1	
20	SELD2FH	1	0 or 1	
21	SELDFL	1	0 or 1	
22	YHCOR	1	0 ~ 3	
23	HPLLFS	1	0 or 1	
24	PLLFG	1	0 or 1	
25	KILR	3	0 ~ 15	
26	HSSL	12	0 ~ 15	
27	VSSL	3	0 ~ 15	
28	BGPS	7	0 ~ 15	
29	BGPW	3	0 ~ 15	
<b>Group: 2 TB1274</b>				
0	TINT	32	0 ~ 63	
1	SHP_EQ	2	0 ~ 3	
2	SHP_FO	2	0 ~ 3	
3	SHP_GAIN	8/8/8/8/8/8	0 ~ 15	VideoNT/ PAL,PALM,PALN/SECAM,BW60,BW50/ NT443/ PAL60/ S-Video/YCbCr
4	Y_OUT_LEVEL 0.7V	31/32/32/32/32 32/32/32/32/32	0 ~ 63	VideoNT/ NT443/ PAL,PALM,PALN/ PAL60/ SECAM,BW S-VideoNT,BW/ NT443/ PAL,PALM,PALN/ PAL60/ SECAM/YCbCr
5	C_OUT_LEVEL 0.6V	12/12/15/15/22 12/12/15/15/22/18/20	0 ~ 63	VideoNT/ NT443/ PAL,PALM,PALN/ PAL60/ SECAM,BW S-VideoNT,BW/ NT443/ PAL,PALM,PALN/ PAL60/ SECAM/480i/575i
6	Y_DELAY	5/5/4/4/4 4/4/3/3/4	0 ~ 15	Video NT,BW60/ PAL,PALM,PALN,BW50/ SECAM/NT443/PAL60 S-Video NT,BW60/PAL,PALM,PALN,BW50/ SECAM/ NT443/ PAL60
7	COL_SYS	-	-	
8	X'TAL	-	-	
9	NOISE_DET	-	-	Read Only
10	V_FREQ	-	-	
11	Vert. Std	-	-	
12	CID	-	-	
13	VSIG	-	-	
14	MVM	0	0 or 1	
15	AFC_GAIN	1	0 ~ 3	
16	SECAM_GP	7	0 ~ 7	
<b>Group: 3 CXA2101</b>				
0	PICTURE	15/25/25	0 ~ 63	NT,PAL,SECAM,NT443,PALM,PALN,480i,575i/ 480p,575p/ 1080i,1035i,720p    *: A/D Input adjustment [G]
1	BRIGHT	50/50/50	0 ~ 63	NT,PAL,SECAM,NT443,PALM,PALN,480i,575i/ 480p,575p/ 1080i,1035i,720p    *: Pedestal adjustment [G]
2	R_DRIVE	31/31/31	0 ~ 63	NT,NT443,PAL,PALM,PALN,480i,575i/ 480p,575p/ 1080i,1035i,720p    *: A/D Input adjustment [R]
3	G_DRIVE	31	0 ~ 63	

## Electrical Adjustments

No.	Adjustment Item	Initial Value	Range	Input source / Description
4	B_DRIVE	31/31/31	0 ~ 63	NT,NT443,PAL,PALM,PALN,480i,575i/ 480p,575p/ 1080i,1035i,720p *: A/D Input adjustment [B]
5	HSEP_SEL	1	0 ~ 1	
6	CR_OFFSET1	7	0 ~ 15	
7	CB_OFFSET1	7	0 ~ 15	
8	BLK_BOTTOM	15	0 ~ 15	
9	R-Y/R	12/13/6/6	0 ~ 15	
10	R-Y/B	12/15/5/5	0 ~ 15	
11	G-Y/R	12/12/8/8	0 ~ 15	
12	G-Y/B	5/4/10/10	0 ~ 15	
13	MAT_OUT	0/0/0/1	0 ~ 3	
14	SYSTEM	0/1/2/2	0 ~ 3	NT,NT443,PAL,PALM,PALN,SECAM,480i,575i/ 480p,575p/ 1080i60,1035i,720p/1080i50
15	V_TC	2/1/1/0	0 ~ 3	
16	H_WIDTH	2/1/1/0	0 ~ 3	
17	HD_TC	1/1/0/0	0 ~ 3	
18	HS_MASK	0/1/1/1	0 ~ 1	
19	CTI_LEVEL	1/1/1/0/0	0 ~ 3	NT,NT443,PAL,PALM,PALN,SECAM/ 480i,575i/ 480p,575p/ 1080i60,1035i,720p/ 1080i50
20	SUB_SHP	2/2/1/1	0 ~ 3	NT,NT443,PAL,SECAM,PALM,PALN,480i,575i/ 480p,575p/ 1080i60,1035i,720p/ 1080i50
21	SHP_FO	3/3/3/3	0 ~ 3	
22	PRE_OVER	2/3/0/0	0 ~ 3	
23	LTI_LEVEL	1/1/0/0	0 ~ 3	NT,NT443,PAL,SECAM,PALM,PALN,480i,575i/ 480p,575p/ 1080i60,1035i,720p/ 1080i50
24	D_PIC	0/0/1/1	0 ~ 3	NT,NT443,PAL,SECAM,PALM,PALN,480i,575i/ 480p,575p/ 1080i60,1035i,720p/ 1080i50"
25	HUE	31/31	0 ~ 63	PAL,PALM,PALN,PAL60,SECAM/ 575i,575p adjustable only those mode.
26	SUB_COL	7/7/7/8/3/3	0 ~ 15	NT,NT443/PAL,PALM,PALN,PAL60,SECAM/480i,480p/575i,575p/1035i/1080i,720p
27	SUB_HUE	7/7/8/7/9/6	0 ~ 15	NT,NT443/PAL,PALM,PALN,PAL60,SECAM/480i,480p/575i,575p/1035i/1080i,720p
28	CINEMA CTI_LEVEL	0		
29	CINEMA LTI_LEVEL	0		
<b>Group: 4 L3E07050</b>				
0	B_SUB_BRT	0/0	0 ~ 1023	PC/DVI,AV
1	G_SUB_BRT	0/0	0 ~ 1023	
2	R_SUB_BRT	0/0	0 ~ 1023	
3	R_SUB_GAIN	367/390/300/420	0 ~ 1023	PC/AV/DVI/HD *: Gain adjustment [R]
4	G_SUB_GAIN	367/390/300/420	0 ~ 1023	*: Gain adjustment [G]
5	B_SUB_GAIN	367/390/300/420	0 ~ 1023	*: Gain adjustment [B]
6	Standard G GAMMA SHIFT	350/390	0 ~ 1023	PC,DVI std/AV Std Center value 512 * Modify RGB data at the same time when changing G data. *
7	Standard R GAMMA SHIFT	350/390	0 ~ 1023	PC,DVI std/AV Std Center value 512      *: White balance adj. [R]      Gamma shift adjustment
8	Standard B GAMMA SHIFT	350/390	0 ~ 1023	PC,DVI std/AV Std Center value 512      *: White balance adj. [B]
9	Standard GAMMA 0	0/0	0 ~ 1023	PC,DVI Standard / AV Standard
10	Standard GAMMA 1	160/145	0 ~ 1023	Read only
11	Standard GAMMA 2	274/263	0 ~ 1023	
12	Standard GAMMA 3	386/377	0 ~ 1023	
13	Standard GAMMA 4	477/471	0 ~ 1023	
14	Standard GAMMA 5	544/537	0 ~ 1023	
15	Standard GAMMA 6	611/604	0 ~ 1023	
16	Standard GAMMA 7	659/648	0 ~ 1023	
17	Standard GAMMA 8	700/684	0 ~ 1023	
18	Standard GAMMA 9	736/709	0 ~ 1023	
19	Standard GAMMA 10	770/737	0 ~ 1023	
20	Standard GAMMA 11	802/766	0 ~ 1023	
21	Standard GAMMA 12	840/804	0 ~ 1023	
22	Standard GAMMA 13	874/837	0 ~ 1023	
23	Standard GAMMA 14	926/902	0 ~ 1023	
24	Standard GAMMA 15	1023/1023	0 ~ 1023	
25	Real/Cinema G GAMMA SHIFT	506/506	385 ~ 639	PC,DVI Real / AV Cinema
26	Real/Cinema R GAMMA SHIFT	512/512	385 ~ 639	
27	Real/Cinema B GAMMA SHIFT	522/527	385 ~ 639	
28	Real/Cinema GAMMA 0	512/512	385 ~ 639	
29	Real/Cinema GAMMA 1	522/527	385 ~ 639	
30	Real/Cinema GAMMA 2	518/521	385 ~ 639	
31	Real/Cinema GAMMA 3	515/519	385 ~ 639	
32	Real/Cinema GAMMA 4	514/516	385 ~ 639	
33	Real/Cinema GAMMA 5	512/512	385 ~ 639	
34	Real/Cinema GAMMA 6	510/510	385 ~ 639	
35	Real/Cinema GAMMA 7	508/508	385 ~ 639	
36	Real/Cinema GAMMA 8	505/505	385 ~ 639	
37	Real/Cinema GAMMA 9	503/503	385 ~ 639	
38	Real/Cinema GAMMA 10	501/501	385 ~ 639	
39	Real/Cinema GAMMA 11	499/499	385 ~ 639	
40	Real/Cinema GAMMA 12	496/496	385 ~ 639	
41	Real/Cinema GAMMA 13	492/492	385 ~ 639	

## Electrical Adjustments

No.	Adjustment Item	Initial Value	Range	Input source / Description
42	Real/Cinema GAMMA 14	488/488	385 ~ 639	
43	Real/Cinema GAMMA 15	512/512	385 ~ 639	
44	r_mid2_level	512	0 ~ 1023	_C9D
45	r_mid1_level	608	0 ~ 1023	_C9E
46	r_max_level	680	0 ~ 1023	_C9F
47	g_mid2_level	512	0 ~ 1023	_CA1
48	g_mid1_level	608	0 ~ 1023	_CA2
49	g_max_level	680	0 ~ 1023	_CA3
50	b_mid2_level	512	0 ~ 1023	_CA5
51	b_mid1_level	608	0 ~ 1023	_CA6
52	b_max_level	680	0 ~ 1023	_CA7
53	V-line Correction_R2	1	0 ~ 255	_C48
54	V-line Correction_G2	1	0 ~ 255	_C4D
55	V-line Correction_B2	1	0 ~ 255	_C52
<b>Group: 5 DAC</b>				
0	B_VIDEO_CENTER	125	0 ~ 255	dac1
1	G_VIDEO_CENTER	124	0 ~ 255	dac1
2	R_VIDEO_CENTER	125	0 ~ 255	dac1
3	REF_B	105	0 ~ 255	dac1
4	REF_G	108	0 ~ 255	dac1
5	REF_R	107	0 ~ 255	dac1
6	NRSB	42	0 ~ 255	NRS B
7	NRSA	159	0 ~ 255	NRS A
8	--			*: PSIG adjustment-1
9	--			*: PSIG adjustment-2
10	R_V_COM	69	0 ~ 255	dac2
11	G_V_COM	73	0 ~ 255	dac2
12	B_V_COM	70	0 ~ 255	dac2
13	R_BLK_DC	115/110/115	0 ~ 255	dac3 video/1080i,1035i,720p/480p,525p
14	B_BLK_DC	115/110/115	0 ~ 255	dac3 video/1080i,1035i,720p/480p,525p
15	B_CLMP	30	0 ~ 255	dac4
16	G_CLMP	30	0 ~ 255	dac4
17	R_CLMP	30	0 ~ 255	dac4
<b>Group: 6 AD9883</b>				
0	pll_divide	938/904	0 ~ 4095	adr01,02(7-4) 625line/525line
1	vco_range	0	0 ~ 3	adr03(7-6)
2	charge_pump_current	1/1	0 ~ 7	adr03(5-3) 625line/525line
3	ad_clk_phase	8/8	0 ~ 31	adr04(7-3) 625line/525line
4	clp_placement	128	0 ~ 255	adr05
5	clp_width	50	0 ~ 255	adr06
6	hsync_out_pulse_width	64	0 ~ 255	adr07
7	r_gain	255	0 ~ 255	adr08
8	g_gain	255	0 ~ 255	adr09
9	b_gain	255	0 ~ 255	adr0A
10	r_offset	60	0 ~ 128	adr0B(7-1)
11	g_offset	60	0 ~ 128	adr0C(7-1)
12	b_offset	60	0 ~ 128	adr0D(7-1)
13	sync_reg	208	0 ~ 255	adr0E
14	clp_corst_pow	154	0 ~ 255	adr0F
15	clp_sel	0	0 ~ 7	adr10(2-0)
16	read_status	-	0 ~ 255	read_only adr14
17	ic_ver	-	0 ~ 255	read_only adr00
<b>Group: 7 LP05</b>				
0	LP05_R_GAIN_ud	128	0 ~ 255	
1	LP05_G_GAIN_ud	128	0 ~ 255	
2	LP05_B_GAIN_ud	128	0 ~ 255	
3	LP05_TURBO_GAIN_ud	18	0 ~ 255	
4	LP05_SHP_EN_SET_ud	805	0 ~ 4095	Set apperture compensation effective period.
5	LP05_SHP_EN_RST_ud	14	0 ~ 4095	Set apperture compensation effective period.
6	LP05_AB_ON_ud	0	0 ~ 3	Select apperture compensation effective period. 3: 3 point front/back 1: 2 point front/back0: 1 point front/back 2: Not selection
7	LP05_EGE_ud	0	0 ~ 3	Select Frequency characteristics data
<b>Group: 10 Option</b>				
0	Lamp Time Monitor	-	-	Read only
1	RS232C Baudrate	0	0 ~ 1	0: 19200bps 1: 9600bps
2	Shootout Mode	0	0 ~ 1	1: Shoot Out Mode Enable 0: Disable
3	Cooling Time	3	0 ~ 15	Set cooling period, 1: 30 sec. 3: 90 sec. 15: 450 sec. 0: continuos
4	Hi-Land SW	0	0 ~ 255	0: Normal 1: Highland mode (Fan spin speed max.)
5	V-Douki SW	0	0 ~ 1	0: Syncronized Vertical 1: non-syncronized Vertical

## Electrical Adjustments

No.	Adjustment Item	Initial Value	Range	Input source / Description
6	Lamp-use time accumulated	-	-	Read only
7	Net Board Reset	1	0 ~ 1	0: Invalid , 1: Valid
8	Key Stone Option	0	0 ~ 1	0: Fixed, 1: Change with inpt signal
<b>Group: 11 Fan Control</b>				
0	FAN_TEMP_A_WARNING	46	30 ~ 100	Temerature to judge abnormal A (Not memorized) Inside projector
1	FAN_TEMP_B_WARNING	62	30 ~ 100	Temerature to judge abnormal B (Not memorized) Optical
2	FAN_TEMP_C_WARNING	18	0 ~ 100	Temerature to judge abnormal A (Not memorized) Detect the filter clogged
3	FAN_CONTROL_SW	0	0 or 1	0: Auto-FanControl 1: Manual
4	FAN_A_SPEED	174/250	0 ~ 255	This is effective when FAN_CONTROL_SW is set to "1".
5	FAN_B_SPEED	184/250	0 ~ 255	Normal/Eco mode
6	FAN_TEMP_A_MONI	-	-	Read only
7	FAN_TEMP_B_MONI	-	-	
8	FAN_TEMP_C_MONI	-	-	
9	FAN_PRESSURE	-	-	Read only
<b>Group: 12 PC Real / AV Cinema</b>				
0	PC Real Contrast	32	0 ~ 63	
1	PC Real Brightness	32	0 ~ 63	
2	PC Real Red	32	0 ~ 63	
3	PC Real Green	32	0 ~ 63	
4	PC Real Blue	32	0 ~ 63	
5	PC Real Gamma	8	0 ~ 15	
6	AV Cinema Contrast	32	0 ~ 63	
7	AV Cinema Brightness	32	0 ~ 63	
8	AV Cinema Color	32	0 ~ 63	
9	AV Cinema Tint	32	0 ~ 63	
10	AV Cinema Red	32	0 ~ 63	
11	AV Cinema Green	32	0 ~ 63	
12	AV Cinema Blue	32	0 ~ 63	
13	AV Cinema Sharpness	15	0 ~ 31	
14	AV Cinema Gamma	8	0 ~ 15	
15	AV Cinema N.R.	0	0 or 1	
16	AV Cinema PROGRESSIVE	1	0 or 1	
<b>Group: 100 ICS_LP_data</b>				
0	LP05_R5_VBLKPOL	0	0 ~ 1	R5=ADR133
1	LP05_R5_VBLKS	0	0 ~ 2047	Change value automatically according to selected signal.
2	LP05_R5_VBLKR	9/14/28/ 28/23/30/35	0 ~ 2047	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 1080i50 / 720P / 480P / 575P
3	LP05_R6_HBLKPOL	0	0 ~ 1	R6=ADR134
4	LP05_R6_HBLKS	16	0 ~ 4095	Change value automatically according to selected signal.
5	LP05_R6_HBLKR	32	0 ~ 4095	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 / 1080i50 / 720P / 480P / 575P
6	LP05_R7_CLPPOL	0	0 ~ 1	R7=ADR135
7	LP05_R7_CLPS	175/175/75/ 75/75/156/162	0 ~ 4095	Change value automatically according to selected signal. NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 / 1080i50 / 720P / 480P / 575P
8	LP05_R7_CLPR	270/270/160/ 155/185/260/290	0 ~ 4095	
9	LP05_R8_VOFFON	0/1	0 ~ 1	R8=ADR136
10	LP05_R8_VOFFS	0	0 ~ 2047	Change value automatically according to selected signal.
11	LP05_R8_VOFFR	0/0/20/20/10/7/7	0 ~ 2047	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 / 1080i50 / 720P / 480P / 575P
12	LP05_R9_VBLK2POL	0	0 ~ 1	R9=ADR137
13	LP05_R9_VBLK2POS	16	0 ~ 2047	Change value automatically according to selected signal.
14	LP05_R9_VBLK2WID	32	0 ~ 2047	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 / 1080i50 / 720P / 480P / 575P
15	LP05_RA_HBLK2POL	0	0 ~ 1	RA=ADR138
16	LP05_RA_HBLK2POS	0	0 ~ 4095	Change value automatically according to selected signal.
17	LP05_RA_HBLK2WID	300/300/127/ 120/185/230/265	0 ~ 4095	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 1080i50 / 720P / 480P / 575P
18	ICS_R0_EnDLS	0	0 ~ 1	R0
19	ICS_R0_EnPLS	1	0 ~ 1	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 / 1080i50 / 720P / 480P / 575P
20	ICS_R0_Func_Sel	0	0 ~ 1	
21	ICS_R0_Fbk_Sel	0	0 ~ 1	
22	ICS_R0_Fbk_Pol	0	0 ~ 1	
23	ICS_R0_Ref_Pol	1	0 ~ 1	
24	ICS_R0_PD_Pol	0	0 ~ 1	
25	ICS_R0_Pden	1	0 ~ 1	
26	ICS_R1_PSD	2	0 ~ 3	R1
27	ICS_R1_PFD	6	0 ~ 7	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 / 1080i50 / 720P / 480P / 575P
28	ICS_R3_FBD	2432	0 ~ 8191	R3_R2
				NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 / 1080i50 / 720P / 480P / 575P
29	ICS_R4_Fil_Sel	0	0 ~ 1	R4
30	ICS_R4_DPA_OS	0	0 ~ 63	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 / 1080i50 / 720P / 480P / 575P

## Electrical Adjustments

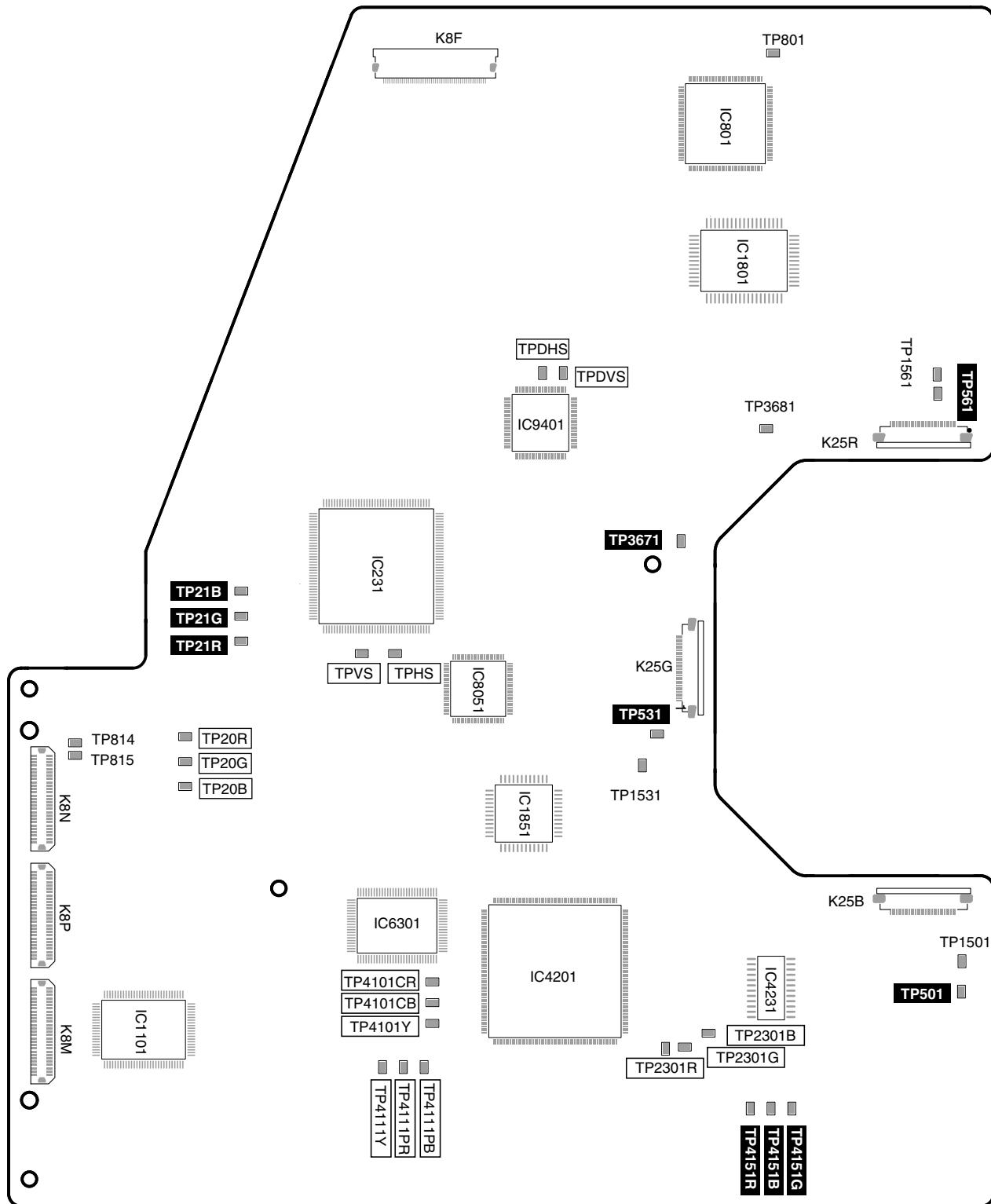
No.	Adjustment Item	Initial Value	Range	Input source / Description
31	ICS_R5_Mask_Rev	0	0 ~ 63	R5
32	ICS_R5_DPA_Res	0	0 ~ 3	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 / 1080i50 / 720P / 480P / 575P
33	ICS_R6_Out_Scl	0	0 ~ 3	R6
34	ICS_R6_Ck2_Inv	0	0 ~ 1	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 / 1080i50 / 720P / 480P / 575P
35	ICS_R6_OE_F	1	0 ~ 1	
36	ICS_R6_OE_T2	0	0 ~ 1	
37	ICS_R6_OE_P2	0	0 ~ 1	
38	ICS_R6_OE_Tck	1	0 ~ 1	
39	ICS_R6_OE_Pck	0	0 ~ 1	
40	ICS_R7_In_Sel	0	0 ~ 1	R7
41	ICS_R7_Osc_Div	0	0 ~ 127	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 / 1080i50 / 720P / 480P / 575P
42	ICS_R8_PLL	5	0 ~ 15	R8
43	ICS_R8_DPA	10	0 ~ 15	NTSC & 480i / PAL & SECAM & 525i / 1035i & 1080i60 / 1080i50 / 720P / 480P / 575P
<b>Group: 500 ADC</b>				
0	ADC R-OFFSET	128	0 ~ 255	
1	ADC G-OFFSET	128	0 ~ 255	
2	ADC B-OFFSET	128	0 ~ 255	
3	ADC R-GAIN	255	0 ~ 255	
4	ADC G-GAIN	255	0 ~ 255	
5	ADC B-GAIN	255	0 ~ 255	
<b>Group: 510 NTSC Gakaku</b>				
0	NTSC TOTAL DOTS	905	0 ~ 2048	Not used
1	NTSC DISP DOTS	1412	0 ~ 2048	NT
2	NTSC H BACK PORCH	295	0 ~ 2048	
3	NTSC V BACK PORCH	41	0 ~ 2048	
4	NTSC DISP LINE	456	0 ~ 2048	
5	NTSC CLAMP	0	0 ~ 2048	
<b>Group: 511 PAL Gakaku</b>				
0	PAL TOTAL DOTS	939	0 ~ 2048	Not used
1	PAL DISP DOTS	1430	0 ~ 2048	PAL
2	PAL H BACK PORCH	296	0 ~ 2048	
3	PAL V BACK PORCH	52	0 ~ 2048	
4	PAL DISP LINE	534	0 ~ 2048	
5	PAL CLAMP	0	0 ~ 2048	
<b>Group: 512 HDTV 1080i-60 Gakaku</b>				
0	TOTAL DOTS	1203	0 ~ 2048	1080i60
1	DISP DOTS	1024	0 ~ 2048	
2	H BACK PORCH	145	0 ~ 2048	
3	V BACK PORCH	53	0 ~ 2048	
4	DISP LINE	1050	0 ~ 2048	
5	CLAMP	7	0 ~ 2048	
<b>Group: 513 HDTV 1080i-50 Gakaku</b>				
0	TOTAL DOTS	1444	0 ~ 2048	1080i50
1	DISP DOTS	1024	0 ~ 2048	
2	H BACK PORCH	144	0 ~ 2048	
3	V BACK PORCH	53	0 ~ 2048	
4	DISP LINE	1052	0 ~ 2048	
5	CLAMP	7	0 ~ 2048	
<b>Group: 514 HDTV 1035i Gakaku</b>				
0	TOTAL DOTS	1203	0 ~ 2048	1035i (temporarily)
1	DISP DOTS	1024	0 ~ 2048	
2	H BACK PORCH	144	0 ~ 2048	
3	V BACK PORCH	89	0 ~ 2048	
4	DISP LINE	1012	0 ~ 2048	
5	CLAMP	7	0 ~ 2048	
<b>Group: 515 HDTV 720p Gakaku</b>				
0	TOTAL DOTS	1650	0 ~ 2048	720p
1	DISP DOTS	1248	0 ~ 2048	
2	H BACK PORCH	318	0 ~ 2048	
3	V BACK PORCH	34	0 ~ 2048	
4	DISP LINE	700	0 ~ 2048	
5	CLAMP	8	0 ~ 2048	
<b>Group: 516 HDTV 575p Gakaku</b>				
0	TOTAL DOTS	1408	0 ~ 2048	575p
1	DISP DOTS	1024	0 ~ 2048	
2	H BACK PORCH	296	0 ~ 2048	
3	V BACK PORCH	48	0 ~ 2048	
4	DISP LINE	542	0 ~ 2048	

## Electrical Adjustments

No.	Adjustment Item	Initial Value	Range	Input source / Description
5	CLAMP	8	0 ~ 2048	
<b>Group: 517 HDTV 480p Gakaku</b>				
0	TOTAL DOTS	1285	0 ~ 2048	480p (top bottom left right 7)
1	DISP DOTS	1024	0 ~ 2048	
2	H BACK PORCTH	214	0 ~ 2048	
3	V BACK PORCTH	47	0 ~ 2048	
4	DISP LINE	460	0 ~ 2048	
5	CLAMP	7	0 ~ 2048	
<b>Group: 518 RGB NTSC Gakaku</b>				
0	TOTAL DOTS	1308	0 ~ 2048	RGB NTSC
1	DISP DOTS	1024	0 ~ 2048	
2	H BACK PORCTH	223	0 ~ 2048	
3	V BACK PORCTH	43	0 ~ 2048	
4	DISP LINE	462	0 ~ 2048	
5	CLAMP	4	0 ~ 2048	
<b>Group: 519 RGB PAL Gakaku</b>				
0	TOTAL DOTS	1338	0 ~ 2048	RGB PAL
1	DISP DOTS	1024	0 ~ 2048	
2	H BACK PORCTH	250	0 ~ 2048	
3	V BACK PORCTH	57	0 ~ 2048	
4	DISP LINE	546	0 ~ 2048	
5	CLAMP	4	0 ~ 2048	

## Test Points and Locations

### ● MAIN BOARD



# ■ Troubleshooting

## No Power

The possible causes of No Power are listed below. Please check following and refer to power supply and protection circuits diagram in the figure opposite.

### **1. Stop the operation of power supply circuit due to detection of abnormality.**

- Detected the abnormality on the secondary power supply lines.  
Power failure detection diodes detect an abnormal voltage on the power supply. Check the shortage of secondary circuits, ICs, condensers, etc.  
Check power supply lines, 9VA and 15.7V on the Drive Board, and 3.3V, 5VD, 5VA, S5V, 9V and 15.5V on Main Board.  
Check detection diodes, D1653, D1604 on Drive Board, and D2304, D2303, D2305, D2306, D3801, D4118, D1182 and D1161 on Main Board.
- Detected the operation stop of cooling fans.  
Power failure detection diodes detect the fan operation stop. Check Fans FN901, FN902, FN903, FN904, FN905, FN907 and FN908.  
Check fan's power supply lines and detection diodes and transistors D6610, D6612, D6613, D6614, D6616, D6617, D6618 and Q6609 on Power Sub Board and D7021 and D7022 on I/F Board.
- Detected the abnormal temperature rise inside the projector.  
Temperature sensor ICs detect abnormal temperature. Check peripheral circuits and sensor ICs IC1691 on Sensor1 Board, IC1871 and IC1872 on Main Board.  
Thermal switch (SW905) detects abnormal temperature. Check peripheral circuits and SW905.  
SW905..... short in normal  
SW905 opens when peripheral temperature is over 90°C.
- Detected the abnormality on the lamp ballast unit.  
The lamp ballast unit outputs error signal (LAMP\_DET) to pin 123 of IC801.  
LAMP\_DET ..... High in abnormal
- Detected the over load/over voltage on power supply circuit.  
Feedback circuits detect over load or over voltages.  
Check PC602 and peripheral circuits on Power Board.
- Operated the mechanical protect on the Interlock switch (SW902). Check lamp cover fixed correctly.
- Fuse (F601) open.

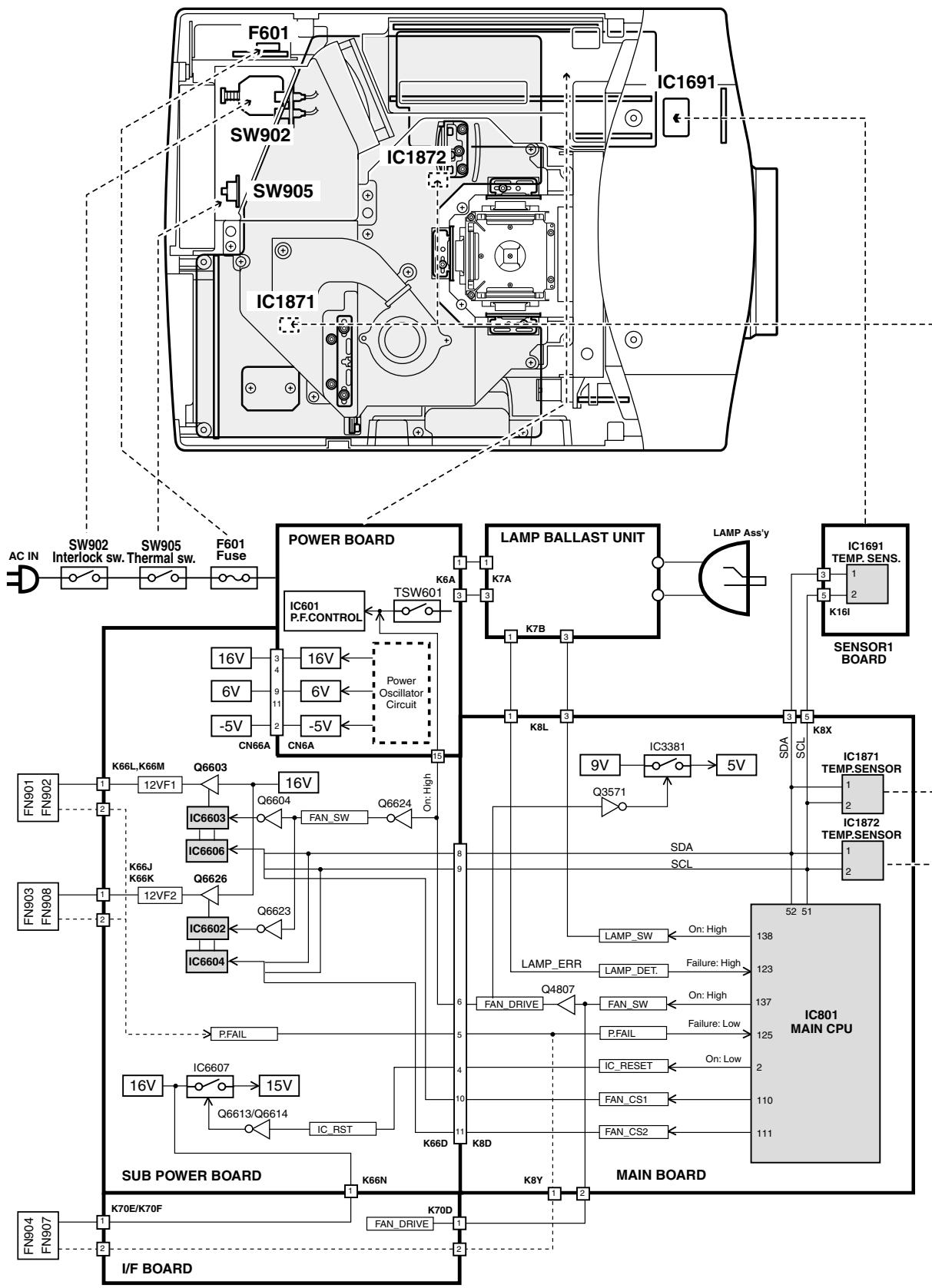
### **2. Abnormality occurs on drive signals for power or lamp circuit.**

- Abnormality on power starter signals (FAN\_DRIVE/ FAN\_SW).  
FAN\_SW signal is output from pin 137 of IC801 and applied to power switching circuit through Q4807. It drives the power oscillation circuit in Power Board and power supply for the cooling fans in Sub Power Board.  
FAN\_DRIVE/FAN\_SW.... High in power on  
Check FAN\_DRIVE and FAN\_SW signals, switching circuit Q6623, Q6624, Q6604, IC6604, IC6606, IC6603, IC6606 and peripheral circuit on Sub Power Board.
- Abnormality on fan drive signal (IC\_RESET).  
IC\_RESET signal is output from pin 2 of IC801 and sent to Q6616, Q6612 and Q6613 on Sub Power Board. They switch power supply lines, 9V, 10VA, 15.7V, 15VP, 3.4V.  
IC\_RESET ..... High in power on  
Check IC\_RESET signal, IC801 on Main Board, drive transistors and ICs Q6616, Q6617, Q6612, Q6611, Q6613, Q6626, Q6602, Q6628, IC6608, IC6618, IC6607, IC6601, IC6616 and peripheral circuits.
- Abnormality on power drive signal (LAMP\_SW).  
LAMP\_SW signal is output from pin 138 of IC801 and sent to pin 3 of K8L on Main Board to drive the Lamp Ballast Unit.  
LAMP\_SW ..... High in power on  
Check LAMP\_SW signal, IC801 and peripheral circuits.

### **3. Abnormality occurs on the power circuit.**

- Abnormality on power primary circuit  
Check Line filters, L601, L602, D604, Q601, DS601, L611, IC651, D632, etc.
- Abnormality on power secondary circuit  
Check D681, D682, D683, IC681, etc.

## Power supply drive and protection diagrams and locations



## No Picture

The possible causes of No Picture are listed below. Please check following and refer to video signal processing diagrams in the figure opposite.

### **1. No picture from Video source**

#### **Composite Video Input**

Check composite video signal at pins 3 and 4 of K10R on AV Board and K8A on Main Board.

Check Y, C signals at pins 15 and 14 of IC1141.

Check Y, C signals at pins 5 and 7 of IC3101.

Check IN2/IN3 signal at pin 22 of IC101.

IN2 : Low, IN3 : High

#### **S-Video Input**

Check S-video signals at pins 47-48 (Y), 51-52(C) of K10R and K8A.

Check Y, C signals at pins 43 and 44 of IC3101.

#### **Component Input**

Check component signals at pins 7-8 (Pb), 11-12 (Pr) and 3-4 (Y) of K10R and K8A.

Check component signals (Y, Pr, Pb) at test points TP4111PB, TP4111PR and TP4111Y.

Check IN2/IN3 signal at pin 22 of IC101.

IN2 : Low, IN3 : High

#### **All of video signals**

Check component signals (Y, Cr, Cb) at test points TP401CR, TP401CB and TP401Y.

Check component signals (Y, Cr, Cb) at pins 67, 68 and 69 of IC4101.

Check component signals (Y, Pr, Pb) at pins 73, 74 and 75 of IC4101.

Check Sync signals (AV\_HSYNC, AV\_VSYNC) at pins 4 and 9 of IC3101.

Check Sync signals (AV\_HSYNC, AV\_VSYNC) at pins 65 and 66 of IC4101.

Check RGB signals at pin 35, 37 and 39 of IC4101.

Check RGB signals at pins 15, 14 and 4 of IC4181.

Check RGB signals at pins 8, 10 and 12 of IC201.

Check Sync signals (AV\_HSYNC, AV\_VSYNC) at pins 1 and 3 of IC3231.

Check CG/HD switching signal at pin 22 of IC201 and pins 9, 10 of IC3231.

CG : Low, HD : High

### **2. No picture from Computer source**

Check RGB signals at pins 19-20, 23-24 and 27-28 of K10Q on AV Board and K8B on Main Board.

Check Sync signals (CG\_HSYNC, CG\_VSYNC) at pins 11-12 and 13-14 of K10Q on AV Board and K8B on Main Board.

Check RGB signals at test points TP20R, TP21R, TP20G, TP21G, TP20B and TP21B.

Check sync signals at test point TPHS and TPVS.

Check CG1/CG2 switching signal at pin 22 of IC5201 and pins 16 of IC5204. The CG1/CG2 switching signal is output from pin 50 of IC1801.

CG1 : Low, CG2 : High

Check CG/HD switch signal at pin 22 of IC201 and pins 9, 10 of IC3231. The CG/HD signal is output from pin 52 of IC1801.

CG : Low, HD : High

### **3. No picture from both of Video and Computer sources.**

Check RGB signals at test points TP20R, TP21R, TP20G, TP21G, TP20B and TP21B.

Check HSYNC signal at test point TPHS and VSYNC signal at TPVS.

Check clamping signals at IC211 and IC212.

### **4. No picture from DVI source.**

Check 5V power supply(5VDVI) at pins 1 and 2 of K10P.

Check Sync signal at pins 47 and 48 of IC8001.

Check ICs IC8001 and peripheral circuits.

### **5. No picture from all of sources**

Check RGB S&H signals at test points TP501, TP1501, TP531, TP1531, TP561 and TP1561.

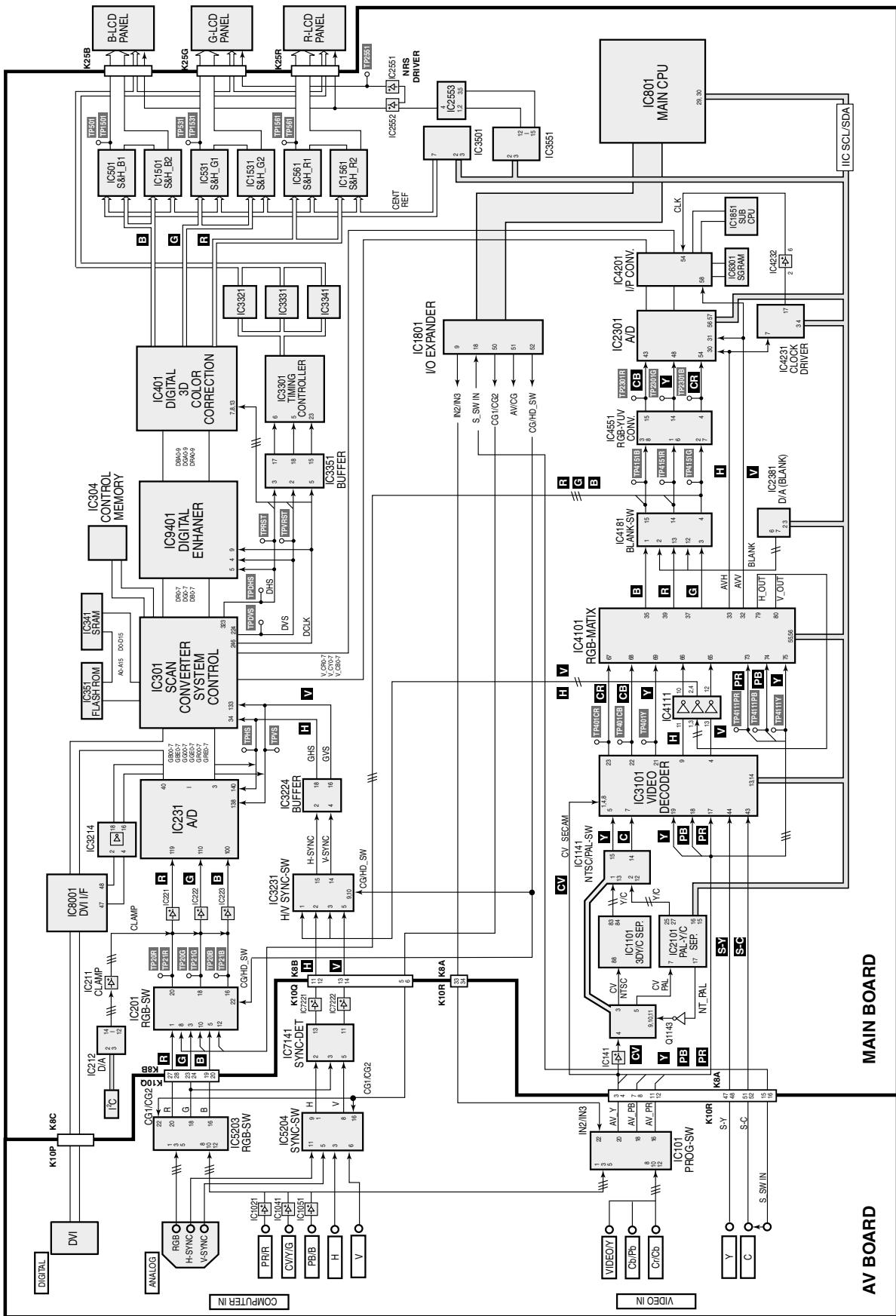
Check NRS signal at test point TP2551.

Check power supply circuit 15.5V and 15VP and peripheral circuit.

Check ICs IC501, IC531, IC561, IC1501, IC1531, IC1561, IC9401, IC401, IC3301 and peripheral circuits.

SIGNAL	K10Q/K8B	SIGNAL	K10R/K8A
CG1/CG2-SW	5-6	AV_Y/Video	3-4
H-Sync	11-12	AV_PB	7-8
V-Sync	13-14	AV_PR	11-12
B	19-20	S_SW-IN	15-16
G	23-24	IN2/IN3-SW	33-34
R	27-28	S-Y	47-48
		S-C	51-52

## Video Signal processing diagrams



## No Sound

### 1. No audio signals at AV input circuit.

Check audio signals at pins 1, 13 (CG1), 5, 14 (CG2) and 2, 12 (VIDEO) of IC5011 on AV Board. Check IC5011 and peripheral circuits.

### 2. Incorrect operation of Input mode switching.

Check AUDIO\_SW1/AUDIO\_SW2 switching signals at pins 9 and 10 of IC5011. The AUDIO\_SW1/AUDIO\_SW2 signals are output from pins 4 and 5 of IC1801. See the truth table below for input mode selection.

Logic Table of IC5011		
Pin 10	Pin 9	Mode
L	L	COMPUTER 1
H	L	COMPUTER 2
L	H	VIDEO

### 3. No audio output signal at speakers.

Check audio signals at pins 3, 4 and 1, 2 of K16U on M Drive Board.

Check MUTE signal at pin 8 of K16R/K8T.

The MUTE signal is output from pin 48 of IC1801.

Mute On : High

Check MUTE signal at pins 3 and 14 of IC1652.

Check sound volume signal at pin 7 of K16R/K8T.

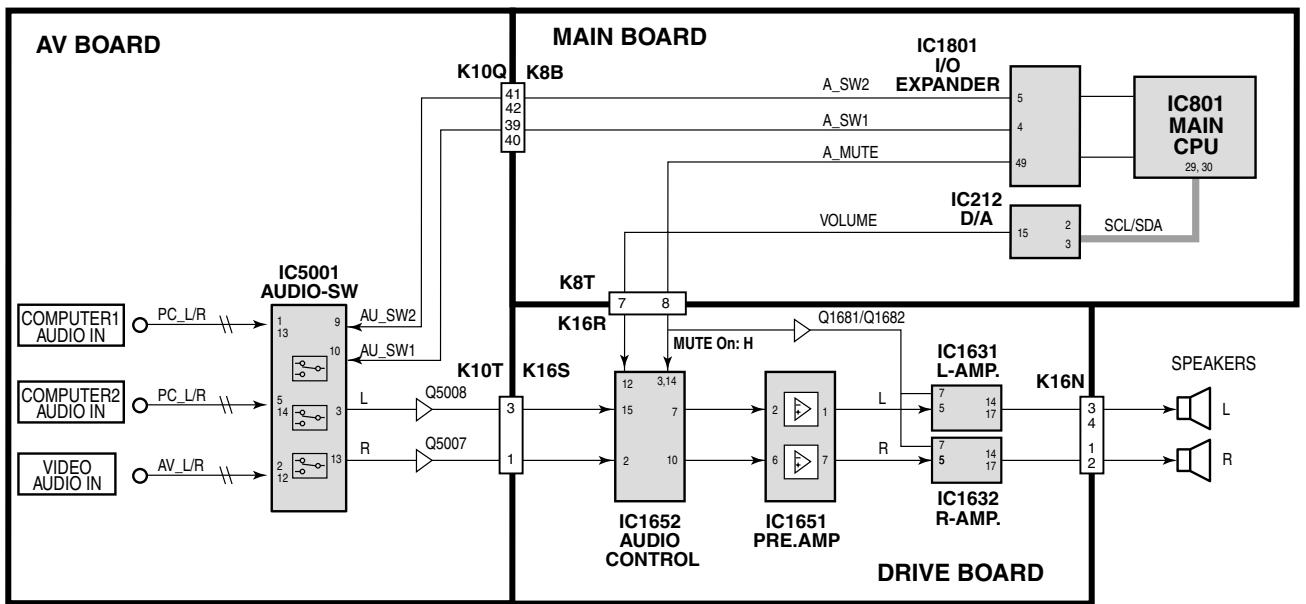
The VOLUME signal is output from pin 15 of IC212 and it is controlled by IC801 via the IIC bus.

Volume Min.: Low

Check audio signals at IC1651, IC1631, IC1632 and peripheral circuits.

### 4. No power supply at audio circuit.

Check 6V(6V AUDIO) power supply line.



## Lens Motor Problems

### 1. No drive signals supplied at motors

Check drive signals at pins 1 and 2 of K16M for focus motor, pins 3 and 4 of K16M for zoom motor and pins 1 and 2 of K16L for lens shift motor on Power Board. Check drive signals at pins 2 and 10 of ICs IC1611, IC1602 and IC1601. Check ICs IC1611, IC1602 and IC1601 and peripheral circuits. Check motor drive power supply (9VA).

Logic Table of IC1611/IC1602/IC1601				
Input		Output		Operation
5	6	10	2	
H	L	L	H	Forward drive
L	H	H	L	Reverse drive
H	H	L	L	Braking
L	L	-	-	Stand by

### 2. No drive signals supplied at motor drive ICs.

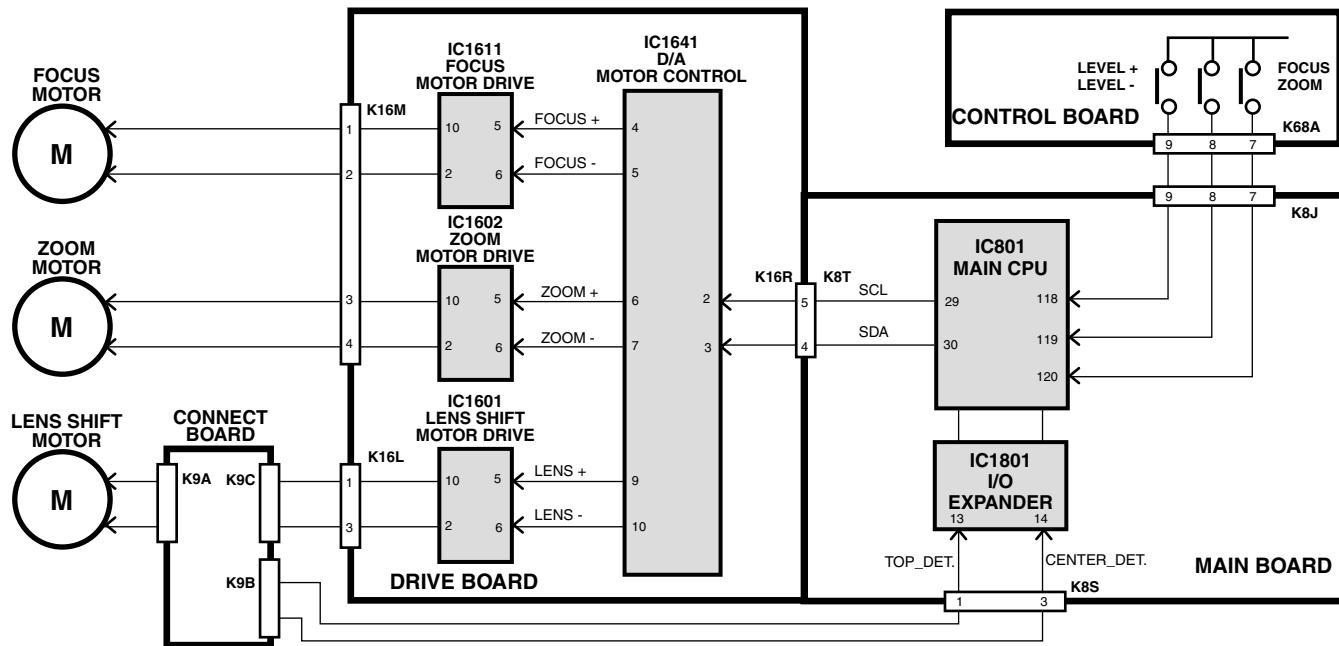
Check drive signals at pins 5 and 6 of ICs IC1611, IC1602 and IC1601. They are supplied from pins 4 and 5 for focus drive, pins 6 and 7 for zoom drive and pins 9 and 10 for lens shift drive of IC1641 D/A control IC.

### 3. No drive signals output from CPU.

The motor drive signals are supplied from IC801, main CPU, via the IIC bus control lines.

### 4. No key switch signals input to CPU.

Check signals at pins 118 to 120 of IC801 when pressing the key buttons. Check key buttons.



# ■ Control Port Functions

## ● System Control & I/O Port Table (IC801)

Pin No.	Name	Function Name	Function	Polarity	I/O
1	PA23/WRHH	USB RESET	USB Reset Signal	Active L	O
2	PE14/TIOC4C/DACK0/AH	IC RESET	Power on/off control except FAN and LAMP	Active L	O
3	PA22/WRHL				
4	PA21/CASHH	RS232C_SW	Not used		
5	PE15/TIOC4D/DACK1/IRQOUT	POWER SW	Power ON: H, Power OFF: L		O
6	VSS	GND			
7	PC0/A0	ADDRESS0	Address Bus 0		O
8	PC1/A1	ADDRESS1	Address Bus 1		O
9	PC2/A2	ADDRESS2	Address Bus 2		O
10	PC3/A3	ADDRESS3	Address Bus 3		O
11	PC4/A4	ADDRESS4	Address Bus 4		O
12	VCC	5V			
13	PC5/A5	ADDRESS5	Address Bus 5		O
14	VSS	GND			
15	PC6/A6	ADDRESS6	Address Bus 6		O
16	PC7/A7	ADDRESS7	Address Bus 7		O
17	PC8/A8	ADDRESS8	Address Bus 8		O
18	PC9/A9	ADDRESS9	Address Bus 9		O
19	PC10/A10	ADDRESS10	Address Bus 10		O
20	PC11/A11	ADDRESS11	Address Bus 11		O
21	PC12/A12	ADDRESS12	Address Bus 12		O
22	PC13/A13	ADDRESS13	Address Bus 13		O
23	PC14/A14	ADDRESS14	Address Bus 14		O
24	PC15/A15	ADDRESS15	Address Bus 15		O
25	PB0/A16	ADDRESS16	Address Bus 16		O
26	VCC	5V			
27	PB1/A17	ADDRESS17	Address Bus 17		O
28	VSS	GND			
29	PA20/CASHL	SCL 1	IIC Bus 1 Clock		I/O
30	PA19/BACK/DRAK1	SDA 1	IIC Bus 1 Data		I/O
31	PB2/IRQ0/POE0/RAS				
32	PB3/IRQ1/POE1/CASL				
33	PA18/BREQ/DRAK0	SYS SW	Peripheral IC Power SW (ON=L, OFF=H)		O
34	PB4/IRQ2/POE2/CASH	AFT-V	Vertical Sync. Signal for Panel Drive	Active L	I
35	VSS	GND			
36	PB5/IRQ3/POE3/RDWR	DE_DIF	Detect DVI Effective		I
37	PB6/IRQ4/A18/BACK	ADDRESS18	Address Bus 18		O
38	PB7/IRQ5/A19/BREQ	ADDRESS19	Address Bus 19		O
39	PB8/IRQ6/A20/WAIT	ADDRESS20	Address Bus 20		O
40	VCC	5V			
41	PB9/IRQ7/A21/ADTRG	ADDRESS21	Address Bus 21		O
42	VSS	GND			
43	PA14/RD	READ	Read signal	Active L	O
44	WDTOVF	SEREKUTO	Over flow output from Watch dog timer		O
45	PD31/D31/ADTRG	RTS	RS232C RTS (Request To Send)		I
46	PD30/D30/IRQOUT	CTS	RS232C CTS (Clear To Send)		O
47	PA13/WRH				
48	PA12/WRL	WRL	Write signal (Lower 8 bit)	Active L	O
49	PA11/CS1	ET7050SELECT	Select SW for Color Correct. ET7050		O
50	PA10/CS0	CS0	Flash Memory Chip Select	Active L	O
51	PA9/TCLKD/IRQ3	SCL 2	IIC Bus 2 Clock		I/O
52	PA8/TCLKC/IRQ2	SDA 2	IIC Bus 2 Data		I/O
53	PA7/TCLKB/CS3	CS3	USB/IO EXP Chip Select	Active L	O
54	PA6/TCLKA/CS2	CS2	SRAM/CXD3511Q Chip Select	Active L	O
55	VSS	GND			
56	PD29/D29/CS3				
57	PD28/D28/CS2	PW_SEL	PW365 RS232C Select		O
58	PD27/D27/DACK1	PW_INTR	PW_365 Dividing signal		O
59	PD26/D26/DACK0	PW_OUT1	PW_365 Data output	(reserve)	O
60	PD25/D25/DREQ1	PW_OUT0	PW_365 Data output	(reserve)	O
61	VSS	GND			
62	PD24/D24/DREQ0	DAC_CS	Select signal for DAC M62358		O
63	VCC	5V			
64	PD23/D23/IRQ7	DVI_PC		DVI = L	O
65	PD22/D22/IRQ6	DVI_OUT		DVI = L	O
66	PD21/D21/IRQ5	CG_HD		CG = L	O
67	PD20/D20/IRQ4				
68	PD19/D19/IRQ3				
69	PD18/D18/IRQ2	PW_IN1	PW365 Data input (reserve)		I
70	PD17/D17/IRQ1	PW_IN0	PW365 Data input (reserve)		I
71	VSS	GND			

## Control Port Functions

Pin No.	Name	Function Name	Function	Polarity	I/O
72	PD16/D16/IRQ0	reserve			
73	PD15/D15	DATA15	Data Bus 15		I/O
74	PD14/D14	DATA14	Data Bus 14		I/O
75	PD13/D13	DATA13	Data Bus 13		I/O
76	PD12/D12	DATA12	Data Bus 12		I/O
77	VCC	5V			
78	PD11/D11	DATA11	Data Bus 11		I/O
79	VSS	GND			
80	PD10/D10	DATA10	Data Bus 10		I/O
81	PD9/D9	DATA9	Data Bus 9		I/O
82	PD8/D8	DATA8	Data Bus 8		I/O
83	PD7/D7	DATA7	Data Bus 7		I/O
84	PD6/D6	DATA6	Data Bus 6		I/O
85	VCC	5V			
86	PD5/D5	DATA5	Data Bus 5		I/O
87	VSS	GND			
88	PD4/D4	DATA4	Data Bus 4		I/O
89	PD3/D3	DATA3	Data Bus 3		I/O
90	PD2/D2	DATA2	Data Bus 2		I/O
91	PD1/D1	DATA1	Data Bus 1		I/O
92	PD0/D0	DATA0	Data Bus 0		I/O
93	VSS	GND			
94	XTAL	XTAL	Oscillator Input		I
95	MD3	Mode 3	Multiplex setting with Mode 2 (set H)		I
96	EXTAL	EXTAL	Oscillator output		O
97	MD2	Mode 2	Multiplex setting with Mode 3 (set L)		I
98	NMI	NONMASK	Non-maskable Input		I
99	VCC (FWP)	FWP	Write Mode for Flash memory		I
100	PA16/AH	FLASH MODE	FWP Control		O
101	PA17/MWAIT	FAN ON/OFF	Not used		O
102	MD1	Mode 1	MCU Mode setting with Mode 0 (set H)		I
103	MD0	Mode 0	MCU Mode setting with Mode 1 (set L)		I
104	PLLVCC	PLLVCC	Power for PLL		
105	PLLCAP	PLLCAP	PLL Filter		
106	PLVSS	PLLGND	GND for PLL		
107	PA15/CK	M-CLK	CPU Clock output		O
108	RES	RESET	RESET Input	Active L	I
109	PE0/TIOC0A/DREQ0	ET7050SCS	Serial Chip select for Color Correction ET5070	Active L	O
110	PE1/TIOC0B/DRAK0	FAN_CS1	Chip select for FAN 1		O
111	PE2/TIOC0C/DREQ1	FAN_CS2	Chip select for FAN 2		O
112	VCC	5V			
113	PE3/TIOC0D/DRAK1	SDA3	IIC Bus 3 Data		
114	PE4/TIOC1A	SCL3	IIC Bus 3 Clock		
115	PE5/TIOC1B	USB_BRST	Pull-up resistor on/off for USB		
116	PE6/TIOC2A	SH_SEL	S&H Select		
117	VSS	GND			
118	PF0/AN0	KEY1	Key input 1 (A/D input)		I
119	PF1/AN1	KEY2	Key input 2 (A/D input)		I
120	PF2/AN2	KEY3	Key input 3 (A/D input)		I
121	PF3/AN3	OPT1	Option Destination	(A/D input)	I
122	PF4/AN4	OPT2	Option Air pressure sensor	EPSN:H	I
123	PF5/AN5	LAMP DET	Detection Lamp Error		I
124	AVSS	GND	GND for A/D		
125	PF6/AN6	POWER FAIL	Power Fail (A/D input: Abnormal when 2V or less input)		I
126	PF7/AN7	SDATA IN	Serial Data input		I
127	AVREF	5 V	Reference Voltage for A/D		
128	AVCC	5 V	Power for A/D		
129	VSS	GND			
130	PA0/RXD0	PW_RX	PW365 Rx		I
131	PA1/TXD0	PW_TX	PW365 Tx		O
132	PA2/SCK0/DREQ0/IRQ0				
133	PA3/RXD1	Rx	RS232C Rx		I
134	PA4/TXD1	Tx	RS232C Tx		O
135	VCC	5V			
136	PA5/SCK1/DREQ1/IRQ1	USB INTR	USB Dividing signal input	Active L	I
137	PE7/TIOC2B	FAN SW	FAN ON/OFF output		O
138	PE8/TIOC3A	LAMP SW	LAMP ON/OFF output	Active H	O
139	PE9/TIOC3B	SDATA OUT	Serial Data output		O
140	PE10/TIOC3C	SCLK	Serial Clock output		O
141	VSS	GND			
142	PE11/TIOC3D	EXP RESET	I/O Expander	Active H	O
143	PE12/TIOC4A	R/C	Remote Control signal input	Active L	I
144	PE13/TIOC4B/MRES	PW RESET	PW365 Reset signal output	Active L	O

## ● Parallel I/O Expander (IC1801, M66500FP)

Pin No.	Name	Function Name	Function	Polarity	I/O
1	PF6	CG_FILTER			O
2	PF7	D_TURBO_SEL	DIGITAL TURBO Selection		O
3	Vcc	5 V ±10 %			-
4	PE0	A_SW1	Audio SW 1		O
5	PE1	A_SW2	Audio SW 2		O
6	PE2	SEL_BAISOKU	Double Scan Selection		O
7	PE3	IP_CSA	CPU Strobe signal for IP Conversion		O
8	PE4	IP+RESETSW	CPU reset signal for IP Conversion		O
9	PE5	IN2/IN3_SW	Input2/3 switch		O
10	PE6	PC_SWINV	Auto Image		O
11	PE7	S_SW	S-Input		O
12	GND3	GND	-		
13	PB0	LENS_TOP	Lens Position Detection [Top]	Top=L	I
14	PB1	LENS_CENTER	Lens Position Detection [Center]	Not used	I
15	PB2	LENS_BOTTOM	Lens Position Detection [Bottom]	Bottom=L	I
16	PB3	HD-DET	HD Signal Detection , exist at CXA2101	On=H	I
17	PB4	COMP-DET	Component input Detection Yes/No	Not used	I
18	PB5	S-DET	S-Input Detection Yes/No	Not used	I
19	PB6	V-DET	V-Sync Detection at C-Sync		I
20	PB7	PC_DET	Network Board Detection Yes/No	Attached: L	I
21	PA7				I
22	PA6				I
23	PA5				I
24	PA4				I
25	PA3				I
26	PA2				I
27	PA1	DAC_SW	For Service Mode Groupe 6-10,11,12		I
28	PA0	TURBO_LED	Bright LED Drive		I
29	Vcc	5V ±10 %	-		
30	RD		Read Select	Active L	I
31	WR		Write Select	Active L	I
32	CS		Chip Select	Active L	I
33	RESET		Reset	Active H	I
34	GND1	GND	-		
35	A2		Port Select 2		I
36	A1		Port Select 1		I
37	A0		Port Select 0		I
38	D0		Data Bus 0		I/O
39	D1		Data Bus 1		I/O
40	D2		Data Bus 2		I/O
41	D3		Data Bus 3		I/O
42	D4		Data Bus 4		I/O
43	D5		Data Bus 5		I/O
44	D6		Data Bus 6		I/O
45	D7		Data Bus 7		I/O
46	PC7	MOUSE2	Mouse Select 2		O
47	PC6	NET_SW	Network Board On/Off SW	On: L	O
48	PC5	WATT_SW	Lamp Mode Switch	Eco: L	O
49	PC4	A_MUTE	Mute output		O
50	PC0	CG1/CG2	Computer 1/Computer 2 SW		O
51	PC1	AV/CG	Computer/Video SW		O
52	PC2			CG=L	O
53	PC3	DDC_CONT	DDC PC/CPU SW	CPU: H	O
54	PG0				I
55	PG1				I
56	PG2	SCDT_DIF2	DVI Output SW	DVI=H	O
57	PG3	SCDT_DIF	DVI Output SW	DVI=H	O
58	GND2	GND	-		
59	PF0		Temp Warning LED Drive output	LED On=L	O
60	PF1		Lamp Replace LED Drive output	LED On=L	O
61	PF2		Ready LED Drive output	LED On=L	O
62	PF3	PD_DIF	DVI Signal SW_8001	DVI=H	O
63	PF4	PD_DIF2	DVI Signal SW_8051	DVI=H	O
64	PF5	DDC_CONT_DVI	SGRAM Bus Reset	Active L	O

### ● IIC Bus I/O Expander (IC1641, M62320FP) Port Functions

Pin No.	Name	Function	Action	I/O
1	SO	Serial Data output port (Not connected)		O
2	SCL	IIC BUS SCL		I
3	SDA	IIC BUS SDA		I/O
4	D0	FOCUS+	FOCUS +	Active H
5	D1	FOCUS-	FOCUS -	Active H
6	D2	ZOOM+	ZOOM +	Active H
7	D3	ZOOM-	ZOOM -	Active H
8	Vss	GND		-
9	D4	LENS UP	LENS UP	Active H
10	D5	LENS DOWN	LENS DOWN	Active H
11	D6	BRIGHT ON	BRIGHT ON	Active H
12	D7	BRIGHT OFF	BRIGHT OFF	Active H
13	Vdd	Power supply +5V ±10 %		-
14	CS2	Slave address setting port 2 (GND)		I
15	CS1	Slave address setting port 1 (GND)		I
16	CS0	Slave address setting port 0 (GND)		I

### ● IIC Bus DA Converter (IC212, M62393FP) Port Functions

Pin No.	Name	Function	I/O
1	R	Serial Data output port (Not connected)	O
2	SCL	IIC BUS SCL	I
3	SDA	IIC BUS SDA	I/O
4	A05	Not used	O
5	A06	Not used	O
6	A07	Not used	O
7	A08	Not used	O
8	VrefL	DAC Lower Reference Voltage input	-
9	VrefU 1	DAC Upper Reference Voltage input (CH5~CH8)	-
10	Vss	GND	-
11	VrefU2	DAC Upper Reference Voltage input (CH1~CH 4)	-
12	A01	AV_RCLP	O
13	A02	AV_GCLP	O
14	A03	AV_BCLP	O
15	A04	VOLUME	O
16	Vcc	Power Supply for Output Buffer (4.5V ~ 5.5V)	-
17	Vdd	Power Supply +5V±10 %	-
18	CS2	Slave address setting port 2 (GND)	I
19	CS1	Slave address setting port 1 (Vdd)	I
20	CS0	Slave address setting port 0 (GND)	I

### ● IIC Bus DA Converter (IC2381, M62393FP) Port Functions

Pin No.	Name	Function	I/O
1	R	Serial Data output port (Not connected)	O
2	SCL	IIC BUS SCL	I
3	SDA	IIC BUS SDA	I/O
4	A05	Not used	O
5	A06	Not used	O
6	A07	R_BLK_DC	O
7	A08	B_BLK_DC	O
8	VrefL	DAC Lower Reference Voltage input	-
9	VrefU 1	DAC Upper Reference Voltage input (CH5~CH8)	-
10	Vss	GND	-
11	VrefU2	DAC Upper Reference Voltage input (CH1~CH 4)	-
12	A01	Not used	O
13	A02	Not used	O
14	A03	Not used	O
15	A04	Not used	O
16	Vcc	Power Supply for Output Buffer (4.5V ~ 5.5V)	-
17	Vdd	Power Supply +5V±10 %	-
18	CS2	Slave address setting port 2 (GND)	I
19	CS1	Slave address setting port 1 (GND)	I
20	CS0	Slave address setting port 0 (GND)	I

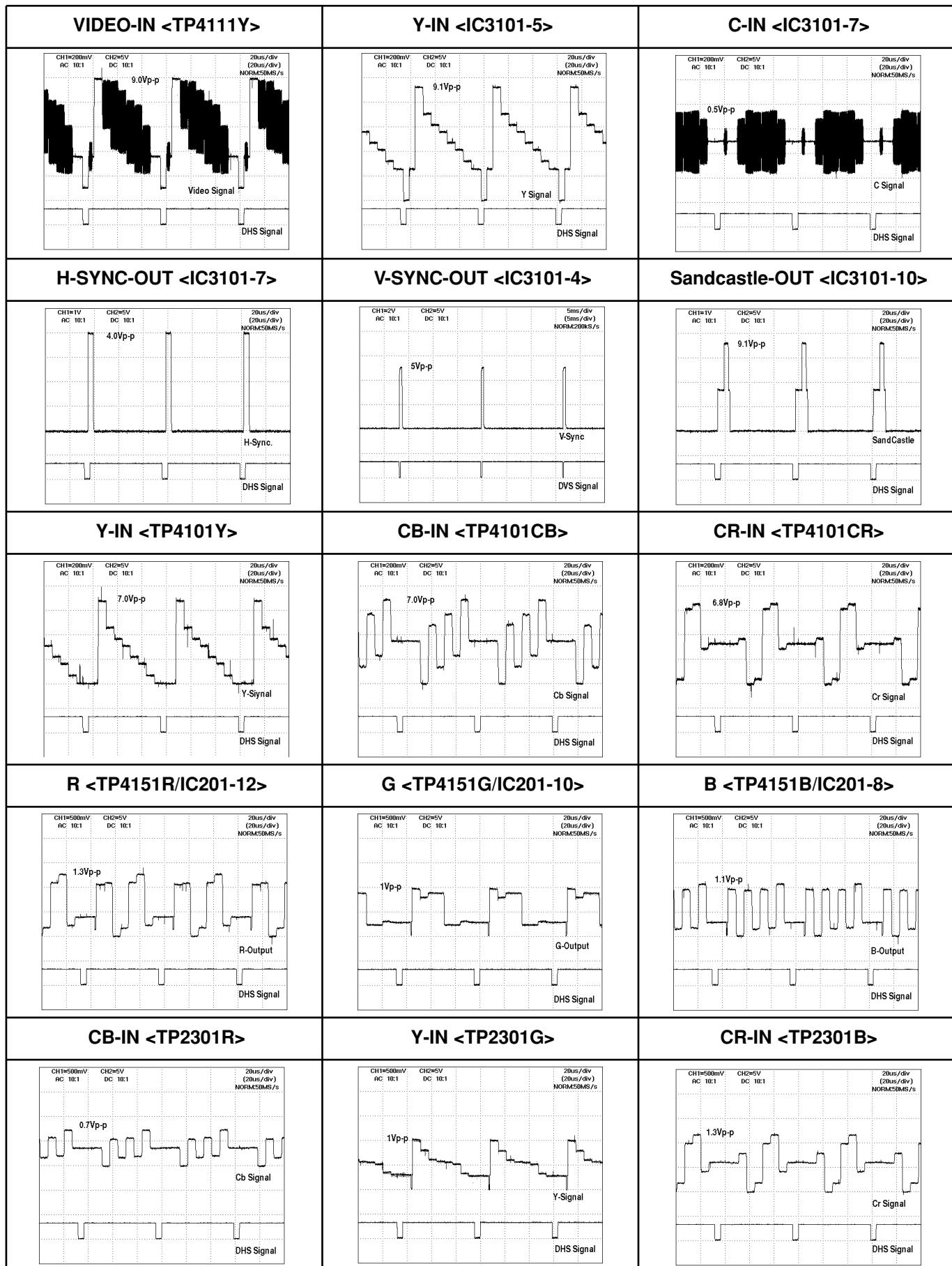
## ● IIC Bus DA Converter (IC3551, M62399FP) Port Functions

Pin No.	Name	Function	I/O
1	R	Serial Data output port (Not connected)	O
2	SCL	IIC BUS SCL	I
3	SDA	IIC BUS SDA	I/O
4	A05	DWN	O
5	A06	V_COMR	O
6	A07	V_COMG	O
7	A08	V_COMB	O
8	VrefL	DAC Lower Reference Voltage input	-
9	VrefU 1	DAC Upper Reference Voltage input (CH5~CH8)	-
10	Vss	GND	-
11	VrefU2	DAC Upper Reference Voltage input (CH1~CH 4)	-
12	A01	NRSB	O
13	A02	NRSA	O
14	A03	XRGT3	O
15	A04	RG3	O
16	Vcc	Power Supply for Output Buffer (2.4*VrefU ~ 12V)	-
17	Vdd	Power Supply +5V±10 %	-
18	CS2	Slave address setting port 2 (GND)	I
19	CS1	Slave address setting port 1 (GND)	I
20	CS0	Slave address setting port 0 (GND)	I

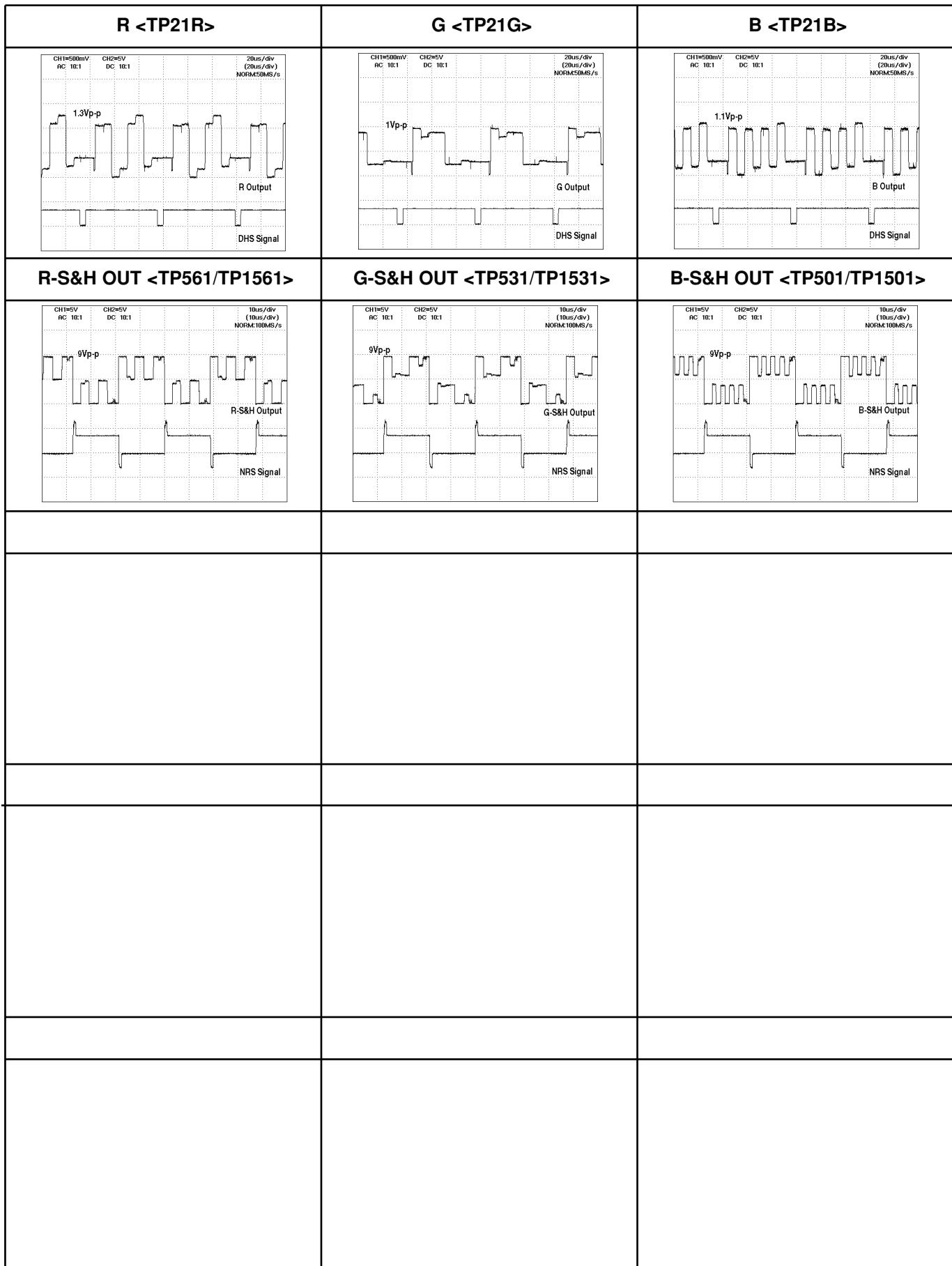
## ● IIC Bus DA Converter (IC3501, M62399FP) Port Functions

Pin No.	Name	Function	I/O
1	R	Serial Data output port (Not connected)	O
2	SCL	IIC BUS SCL	I
3	SDA	IIC BUS SDA	I/O
4	A05	Not used	O
5	A06	REF_B	O
6	A07	REF_G	O
7	A08	REF_R	O
8	VrefL	DAC Lower Reference Voltage input	-
9	VrefU 1	DAC Upper Reference Voltage input (CH5~CH8)	-
10	Vss	GND	-
11	VrefU2	DAC Upper Reference Voltage input (CH1~CH 4)	-
12	A01	B_CENT	O
13	A02	G_CENT	O
14	A03	R_CENT	O
15	A04	Not used	O
16	Vcc	Power Supply for Output Buffer (2.4*VrefU ~ 12V)	-
17	Vdd	Power Supply +5V±10 %	-
18	CS2	Slave address setting port 2 (GND)	I
19	CS1	Slave address setting port 1 (GND)	I
20	CS0	Slave address setting port 0 (GND)	I

## ■ Waveforms



## Waveforms



## ■ Cleaning

After long periods of use, dust and other particles will accumulate on the LCD panel, prism, mirror, polarized glass, lens, etc., causing the picture to darken or color to blur. If this occurs, clean the inside of optical unit.

Remove dust and other particles using air spray. If dirt cannot be removed by air spray, disassemble and clean the optical unit.

### Cleaning with air spray

1. Remove the cabinet top following to "Mechanical Disassemblies".
2. Clean up the LCD panel and polarizing plate by using the air spray from the cabinet top opening.

#### **Caution:**

Use a commercial (inert gas) air spray designed for cleaning camera and computer equipment. Use a resin-based nozzle only. Be very careful not to damage optical parts with the nozzle tip. Never use any kind of cleanser on the unit. Also, never use abrasive materials on the unit as this may cause irreparable damage.

### Disassembly Cleaning

Disassembly cleaning method should only be performed when the unit is considerable dirty and cannot be sufficiently cleaned by air spraying alone.

**Be sure to readjust the optical system after performing disassembly cleaning.**

1. Remove the cabinet top and main units following to "Mechanical Disassemblies".
2. Remove the optical base top following to "Optical Unit Disassemblies". If the LCD panel needs cleaning, remove the LCD panel unit following to "LCD panel replacement".
3. Clean the optical parts with a soft cloth. Clean extremely dirty areas using a cloth moistened with alcohol.

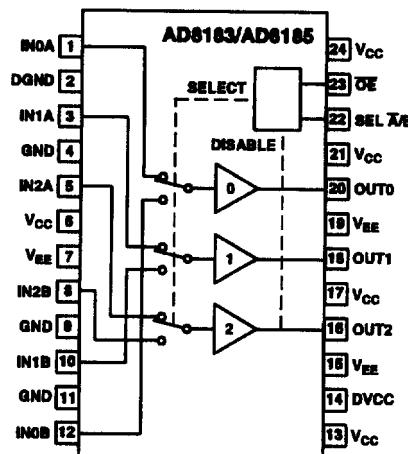
#### **Caution:**

The surface of the optical components consists of multiple dielectric layers with varying degrees of refraction. Never use organic solvents (thinner, etc.) or any kind of cleanser on these components.

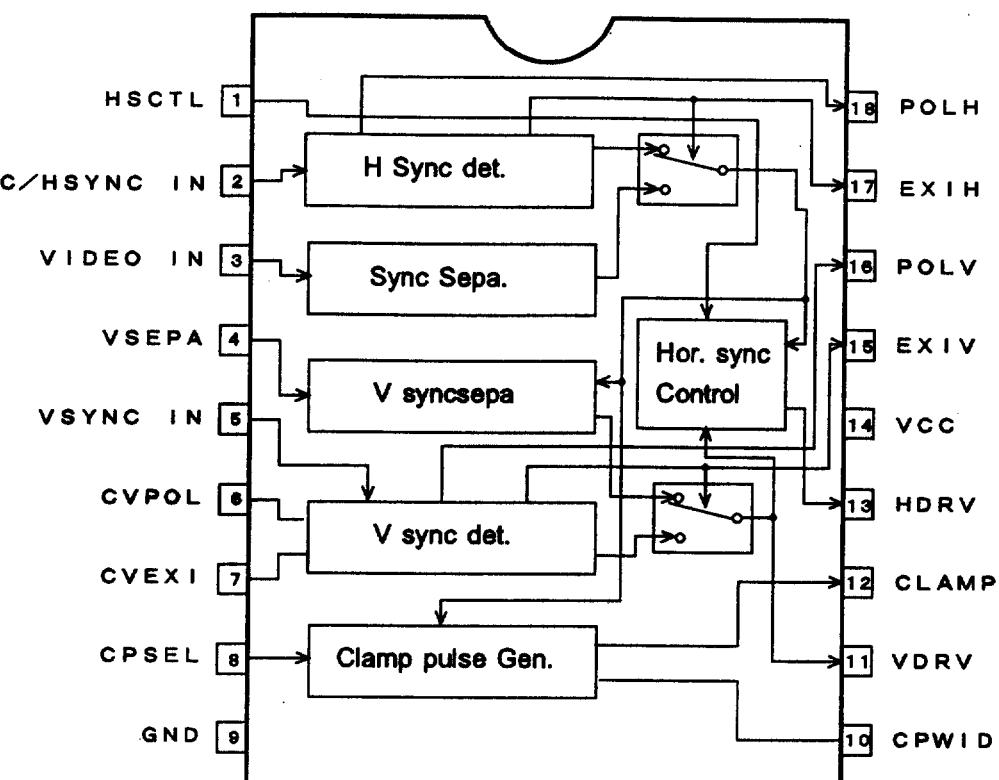
Since the LCD panel is equipped with an electronic circuit, never use any liquids (water, etc.) to clean the unit. Use of liquid may cause the unit to malfunction.

## ■ IC Block Diagrams

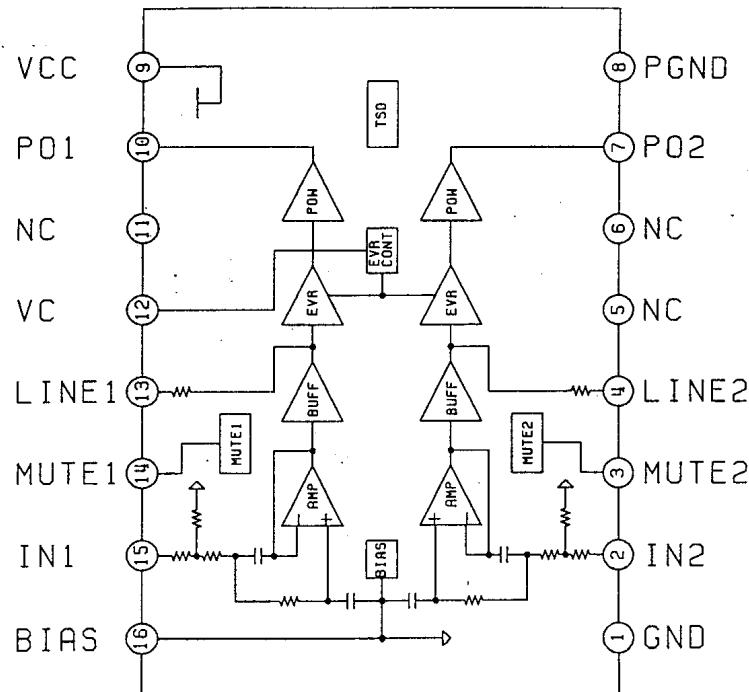
### ● AD8183ARU/AD8185ARU <Selector, IC101, IC201, IC5203>



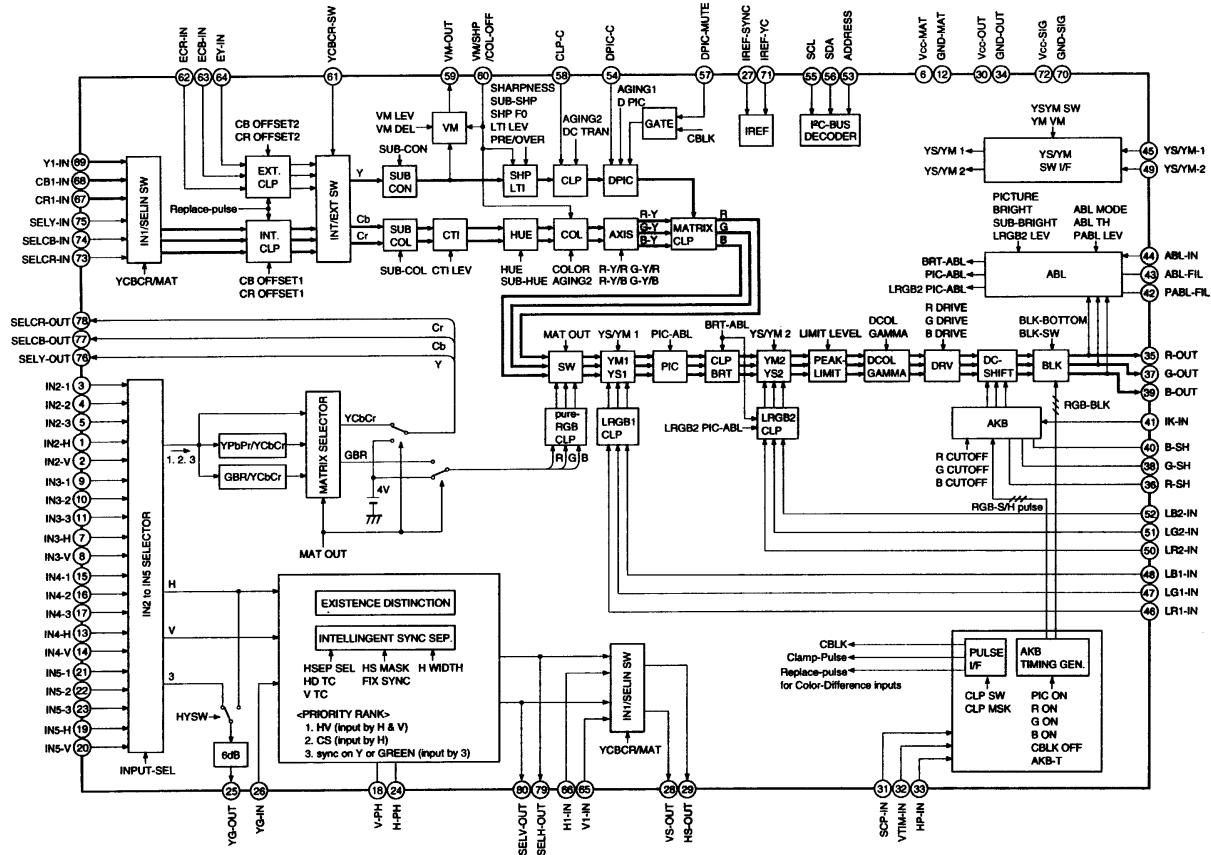
### ● BA7078AF <Sync Detector, IC7141>



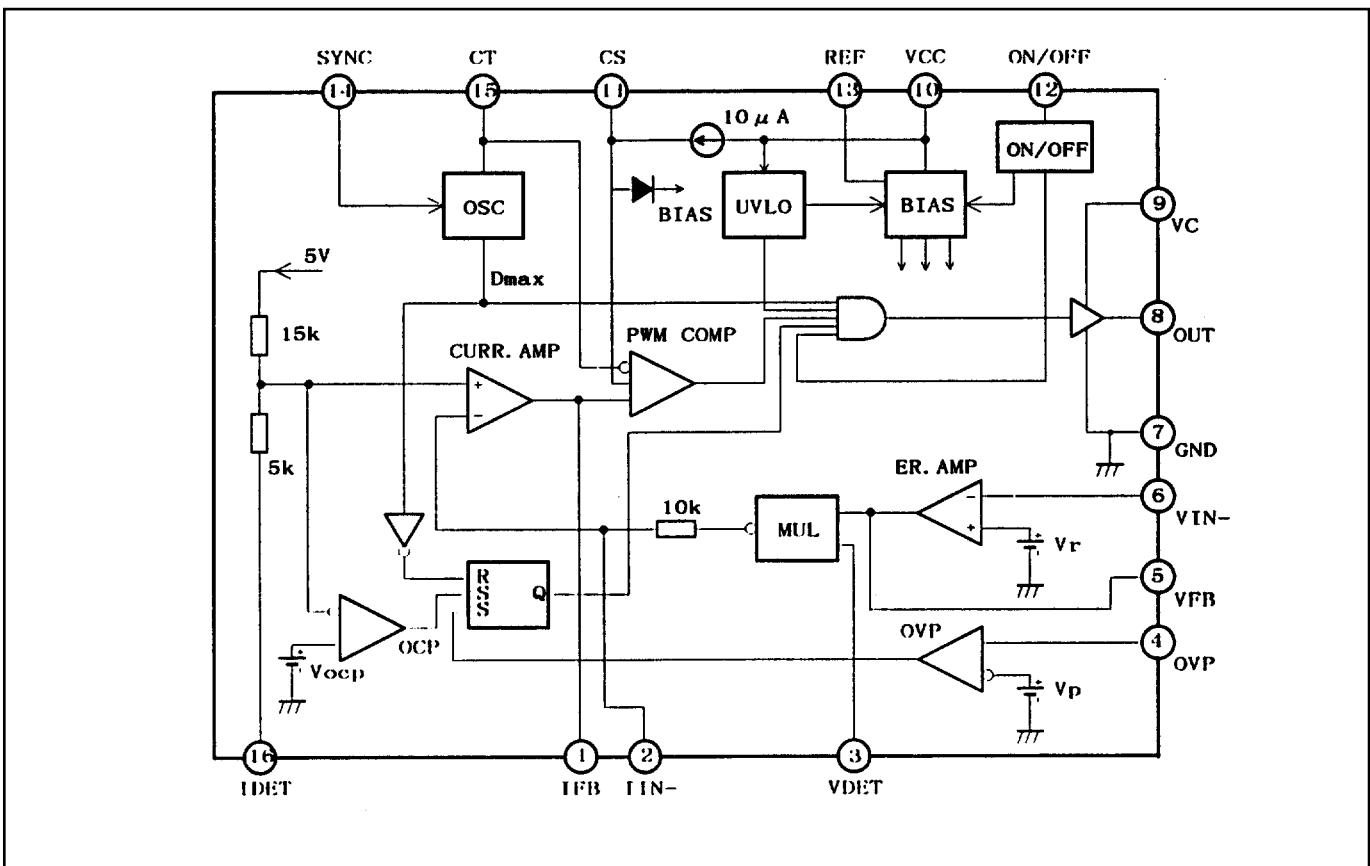
## ● BH3540 <Volume Control, IC1652>



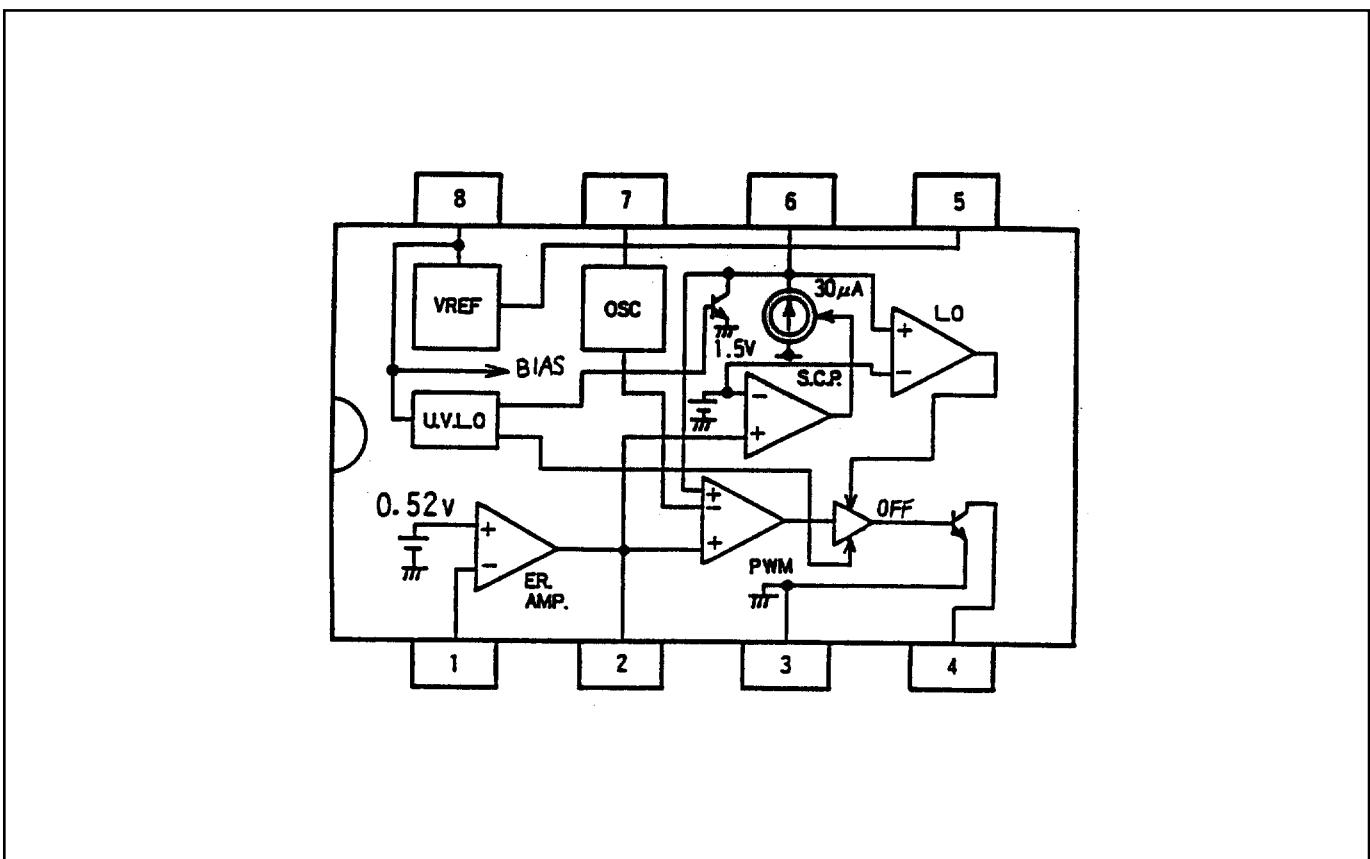
## ● CXA2101AQ <RGB Matrix, IC4101>



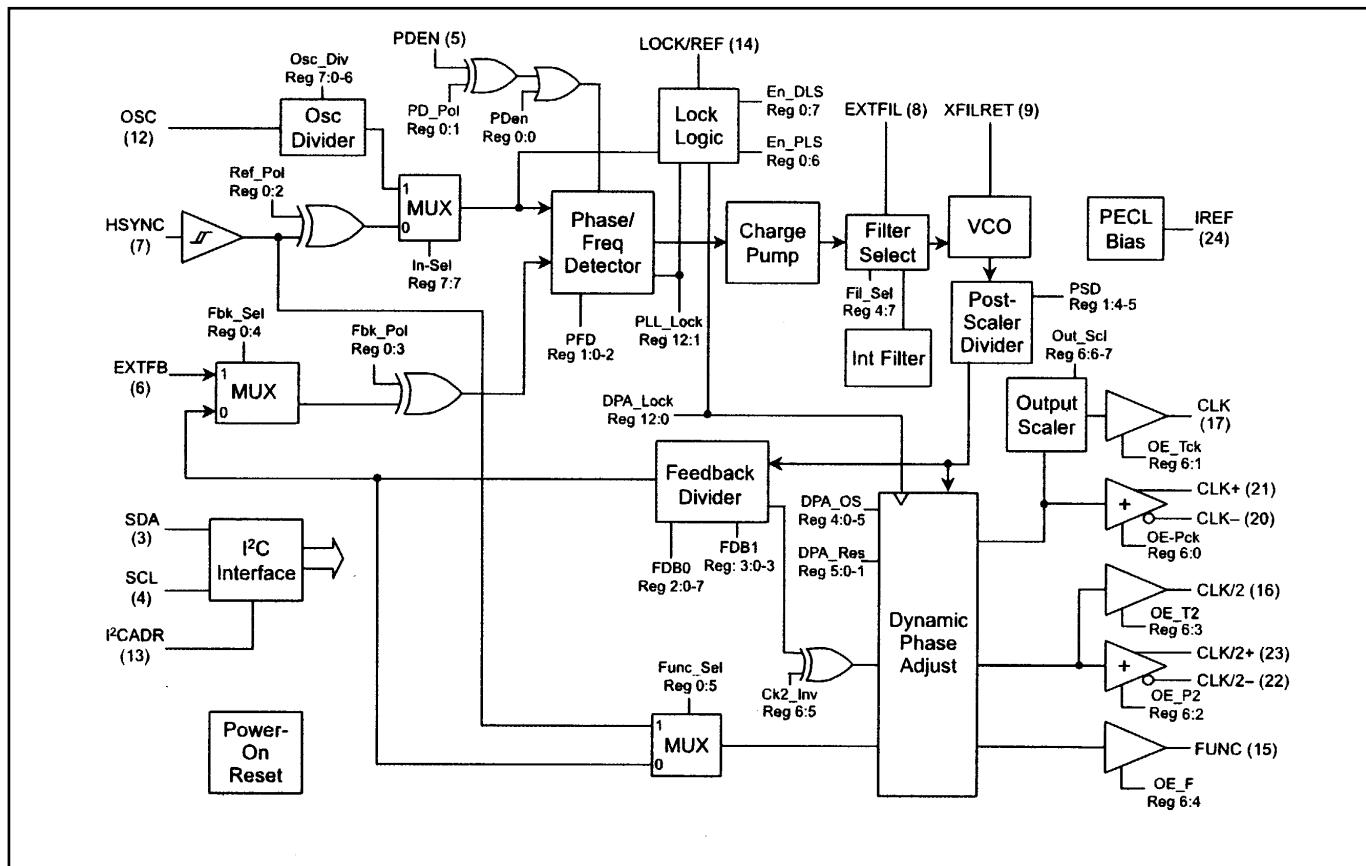
● FA5332M <P. F. Controller, IC601>



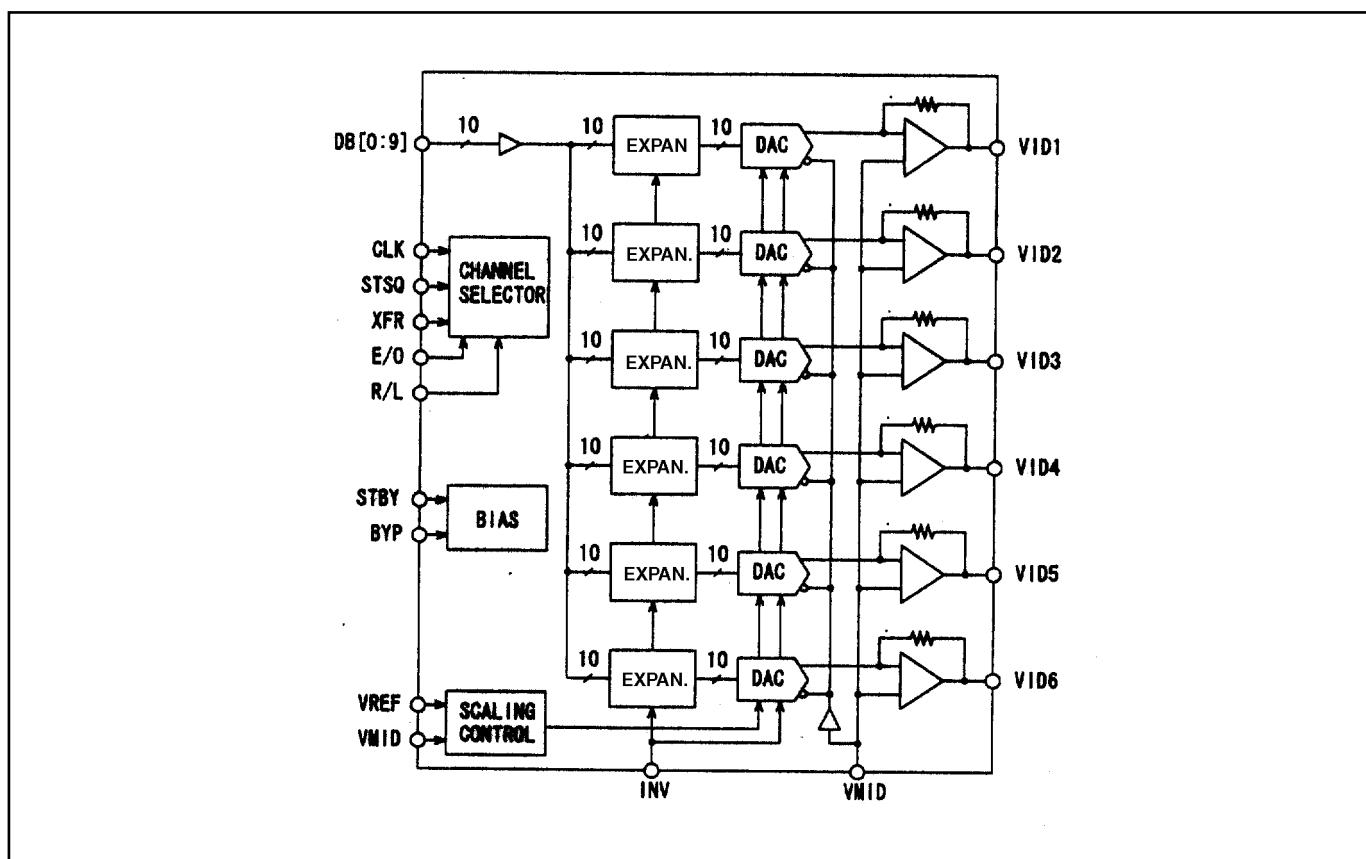
● FA7612CA <PWC Controller, IC6602, IC6603, IC6616>



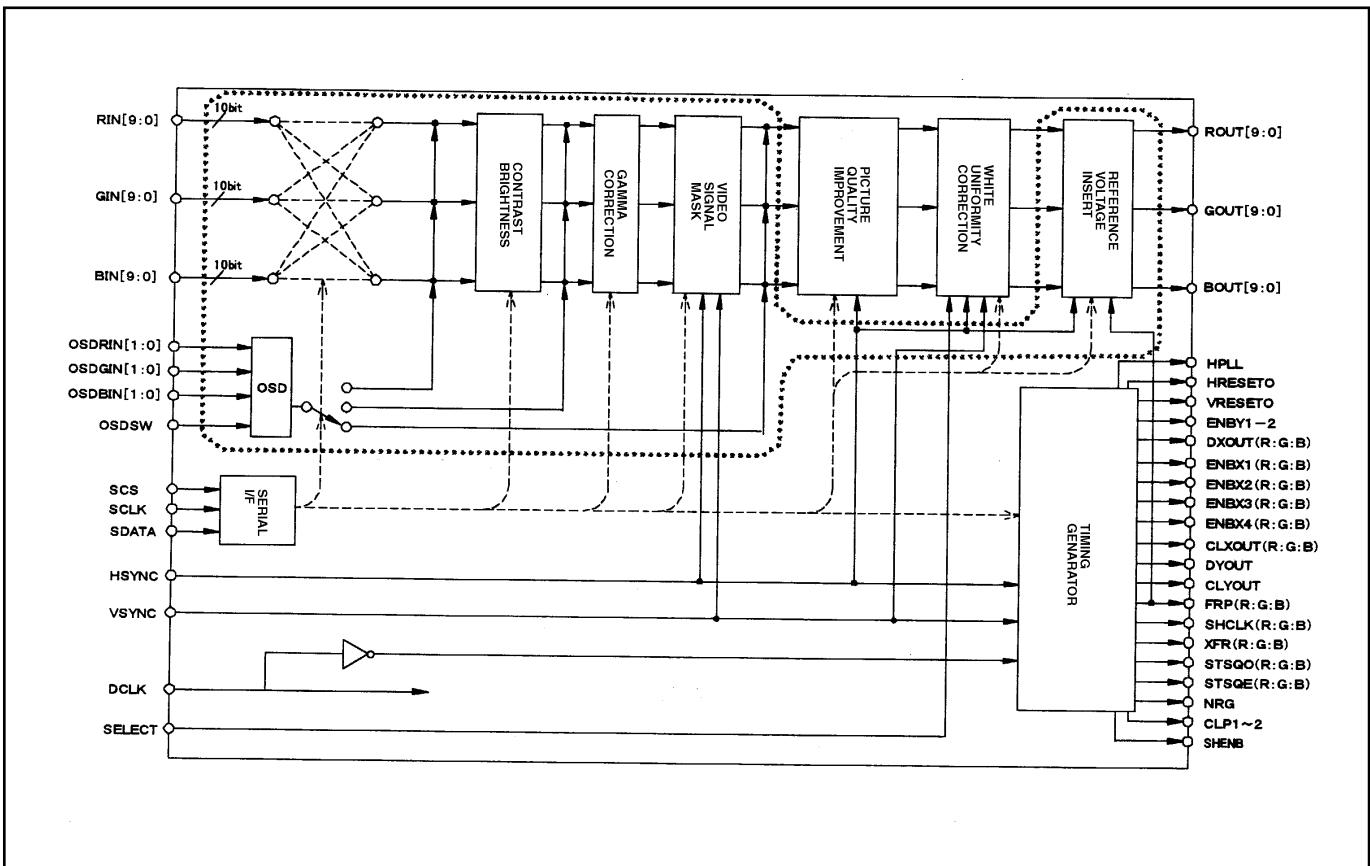
## ● ICS1523M <Clock Driver, IC4231>



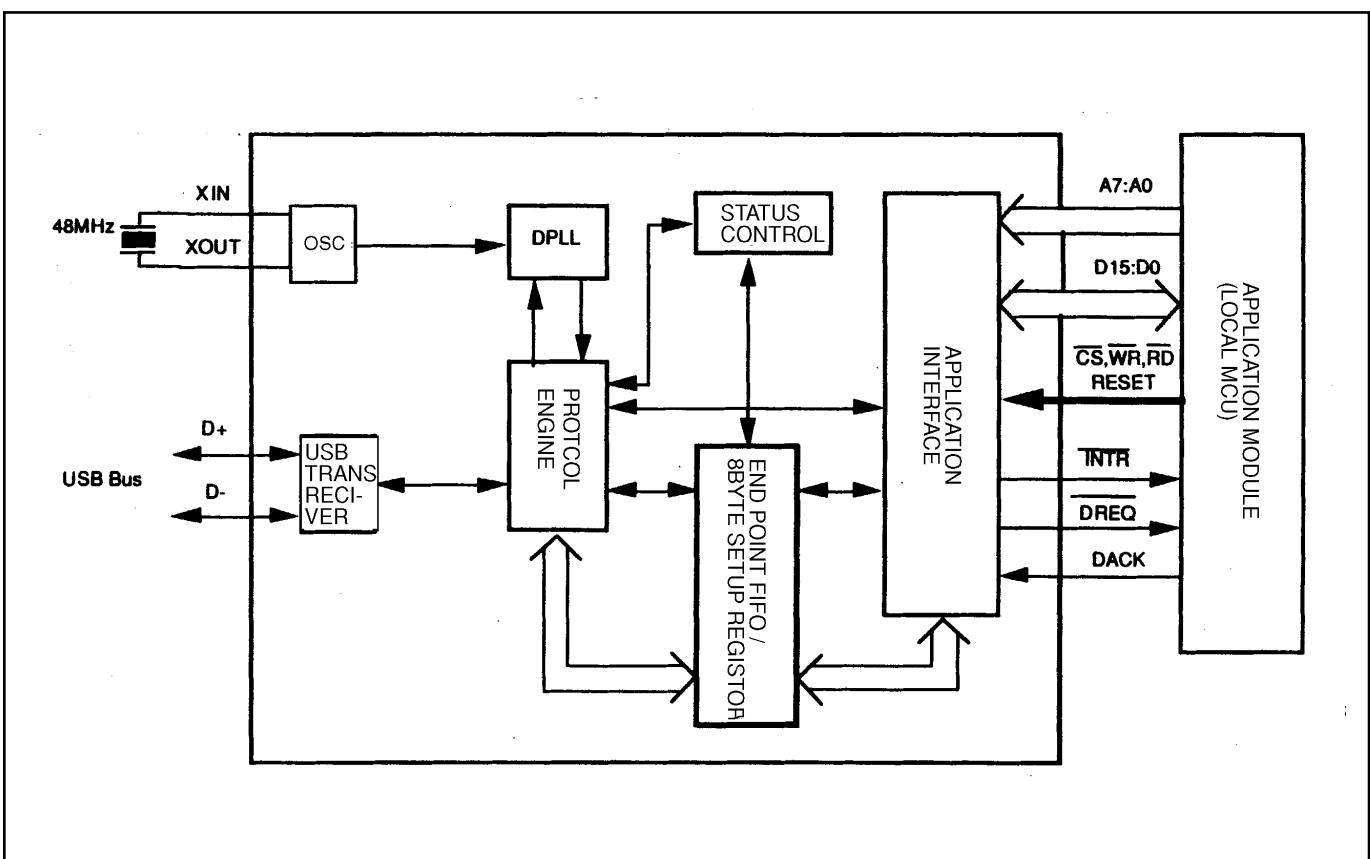
## ● L3E06070 <D/A-Sample & Hold, IC501, IC531, IC561, IC1501, IC1531, IC1561>



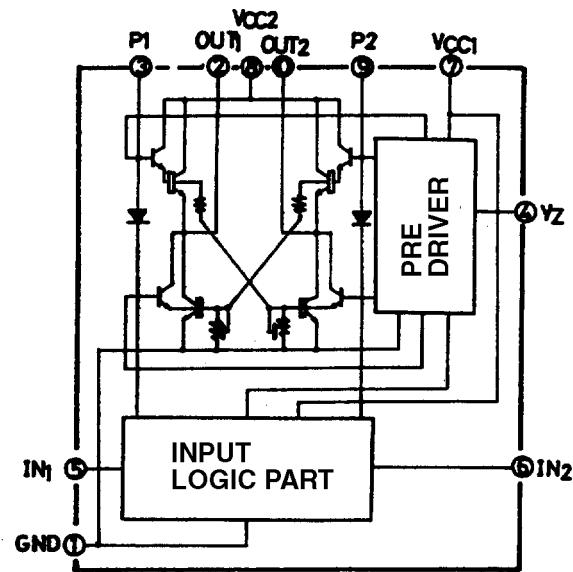
## ● L3E07050 <Color, Gamma Correction & Timing Controller , IC401>



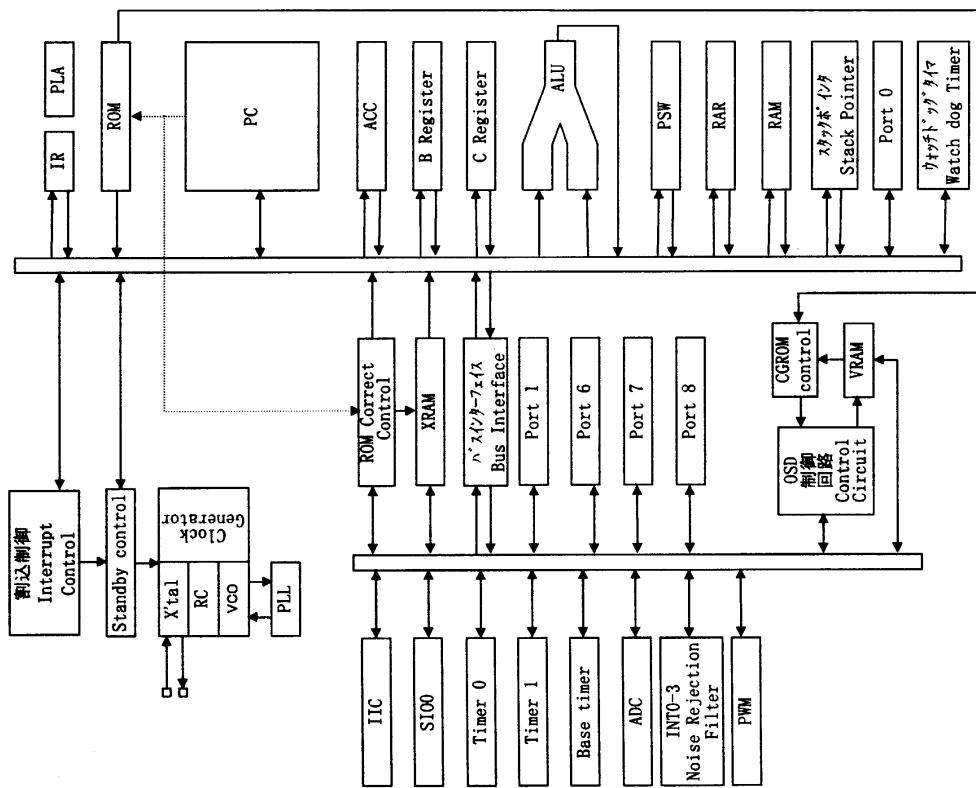
## ● LB1641 <Motor Drive, IC1602, IC1611>



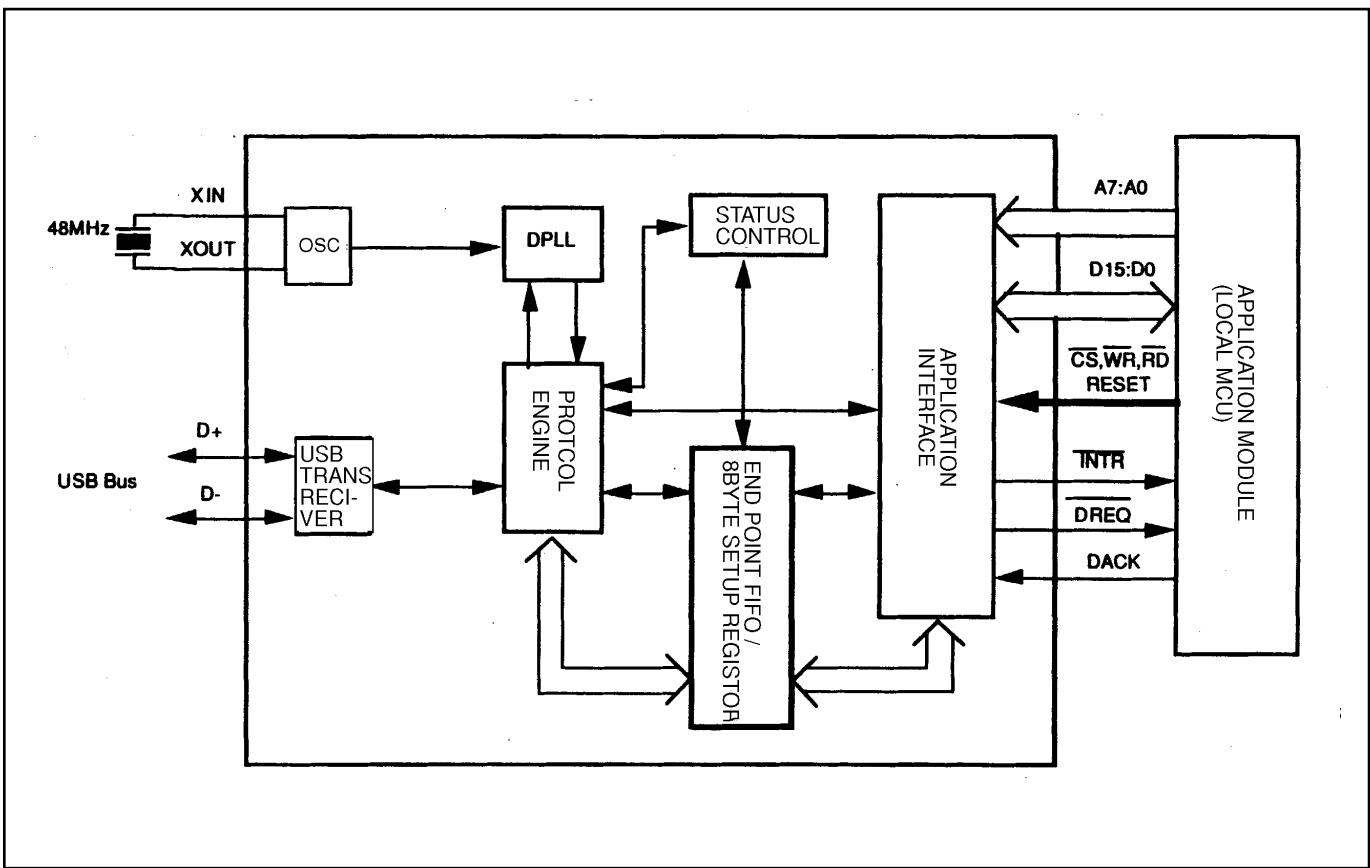
## ● LB1645 <Motor Drive, IC1601>



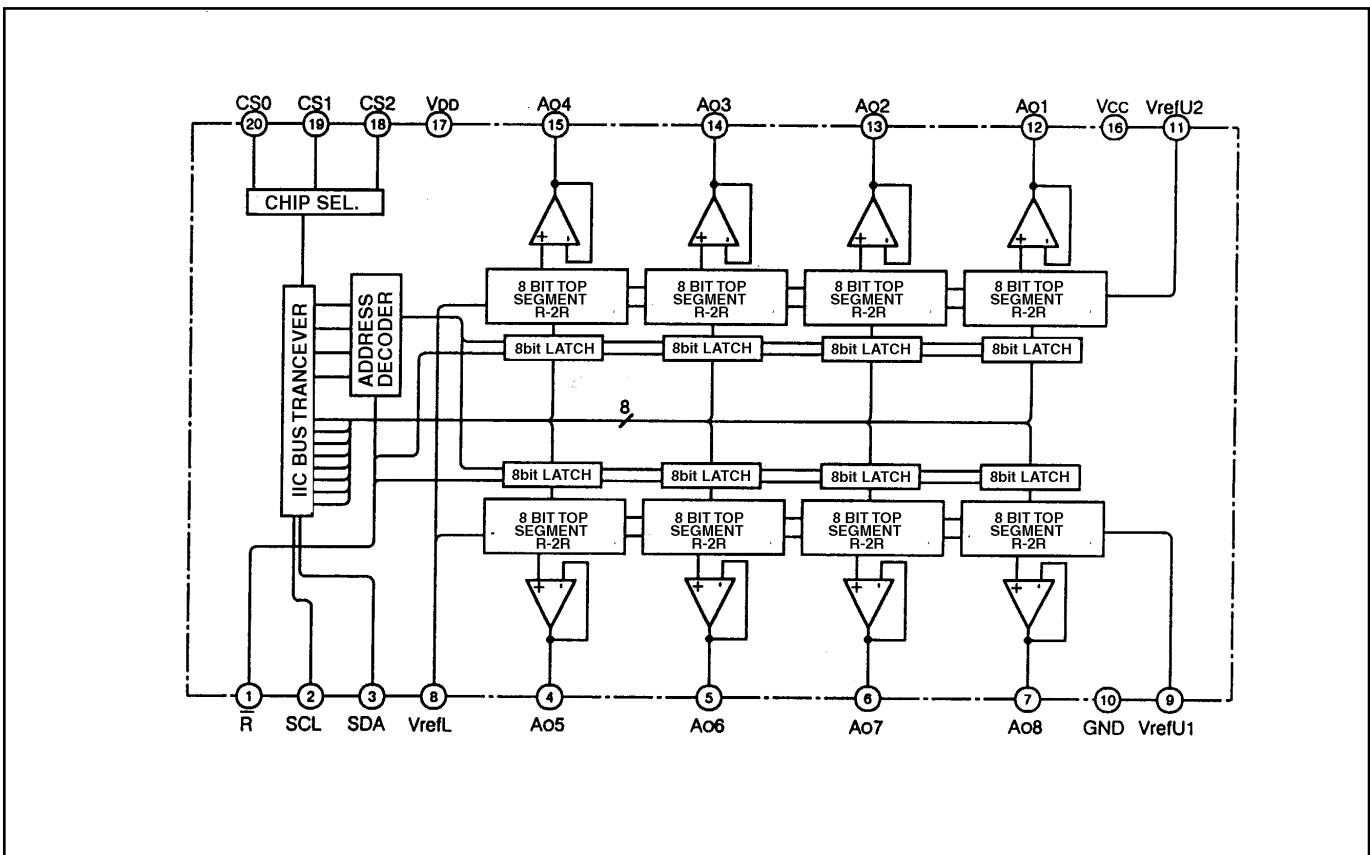
## ● LC863316 <SUB CPU, IC1851>



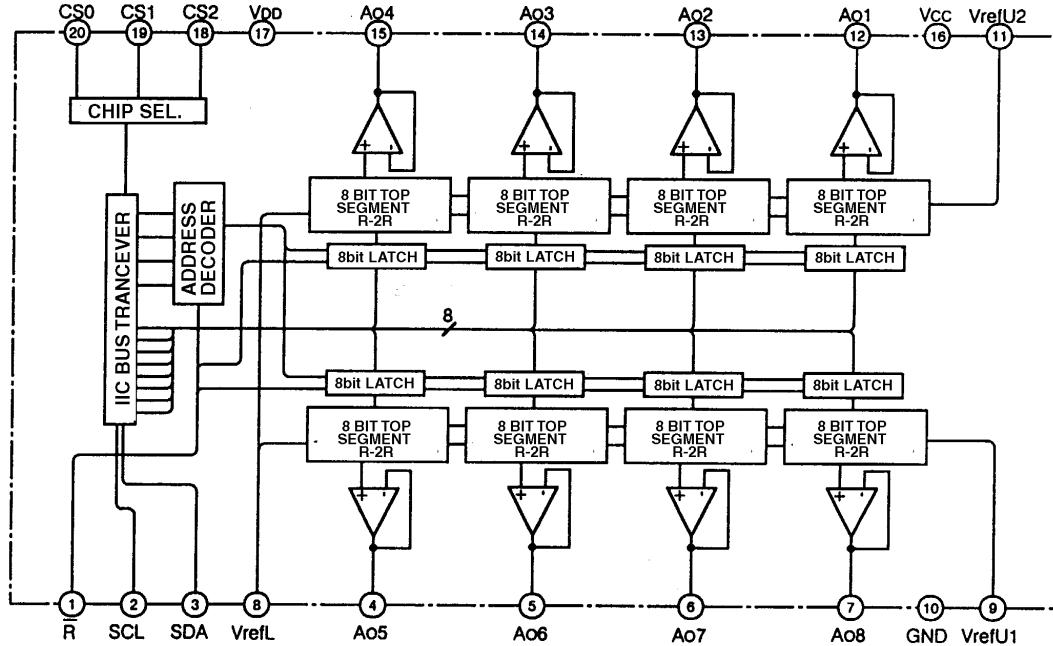
● ML60851 <USB I/F, IC9801>



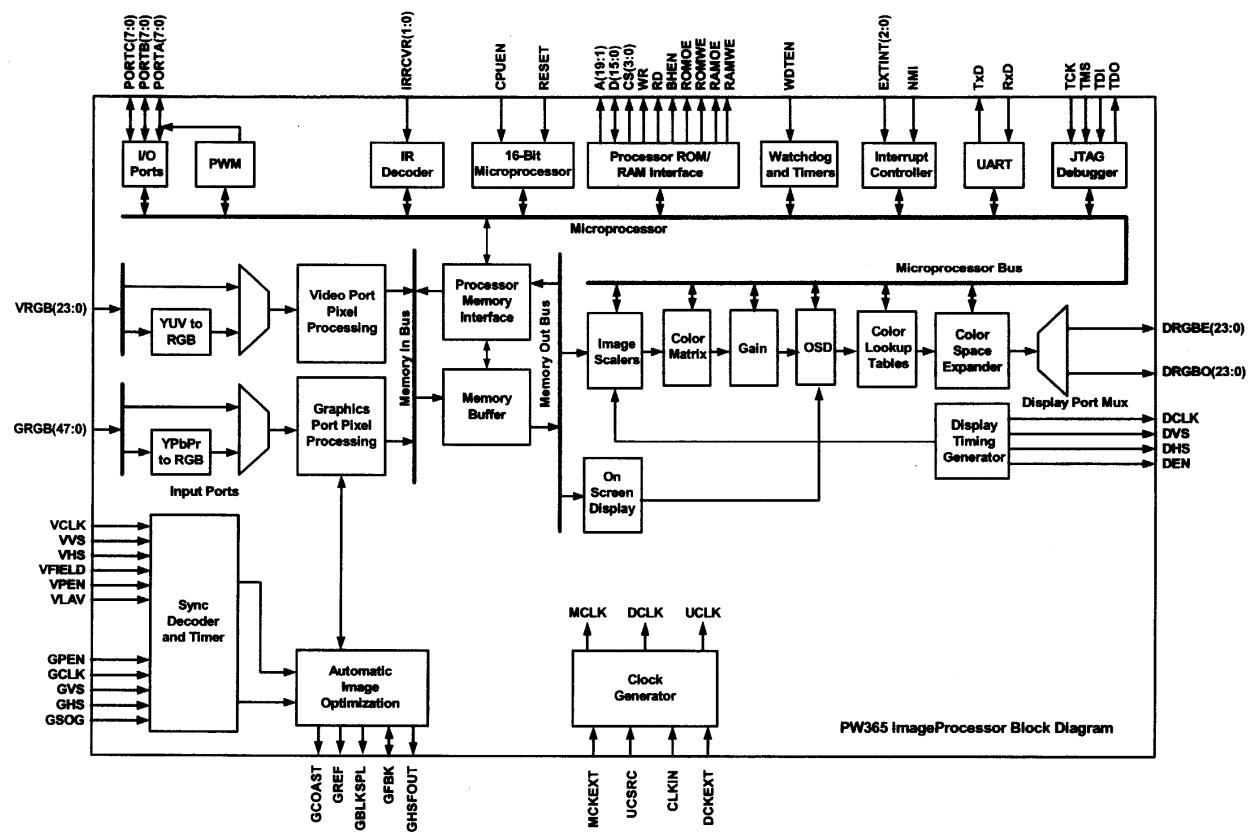
● M62393 <D/A, IC212, IC2381>



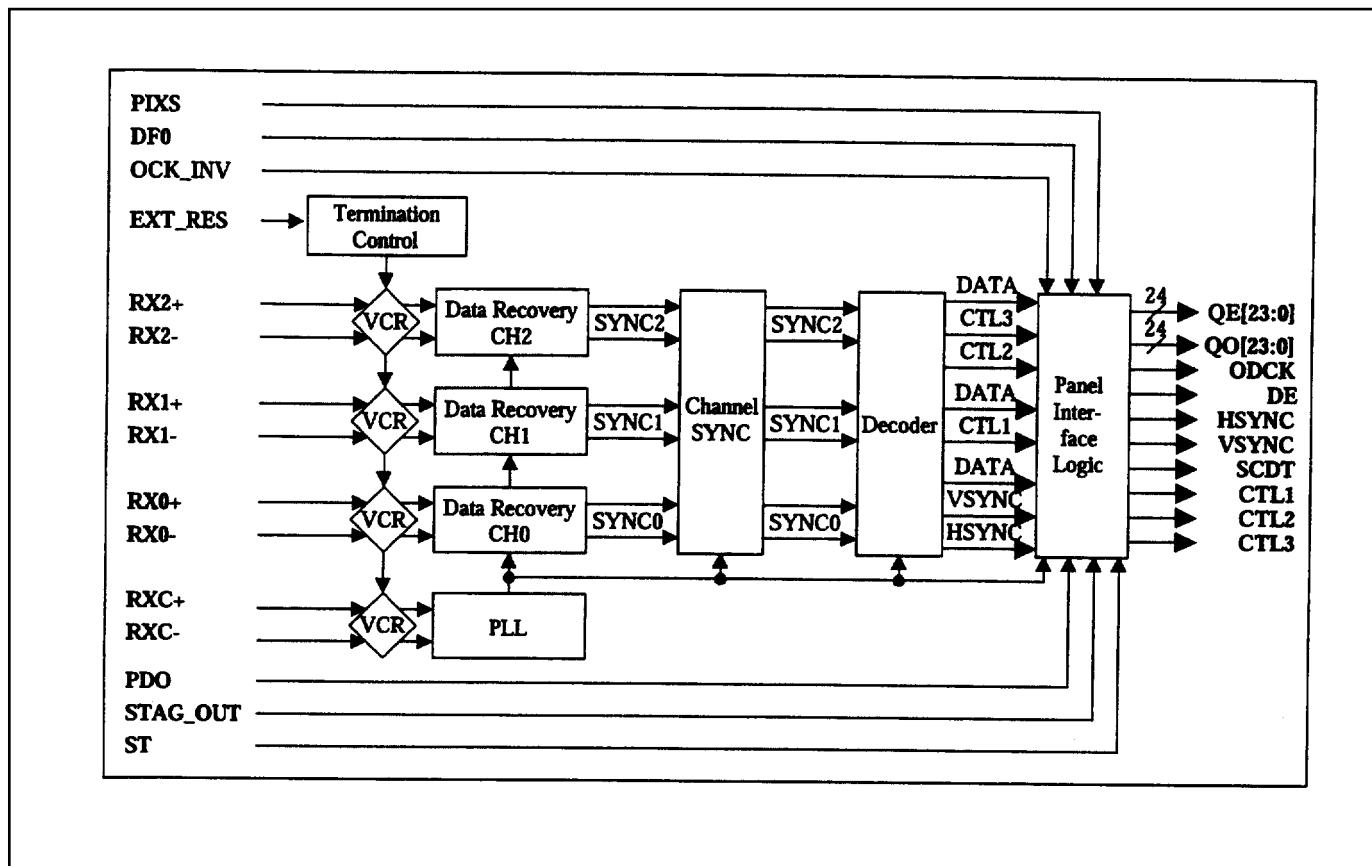
## ● M62399 <D/A, IC3501, IC3551>



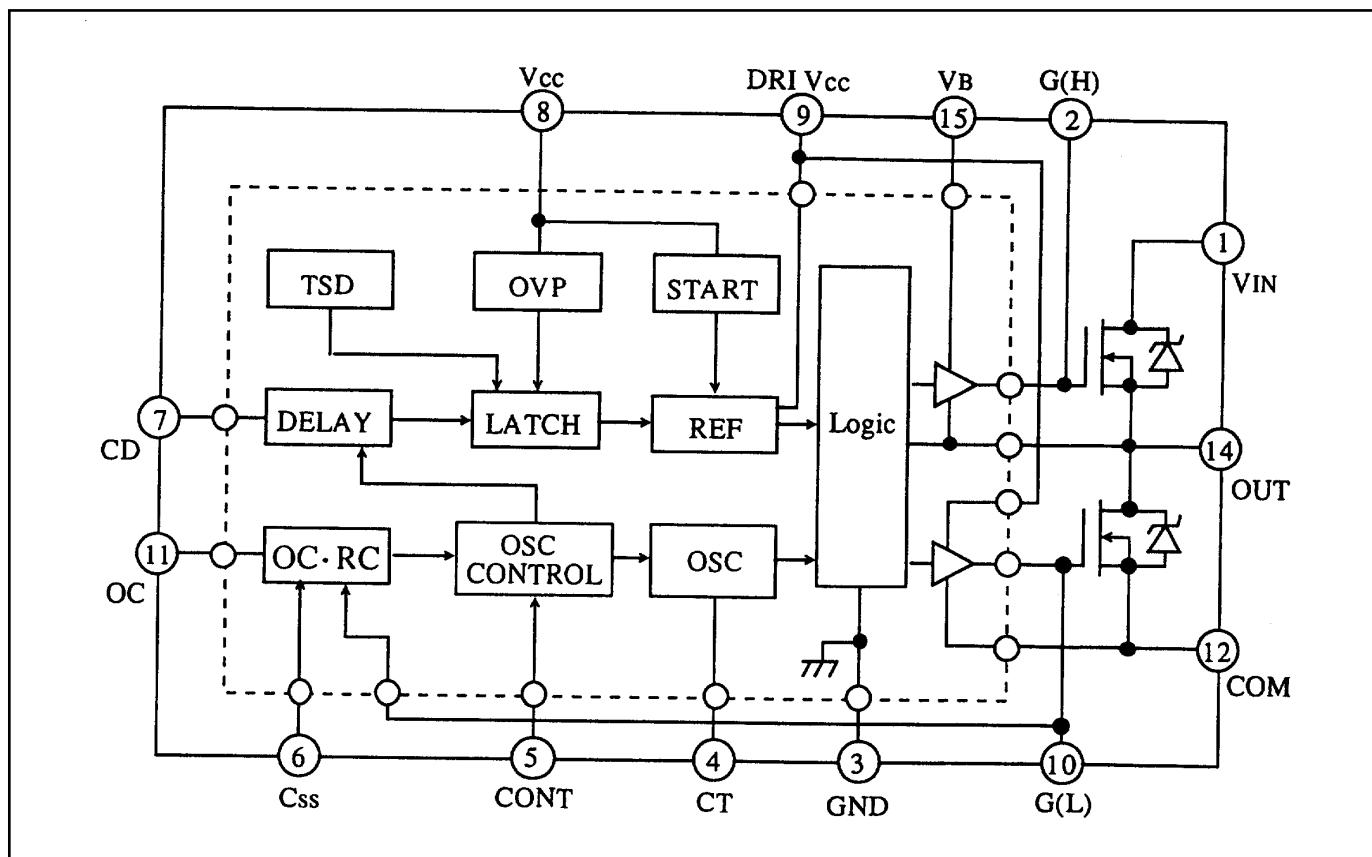
## ● PW365 <System Control & Scan Converter, IC301>



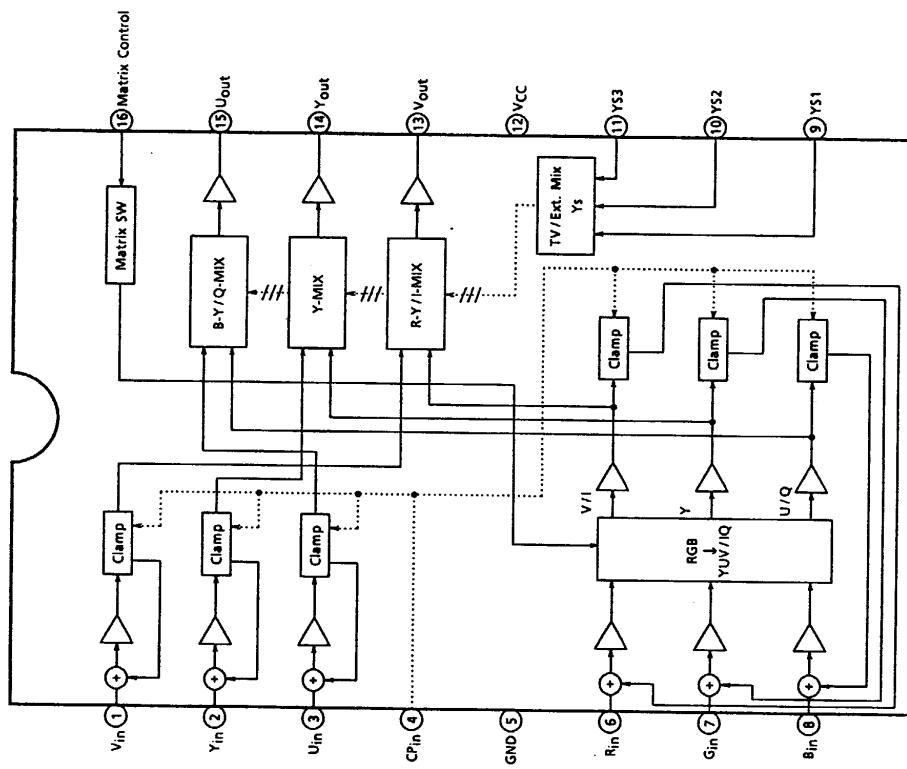
## ● SII161ACT <DVI I/F, IC8001>



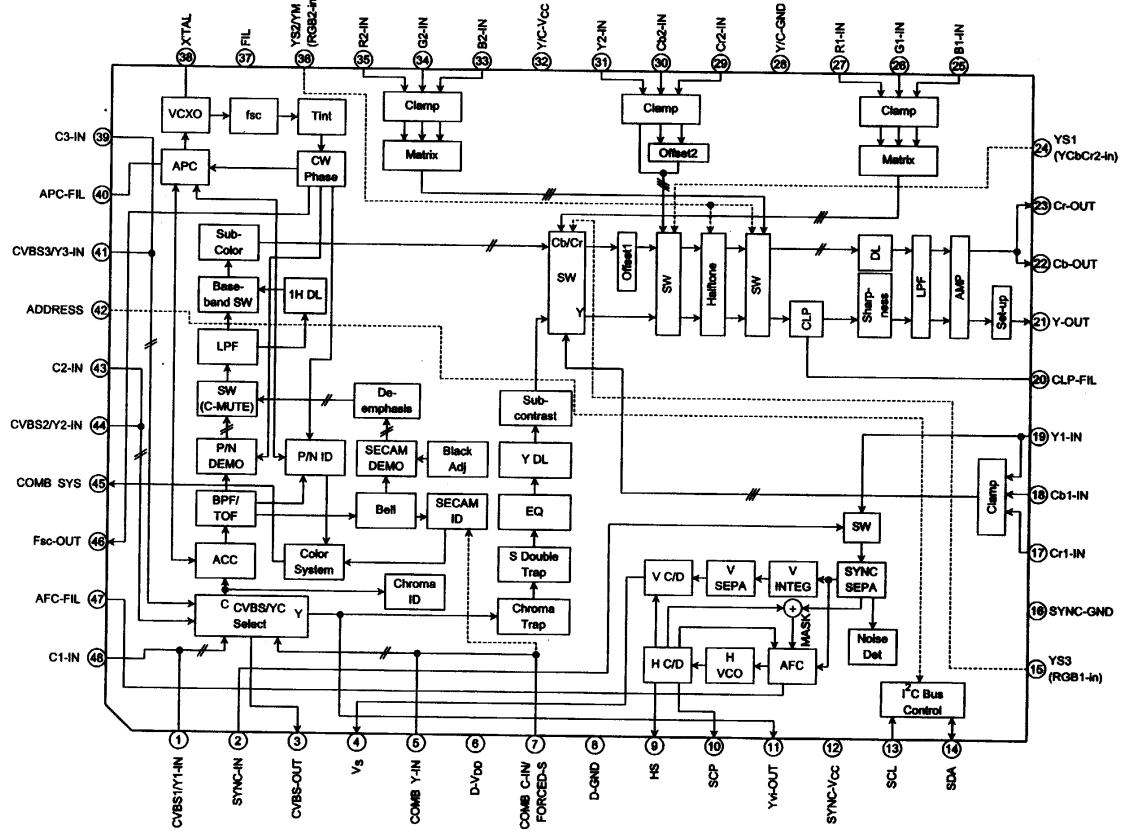
## ● STR-Z2156 <Power Switching, IC651>

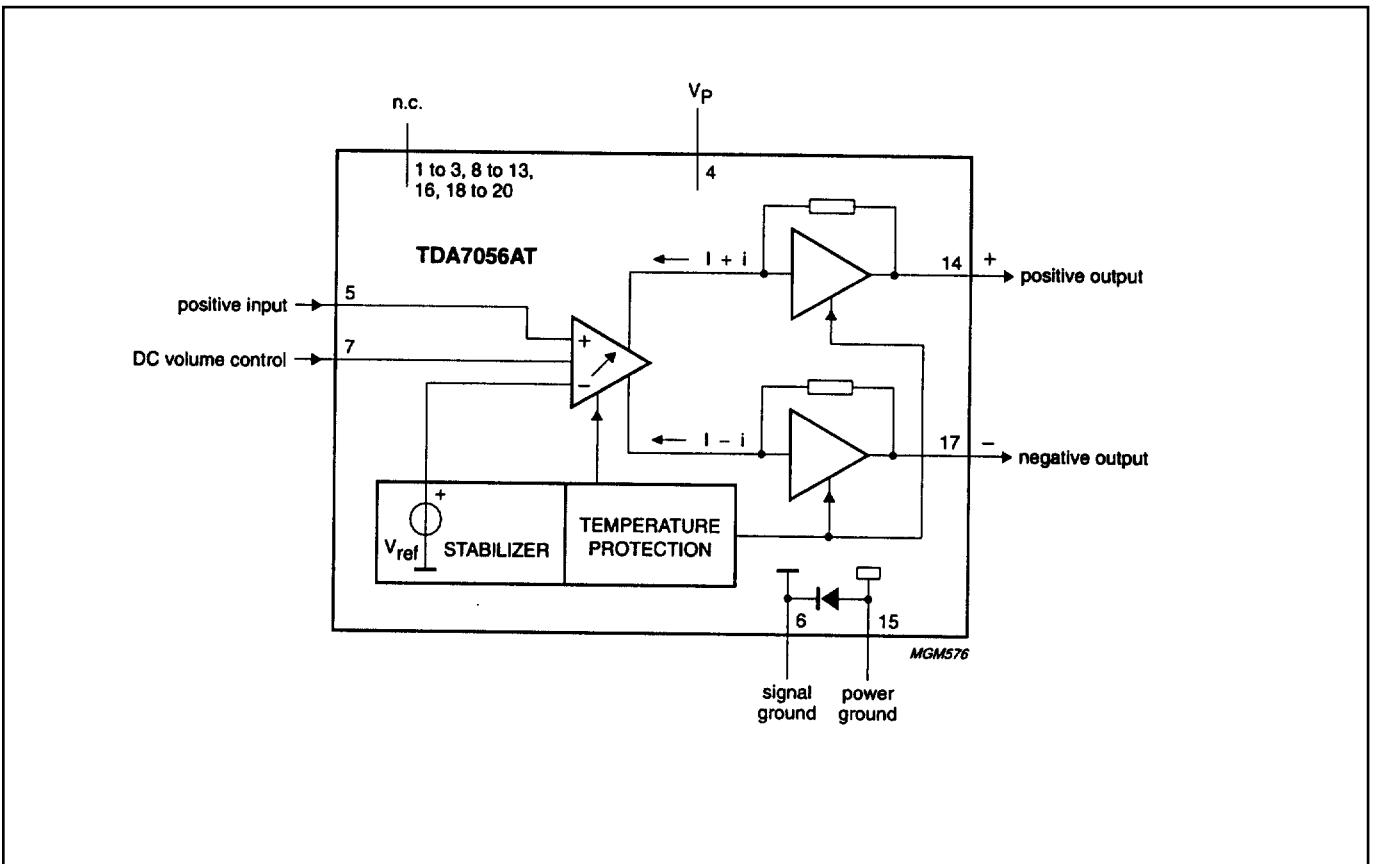


## ● TA1287 <RGB/YUV Converter, IC4551>



## ● TB1274AF <Video Decoder, IC1101>



**● TDA7056 <Audio Output, IC1631, IC1632>**

# ■ Electrical Parts List

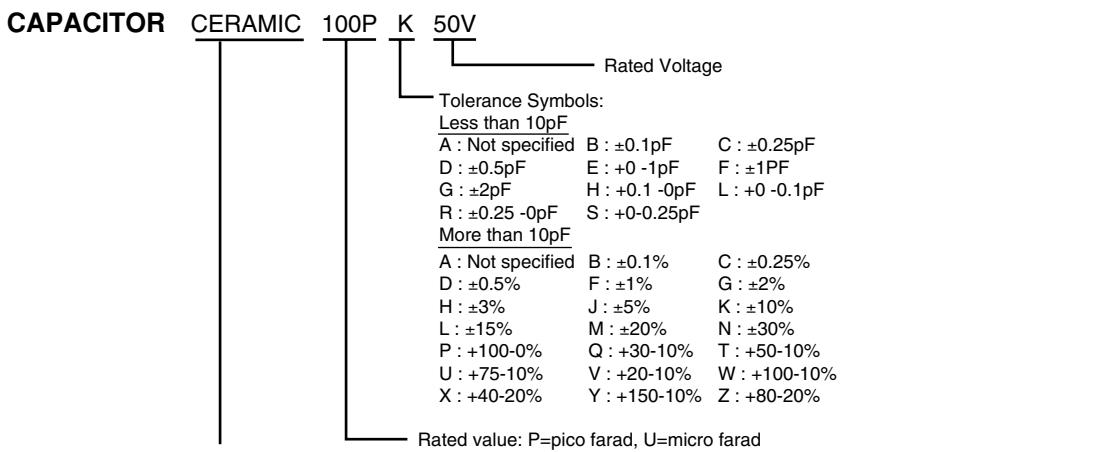
MA8-XP4600, MA8-XP46L00, MB8-XP4100, MB8-XP41L00

Product safety should be considered when a component replacement is made in any area of a projector.

Components indicated by a  $\Delta$  mark in this parts list and the circuit diagram show components whose value have special significance to product safety. It is particularly recommended that only parts specified on the following parts list be used for components replacement pointed out by the mark.

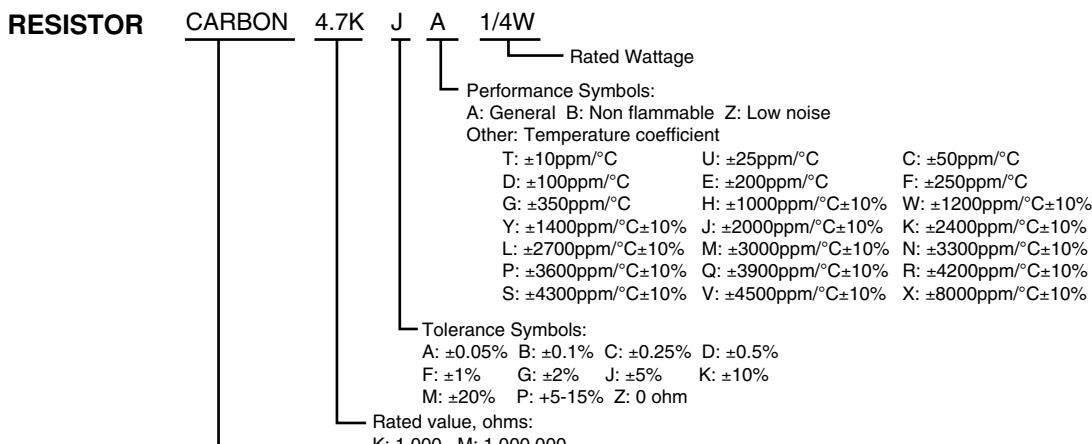
## ● Read Description in the parts list

Read description in the Capacitor and Resistor as follows:



Material:

CERAMIC..... Ceramic  
MT-PAPER..... Metallized Paper  
POLYESTER..... Polyester  
MT-POLYEST..... Metallized Polyester  
POLYPRO..... Polypropylene  
MT-POLYPRO.... Metallized Polypropylene  
COMPO FILM.... Composite film  
MT-COMPO..... Metallized Composite  
STYRENE..... Styrene  
TA-SOLID..... Tantalum Oxide Solid Electrolytic  
AL-SOLID..... Aluminium Solid Electrolytic  
ELECT..... Aluminium Foil Electrolytic  
NP-ELECT..... Non-polarised Electrolytic  
OS-SOLID..... Aluminium Solid with Organic Semiconductive Electrolytic  
POS-SOLID..... Polymerized Organic Semiconductive  
DL-ELECT..... Double Layered Electrolytic  
PPS-FILM..... Polyphenylene Sulfide Film  
MT-PPS-FILM.... Metalized Polyphenylene Sulfide Film  
MT-PEN-FILM.... Metalized Polyethylenenaphthalate Film  
CAPACITOR..... Other



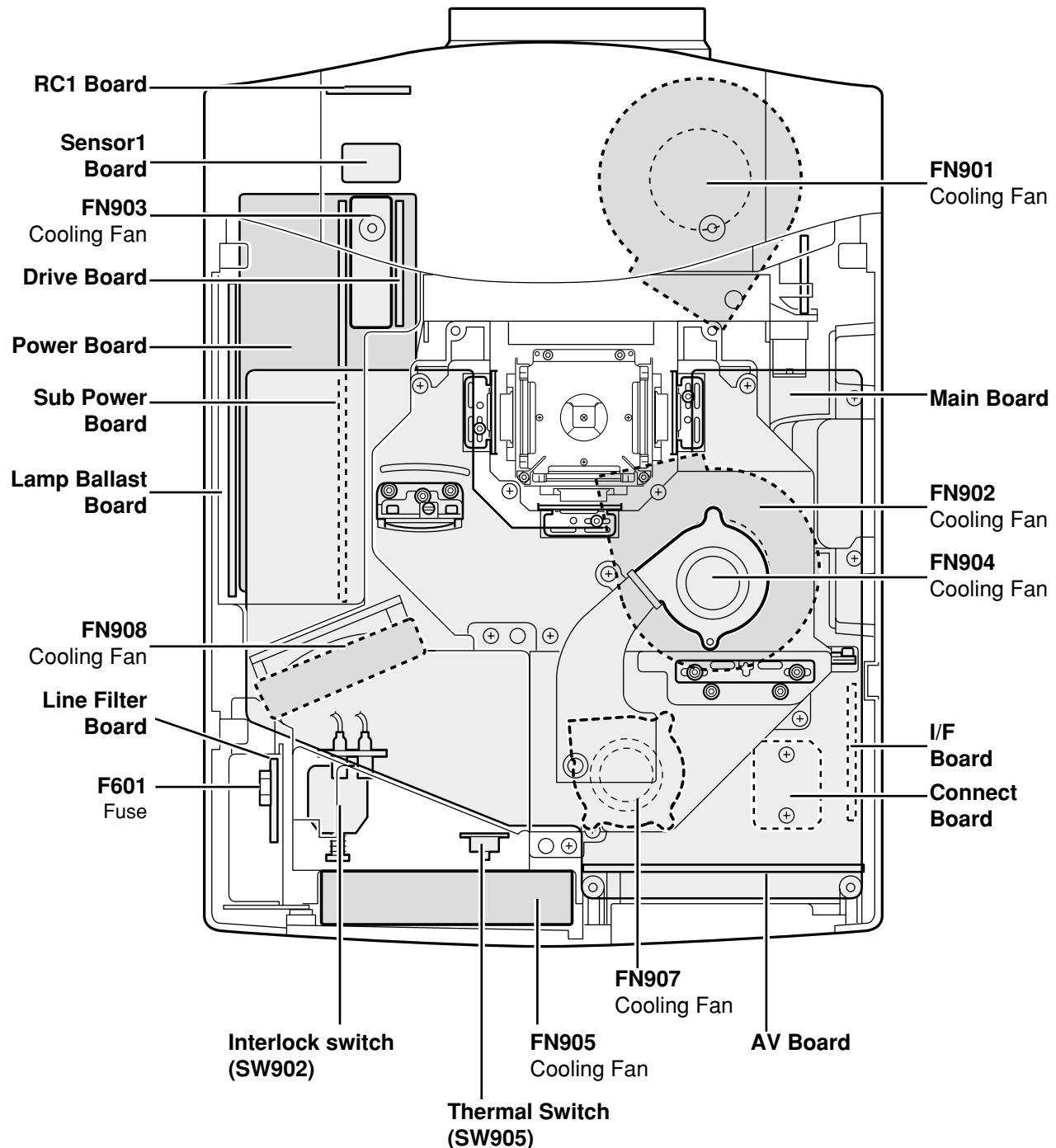
Material:

CARBON..... Carbon  
MT-FILM..... Metal Film  
OXIDE-MT..... Oxide Metal Film  
SOLID..... Composition  
MT-GLAZE..... Metal Glaze  
WIRE WOUND... Wire Wound  
CERAMIC RES.. Ceramic  
FUSIBLE RES.... Fusible  
RESISTOR ..... Other

## Electrical Parts List

Note: Parts order must contain Chassis No., Part No., and Descriptions.

● OUT OF CIRCUIT BOARD



## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
<b>ASSEMBLED BOARDS</b>			R6897	401 105 1501	MT-GLAZE 1.5K JA 1/16W
△ 610 293 1815 ASSY,PWB,CONTROL MA8A	1AA0B10C3390A		R6898	401 105 5202	MT-GLAZE 470 JA 1/16W
△ 610 293 1839 ASSY,PWB,RC FRONT MA8A	1AA0B10C3390C		<b>DIODE</b>		
△ 610 293 1846 ASSY,PWB,CONNECT MA8A	1AA0B10C3390D		D6871	407 223 0501	ZENER DIODE 02DZ12Y(TPH3)
△ 610 294 8233 ASSY,PWB,SENSOR 1 MA8A	1AA0B10C3390E		D6872	407 223 0501	ZENER DIODE 02DZ12Y(TPH3)
△ 610 296 7951 ASSY,PWB,MAIN MA8AA	1AA0B10C36200		D6881	407 223 0501	ZENER DIODE 02DZ12Y(TPH3)
△ 610 297 3631 ASSY,PWB,POWER MA8AA	1AA0B10C3630A		D6891	407 223 0501	ZENER DIODE 02DZ12Y(TPH3)
△ 610 297 3648 ASSY,PWB,SUB POWER MA8AA	1AA0B10C3630B		D6892	407 203 7803	LED SML-210LT T86 M
△ 610 297 3655 ASSY,PWB,DRIVE MA8AA	1AA0B10C3630C		D6893	407 203 7902	LED SML-210MT T86 M
△ 610 297 3662 ASSY,PWB,FILTER MA8AA	1AA0B10C3630D		D6894	407 203 7803	LED SML-210LT T86 M
△ 610 296 9351 ASSY,PWB,A/V MA8AA	1AA0B10C3670A		D6895	407 203 7704	LED SML-210DT T86 L
△ 610 296 9368 ASSY,PWB,I/F MA8AA	1AA0B10C3670B		<b>MISCELLANEOUS</b>		
<b>OUT OF CIRCUIT BOARD</b>			SW6871	645 026 2791	SWITCH, PUSH 1P-1TX1
△ LF901	645 045 2154	UNIT, NOISE FILTER	SW6872	645 026 2791	SWITCH, PUSH 1P-1TX1
L901	645 003 3834	CORE, FERRITE	SW6873	645 026 2791	SWITCH, PUSH 1P-1TX1
L902	645 003 3834	CORE, FERRITE	SW6874	645 026 2791	SWITCH, PUSH 1P-1TX1
<b>MISCELLANEOUS</b>			SW6875	645 026 2791	SWITCH, PUSH 1P-1TX1
△ A901	645 051 9338	UNIT, BALLAST	SW6876	645 026 2791	SWITCH, PUSH 1P-1TX1
△ FN901	645 047 9700	MOTOR, FAN DC 11W	SW6878	645 026 2791	SWITCH, PUSH 1P-1TX1
△ FN902	645 047 9700	MOTOR, FAN DC 11W	SW6887	645 026 2791	SWITCH, PUSH 1P-1TX1
△ FN903	645 053 7523	MOTOR, FAN DC 1.68W	SW6888	645 026 2791	SWITCH, PUSH 1P-1TX1
△ FN904	645 053 7523	MOTOR, FAN DC 1.68W	SW6891	645 026 2791	SWITCH, PUSH 1P-1TX1
△ FN905	645 047 9489	MOTOR, FAN DC 5.28W	SW6892	645 026 2791	SWITCH, PUSH 1P-1TX1
△ FN906	645 048 4001	MOTOR, FAN DC 2.4W	SW6897	645 026 2791	SWITCH, PUSH 1P-1TX1
△ FN907	645 052 9313	MOTOR, FAN DC 2.04W	SW6898	645 026 2791	SWITCH, PUSH 1P-1TX1
SP901	645 047 7584	SPEAKER, 8	<b>RC FRONT BOARD</b>		
SP902	645 047 7584	SPEAKER, 8	<b>610 293 1839 ASSY,PWB,RC FRONT MA8A</b>		
△ SW902	645 031 7743	SWITCH, PUSH 2P-2TX2	<b>1AA0B10C3390C</b>		
△ SW905	645 050 3580	SWITCH, THERMAL	<b>CAPACITOR</b>		
<b>CONTROL BOARD</b>			C2801	403 283 6309	CERAMIC 1U Z 10V
<b>610 293 1815 ASSY,PWB,CONTROL MA8A</b>			C2802	403 157 6206	CERAMIC 220P K 50V
<b>1AA0B10C3390A</b>			C2803	403 304 2105	ELECT 47U M 6.3V
<b>CAPACITOR</b>			<b>RESISTOR</b>		
C6871	403 164 0204	CERAMIC 0.1U Z 25V	R2801	401 105 0405	MT-GLAZE 100 JA 1/16W
C6881	403 164 0204	CERAMIC 0.1U Z 25V	R2802	401 105 0405	MT-GLAZE 100 JA 1/16W
C6891	403 164 0204	CERAMIC 0.1U Z 25V	R2803	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
C6892	403 164 0204	CERAMIC 0.1U Z 25V	<b>MISCELLANEOUS</b>		
<b>RESISTOR</b>			AU2801	645 034 5029	UNIT, REMOCON RECEIVER
R6871	401 105 2904	MT-GLAZE 22K JA 1/16W	<b>CONNECT BOARD</b>		
R6872	401 105 1600	MT-GLAZE 15K JA 1/16W	<b>610 293 1846 ASSY,PWB,CONNECT MA8A</b>		
R6873	401 105 6001	MT-GLAZE 5.6K JA 1/16W	<b>1AA0B10C3390D</b>		
R6874	401 105 5301	MT-GLAZE 4.7K JA 1/16W	<b>SENSOR1 BOARD</b>		
R6875	401 105 3307	MT-GLAZE 2.7K JA 1/16W	<b>610 294 8233 ASSY,PWB,SENSOR 1 MA8A</b>		
R6876	401 105 4106	MT-GLAZE 3.3K JA 1/16W	<b>1AA0B10C3390E</b>		
R6878	401 105 5202	MT-GLAZE 470 JA 1/16W	<b>INTEGRATED CIRCUIT</b>		
R6887	401 105 1501	MT-GLAZE 1.5K JA 1/16W	IC1691	409 481 8602	IC LM76CHMX-5
R6888	401 105 5202	MT-GLAZE 470 JA 1/16W	<b>CAPACITOR</b>		
R6891	401 105 2904	MT-GLAZE 22K JA 1/16W			
R6892	401 105 3802	MT-GLAZE 30K JA 1/16W			
R6893	401 105 7909	MT-GLAZE 0.000 ZA 1/16W			
R6894	401 105 7909	MT-GLAZE 0.000 ZA 1/16W			
R6895	401 105 7909	MT-GLAZE 0.000 ZA 1/16W			
R6896	401 105 7909	MT-GLAZE 0.000 ZA 1/16W			

## Electrical Parts List

<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>					<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>					
C1691	403 281 5205	CERAMIC	0.22U	Z	16V		Q4162	405 014 4509	TR 2SC2412K	T146	R			
C1692	403 155 1609	CERAMIC	33P	J	50V		Q4171	405 014 4509	TR 2SC2412K	T146	R			
C1693	403 155 1609	CERAMIC	33P	J	50V		Q4172	405 014 4509	TR 2SC2412K	T146	R			
<b>RESISTOR</b>														
R1691	401 105 0405	MT-GLAZE	100	JA	1/16W		Q4182	405 014 4509	TR 2SC2412K	T146	R			
R1692	401 105 0306	MT-GLAZE	10	JA	1/16W		Q4185	405 134 5905	TR 2SA1037AK-T146-R					
R1693	401 105 0306	MT-GLAZE	10	JA	1/16W		Q4801	405 134 5905	TR 2SA1037AK-T146-R					
<b>MAIN BOARD</b>														
<b>610 296 7951 ASSY,PWB,MAIN MA8AA 1AA0B10C36200</b>														
<b>TRANSISTOR</b>														
Q1101	405 014 4509	TR 2SC2412K	T146	R			IC1101	409 453 9309	IC UPD64082GF-3BA					
Q1141	405 134 5905	TR 2SA1037AK-T146-R					IC1131	410 342 8808	IC MSM54V16258BSL-40TS-K					
Q1142	405 134 5905	TR 2SA1037AK-T146-R					IC1141	409 051 2900	IC TC4053BF(EL)					
Q1143	405 014 4509	TR 2SC2412K	T146	R			IC1161	409 416 6406	IC BA033FP-E2					
Q1144	405 134 5905	TR 2SA1037AK-T146-R					IC141	410 300 4804	IC MM1031XM					
Q1145	405 014 4509	TR 2SC2412K	T146	R			IC1501	409 502 3302	IC L3E06070D0A					
Q1146	405 134 5905	TR 2SA1037AK-T146-R					IC1531	409 502 3302	IC L3E06070D0A					
Q1147	405 134 5905	TR 2SA1037AK-T146-R					IC1561	409 502 3302	IC L3E06070D0A					
Q1148	405 134 5905	TR 2SA1037AK-T146-R					IC1801	409 475 3705	IC M66500FP					
Q1149	405 014 4509	TR 2SC2412K	T146	R			IC1802	410 364 6905	IC TC74ACT138FT-EL					
Q1151	405 134 5905	TR 2SA1037AK-T146-R					IC1841	409 521 8708	IC MC74HCT244A					
Q1161	405 134 5905	TR 2SA1037AK-T146-R						410 315 5506	IC HD74HCT244TV					
Q1163	405 134 5905	TR 2SA1037AK-T146-R					IC1851	410 398 2706	IC LC863316A-5W09					
Q141	405 014 4509	TR 2SC2412K	T146	R			IC1871	409 481 8602	IC LM76CHMX-5					
Q142	405 014 4509	TR 2SC2412K	T146	R			IC1872	409 481 8602	IC LM76CHMX-5					
Q143	405 014 4509	TR 2SC2412K	T146	R			IC201	409 470 2604	IC AD8183ARU					
Q144	405 134 5905	TR 2SA1037AK-T146-R					IC2101	409 504 5007	IC TC90A69F					
Q145	405 014 4509	TR 2SC2412K	T146	R			IC211	409 357 6602	IC LT1260CS					
Q146	405 014 4509	TR 2SC2412K	T146	R			IC212	409 458 3401	IC M62393FP					
Q147	405 014 4509	TR 2SC2412K	T146	R			IC213	410 343 7008	IC SN74AHCT1G14DBVR					
Q148	405 134 5905	TR 2SA1037AK-T146-R					IC2301	409 523 4807	IC AD9883AKST-110					
Q149	405 014 4509	TR 2SC2412K	T146	R			IC2302	409 416 6406	IC BA033FP-E2					
Q2101	405 014 4509	TR 2SC2412K	T146	R				409 410 1001	IC UPC2933T-E1					
Q2102	405 014 4509	TR 2SC2412K	T146	R			IC2303	409 416 6406	IC BA033FP-E2					
Q2301	405 014 4509	TR 2SC2412K	T146	R				409 410 1001	IC UPC2933T-E1					
Q2302	405 014 4509	TR 2SC2412K	T146	R			IC231	409 504 8206	IC AD9886KS-140					
Q2303	405 014 4509	TR 2SC2412K	T146	R			IC232	409 416 6406	IC BA033FP-E2					
Q2304	405 079 2809	TR IMX1-T110						409 410 1001	IC UPC2933T-E1					
Q2305	405 014 4509	TR 2SC2412K	T146	R			IC2381	409 458 3401	IC M62393FP					
Q2501	405 014 4509	TR 2SC2412K	T146	R			IC301	409 501 8308	IC PW365-10U					
Q2511	405 014 4509	TR 2SC2412K	T146	R			IC304	409 339 3605	IC 24LC16BT/SN-T					
Q2521	405 014 4509	TR 2SC2412K	T146	R			IC306	409 301 5309	IC TC7S32FU-TE85L					
Q3103	405 014 4509	TR 2SC2412K	T146	R			IC3101	409 504 9005	IC TB1274AF					
Q3111	405 134 5905	TR 2SA1037AK-T146-R					IC3102	409 416 6505	IC BA05FP-E2					
Q3112	405 134 5905	TR 2SA1037AK-T146-R					IC3103	409 416 6505	IC BA05FP-E2					
Q3113	405 134 5905	TR 2SA1037AK-T146-R					IC3211	410 321 8300	IC TC74VCX16244FT					
Q3116	405 014 4509	TR 2SC2412K	T146	R			IC3212	410 321 8300	IC TC74VCX16244FT					
Q3117	405 014 4509	TR 2SC2412K	T146	R			IC3213	410 321 8300	IC TC74VCX16244FT					
Q3118	405 014 4509	TR 2SC2412K	T146	R			IC3214	410 362 6501	IC TC74LCX541FT					
Q3301	405 014 4509	TR 2SC2412K	T146	R			IC3221	409 429 6806	IC TC74LCX74FT-(EL)					
Q3302	405 014 4509	TR 2SC2412K	T146	R			IC3224	410 362 6501	IC TC74LCX541FT					
Q3571	405 014 4509	TR 2SC2412K	T146	R			IC3231	410 358 1503	IC TC74HC4053AFT(EL)					
Q3601	405 002 8304	TR 2SA1203-Y-TE12L					IC3381	409 398 1901	IC L88MS05TL-TL					
Q3602	405 014 4509	TR 2SC2412K	T146	R			IC341	410 352 8508	IC IDT71V016S15PHTR					
Q4101	405 014 4509	TR 2SC2412K	T146	R				410 397 0406	IC IS61LV6416-15T					
Q4102	405 134 5905	TR 2SA1037AK-T146-R					IC3501	409 428 9600	IC M62399FP					
Q4103	405 014 4509	TR 2SC2412K	T146	R			IC3502	409 431 2308	IC BA12FP-E2					
Q4151	405 014 4509	TR 2SC2412K	T146	R			IC351	410 430 6006	IC MBM29LV800TA90NB989					
Q4152	405 014 4509	TR 2SC2412K	T146	R										
Q4161	405 014 4509	TR 2SC2412K	T146	R										

## Electrical Parts List

Key No.	Part No.	Description			Key No.	Part No.	Description		
IC3551	409 428 9600	IC	M62399FP		C1113	403 164 0204	CERAMIC	0.1U Z	25V
IC361	409 501 9107	IC	ICS512MT		C1114	403 164 0204	CERAMIC	0.1U Z	25V
IC3611	409 502 3203	IC	L3E01031F0A		C1115	403 304 1801	ELECT	100U M	6.3V
IC362	409 501 9107	IC	ICS512MT		C1116	403 145 9905	CERAMIC	22P J	50V
IC3631	409 502 3203	IC	L3E01031F0A		C1117	403 145 9905	CERAMIC	22P J	50V
IC3651	409 502 3203	IC	L3E01031F0A		C1118	403 164 0204	CERAMIC	0.1U Z	25V
IC3671	409 390 0001	IC	LM7171AIMX		C1119	403 164 0204	CERAMIC	0.1U Z	25V
	409 486 7709	IC	LM7171BIMX		C1121	403 164 0204	CERAMIC	0.1U Z	25V
IC3681	409 343 0201	IC	LT1206CS8		C1122	403 215 0900	CERAMIC	390P J	50V
IC391	409 416 6406	IC	BA033FP-E2		C1123	403 164 0204	CERAMIC	0.1U Z	25V
	409 410 1001	IC	UPC2933T-E1		C1124	403 304 2105	ELECT	47U M	6.3V
IC392	409 475 8403	IC	SI-3025LS-TL		C1125	403 164 0204	CERAMIC	0.1U Z	25V
IC401	409 502 3401	IC	QL3E07050 K0A		C1127	403 283 6309	CERAMIC	1U Z	10V
IC4101	409 474 0002	IC	CXA2101AQ		C1128	403 164 0204	CERAMIC	0.1U Z	25V
IC4111	409 422 5400	IC	MC74AC04DT		C1131	403 283 6309	CERAMIC	1U Z	10V
	409 423 7205	IC	TC74AC04FT		C1132	403 304 1801	ELECT	100U M	6.3V
	410 357 4208	IC	SN74LV04APWR		C1133	403 283 6309	CERAMIC	1U Z	10V
IC4181	409 051 2900	IC	TC4053BF (EL)		C1134	403 283 6309	CERAMIC	1U Z	10V
IC4201	409 498 4406	IC	T8F01HF		C1141	403 164 0204	CERAMIC	0.1U Z	25V
IC4211	409 498 6103	IC	LM385M-1.2		C1142	403 149 9208	CERAMIC	0.01U Z	50V
IC4231	409 444 8700	IC	ICS1523M-ER		C1143	403 304 3300	ELECT	47U M	16V
IC4232	409 439 8906	IC	TC7WH125FU		C1144	403 164 0204	CERAMIC	0.1U Z	25V
IC4261	409 344 1900	IC	MN1382-Q-TX		C1145	403 321 2607	ELECT	10U M	16V
IC4501	410 403 7900	IC	LC24085BT-UG4		C1146	403 283 6309	CERAMIC	1U Z	10V
IC451	409 475 8403	IC	SI-3025LS-TL		C1148	403 164 0204	CERAMIC	0.1U Z	25V
IC4551	409 504 4901	IC	TA1287F		C1161	403 304 1801	ELECT	100U M	6.3V
IC4801	409 416 6406	IC	BA033FP-E2		C1162	403 164 0204	CERAMIC	0.1U Z	25V
	409 410 1001	IC	UPC2933T-E1		C1163	403 145 9905	CERAMIC	22P J	50V
IC501	409 502 3302	IC	L3E06070D0A		C1165	403 145 9905	CERAMIC	22P J	50V
IC531	409 502 3302	IC	L3E06070D0A		C1166	403 175 4802	NP-ELECT	10U M	10V
IC561	409 502 3302	IC	L3E06070D0A		C141	403 162 6208	ELECT	1U M	50V
IC6301	410 365 4603	IC	MS82V16520-8AGA		C142	403 175 4802	NP-ELECT	10U M	10V
IC8001	410 365 2203	IC	SII161ACT100		C143	403 164 0204	CERAMIC	0.1U Z	25V
IC8003	409 051 2900	IC	TC4053BF (EL)		C144	403 321 2607	ELECT	10U M	16V
IC8004	409 487 5803	IC	24C01CT/SN		C145	403 283 6309	CERAMIC	1U Z	10V
IC801	410 406 5408	IC	HD64F7045F28-B867		C146	403 164 0204	CERAMIC	0.1U Z	25V
IC802	409 344 1900	IC	MN1382-Q-TX		C147	403 304 3300	ELECT	47U M	16V
IC802A	410 322 6800	IC	M5M29JB160AVP-10		C148	403 283 6309	CERAMIC	1U Z	10V
IC803	410 428 9804	IC	M5M29JB160AVP-10-B976		C149	403 266 8108	NP-ELECT	1U M	50V
IC804	410 352 4302	IC	M5M51008BFPP-70L		C1501	403 304 1801	ELECT	100U M	6.3V
	410 365 1602	IC	M5M51008BFP-70LL		C1502	403 164 0204	CERAMIC	0.1U Z	25V
	410 367 1501	IC	M5M51008CFP-70HI		C1503	403 164 0204	CERAMIC	0.1U Z	25V
IC808	409 339 3605	IC	24LC16BT/SN-T		C1504	403 164 0204	CERAMIC	0.1U Z	25V
IC811	409 155 8006	IC	TC7S04F-TE85L		C1507	403 164 0204	CERAMIC	0.1U Z	25V
IC812	410 325 4704	IC	HD74LVC244AT		C1508	403 164 0204	CERAMIC	0.1U Z	25V
IC813	409 152 5404	IC	TC7S08F-TE85L		C1509	403 164 0204	CERAMIC	0.1U Z	25V
IC814	410 362 6501	IC	TC74LCX541FT		C151	403 283 6309	CERAMIC	1U Z	10V
IC815	410 362 6501	IC	TC74LCX541FT		C1511	403 304 3300	ELECT	47U M	16V
IC816	410 362 6600	IC	TC74ACT541FT		C1512	403 164 0204	CERAMIC	0.1U Z	25V
IC9401	410 403 7900	IC	LC24085BT-UG4		C1513	403 149 9208	CERAMIC	0.01U Z	50V
IC9801	409 468 8908	IC	ML60851CTB		C1514	403 164 0204	CERAMIC	0.1U Z	25V
	409 521 4502	IC	ML60851DTB		C1531	403 304 1801	ELECT	100U M	6.3V
IC9821	409 521 8708	IC	MC74HCT244A		C1532	403 164 0204	CERAMIC	0.1U Z	25V
	410 315 5506	IC	HD74HCT244TV		C1533	403 164 0204	CERAMIC	0.1U Z	25V
IC9822	409 327 6700	IC	TC7W02FU-TE12L		C1534	403 164 0204	CERAMIC	0.1U Z	25V
					C1537	403 164 0204	CERAMIC	0.1U Z	25V
					C1538	403 164 0204	CERAMIC	0.1U Z	25V
<b>CAPACITOR</b>					C1539	403 164 0204	CERAMIC	0.1U Z	25V
C1101	403 164 0204	CERAMIC	0.1U Z	25V	C1541	403 304 3300	ELECT	47U M	16V
C1102	403 164 0204	CERAMIC	0.1U Z	25V	C1542	403 164 0204	CERAMIC	0.1U Z	25V
C1103	403 164 0204	CERAMIC	0.1U Z	25V	C1543	403 149 9208	CERAMIC	0.01U Z	50V
C1105	403 321 2607	ELECT	10U M	16V	C1544	403 164 0204	CERAMIC	0.1U Z	25V
C1106	403 164 0204	CERAMIC	0.1U Z	25V	C1561	403 304 1801	ELECT	100U M	6.3V
C1107	403 164 0204	CERAMIC	0.1U Z	25V	C1562	403 164 0204	CERAMIC	0.1U Z	25V
C1108	403 164 0204	CERAMIC	0.1U Z	25V	C1563	403 164 0204	CERAMIC	0.1U Z	25V
C1109	403 164 0204	CERAMIC	0.1U Z	25V	C1564	403 164 0204	CERAMIC	0.1U Z	25V
C1111	403 304 1801	ELECT	100U M	6.3V	C1567	403 164 0204	CERAMIC	0.1U Z	25V
C1112	403 164 0204	CERAMIC	0.1U Z	25V					

## Electrical Parts List

<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>			<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>		
C1568	403 164 0204	CERAMIC	0.1U Z	25V		403 349 4706	ELECT	220U M	6.3V
C1569	403 164 0204	CERAMIC	0.1U Z	25V	C228	403 283 6309	CERAMIC	1U Z	10V
C1571	403 304 3300	ELECT	47U M	16V	C230	403 283 6309	CERAMIC	1U Z	10V
C1572	403 164 0204	CERAMIC	0.1U Z	25V	C2301	403 163 9802	CERAMIC	0.047U Z	25V
C1573	403 149 9208	CERAMIC	0.01U Z	50V	C2302	403 163 9802	CERAMIC	0.047U Z	25V
C1574	403 164 0204	CERAMIC	0.1U Z	25V	C2303	403 163 9802	CERAMIC	0.047U Z	25V
C165	403 113 3805	CERAMIC	1000P K	50V	C2307	403 164 0204	CERAMIC	0.1U Z	25V
C1801	403 164 0204	CERAMIC	0.1U Z	25V	C2308	403 164 0204	CERAMIC	0.1U Z	25V
C1802	403 164 0204	CERAMIC	0.1U Z	25V	C2309	403 164 0204	CERAMIC	0.1U Z	25V
C1803	403 164 0204	CERAMIC	0.1U Z	25V	C231	403 149 9208	CERAMIC	0.01U Z	50V
C1804	403 304 1801	ELECT	100U M	6.3V	C2310	403 164 0204	CERAMIC	0.1U Z	25V
C1841	403 164 0204	CERAMIC	0.1U Z	25V	C2311	403 304 2105	ELECT	47U M	6.3V
C1842	403 164 0204	CERAMIC	0.1U Z	25V	C2312	403 164 0204	CERAMIC	0.1U Z	25V
C1851	403 304 2402	ELECT	100U M	10V	C2313	403 304 2105	ELECT	47U M	6.3V
C1852	403 139 7306	CERAMIC	18P J	50V	C2314	403 164 0204	CERAMIC	0.1U Z	25V
C1853	403 157 2307	CERAMIC	20P J	50V	C2315	403 149 9208	CERAMIC	0.01U Z	50V
C1854	403 164 0204	CERAMIC	0.1U Z	25V	C2316	403 164 0204	CERAMIC	0.1U Z	25V
C1855	403 149 9208	CERAMIC	0.01U Z	50V	C2317	403 322 7809	ELECT	220U M	6.3V
C1856	403 149 9208	CERAMIC	0.01U Z	50V		403 349 4706	ELECT	220U M	6.3V
C1857	403 281 5007	CERAMIC	0.033U K	25V	C2318	403 164 0204	CERAMIC	0.1U Z	25V
C1858	403 162 6604	ELECT	2.2U M	50V	C2319	403 322 7809	ELECT	220U M	6.3V
C1861	403 164 0204	CERAMIC	0.1U Z	25V		403 349 4706	ELECT	220U M	6.3V
C1871	403 164 0204	CERAMIC	0.1U Z	25V	C232	403 149 9208	CERAMIC	0.01U Z	50V
C1872	403 164 0204	CERAMIC	0.1U Z	25V	C2320	403 164 0204	CERAMIC	0.1U Z	25V
C201	403 164 0204	CERAMIC	0.1U Z	25V	C2321	403 164 0204	CERAMIC	0.1U Z	25V
C202	403 164 0204	CERAMIC	0.1U Z	25V	C2322	403 164 0204	CERAMIC	0.1U Z	25V
C203	403 162 4006	ELECT	22U M	6.3V	C2323	403 164 0204	CERAMIC	0.1U Z	25V
C204	403 162 4006	ELECT	22U M	6.3V	C2324	403 306 5401	CERAMIC	0.039U K	16V
C205	403 162 4006	ELECT	22U M	6.3V	C2325	403 157 7203	CERAMIC	3900P K	50V
C206	403 164 0204	CERAMIC	0.1U Z	25V	C2326	403 164 0204	CERAMIC	0.1U Z	25V
C207	403 322 7809	ELECT	220U M	6.3V	C2327	403 164 0204	CERAMIC	0.1U Z	25V
	403 349 4706	ELECT	220U M	6.3V	C233	403 149 9208	CERAMIC	0.01U Z	50V
C208	403 149 9208	CERAMIC	0.01U Z	50V	C2330	403 341 3905	POS-SOLID	100U M	6.3V
C209	403 164 0204	CERAMIC	0.1U Z	25V	C234	403 164 0204	CERAMIC	0.1U Z	25V
C210	403 322 7809	ELECT	220U M	6.3V	C235	403 322 7809	ELECT	220U M	6.3V
	403 349 4706	ELECT	220U M	6.3V		403 349 4706	ELECT	220U M	6.3V
C2101	403 149 9208	CERAMIC	0.01U Z	50V	C2351	403 149 9208	CERAMIC	0.01U Z	50V
C2102	403 149 9208	CERAMIC	0.01U Z	50V	C236	403 322 7809	ELECT	220U M	6.3V
C2103	403 304 1801	ELECT	100U M	6.3V		403 349 4706	ELECT	220U M	6.3V
C2104	403 164 0204	CERAMIC	0.1U Z	25V	C237	403 164 0204	CERAMIC	0.1U Z	25V
C2106	403 149 9208	CERAMIC	0.01U Z	50V	C238	401 105 0306	MT-GLAZE	10 JA	1/16W
C2107	403 149 9208	CERAMIC	0.01U Z	50V	C2381	403 283 6309	CERAMIC	1U Z	10V
C2108	403 266 8108	NP-ELECT	1U M	50V	C2382	403 164 0204	CERAMIC	0.1U Z	25V
C211	403 164 0204	CERAMIC	0.1U Z	25V	C2383	403 304 1801	ELECT	100U M	6.3V
C2111	403 304 2105	ELECT	47U M	6.3V	C2384	403 113 3805	CERAMIC	1000P K	50V
C2112	403 164 0204	CERAMIC	0.1U Z	25V	C239	403 164 0204	CERAMIC	0.1U Z	25V
C2113	403 304 2105	ELECT	47U M	6.3V	C240	401 105 0306	MT-GLAZE	10 JA	1/16W
C2114	403 164 0204	CERAMIC	0.1U Z	25V	C241	401 105 0306	MT-GLAZE	10 JA	1/16W
C2116	403 164 0204	CERAMIC	0.1U Z	25V	C242	403 164 0204	CERAMIC	0.1U Z	25V
C2117	403 304 2105	ELECT	47U M	6.3V	C243	403 164 0204	CERAMIC	0.1U Z	25V
C2118	403 164 0204	CERAMIC	0.1U Z	25V	C244	403 164 0204	CERAMIC	0.1U Z	25V
C2119	403 164 0204	CERAMIC	0.1U Z	25V	C245	403 164 0204	CERAMIC	0.1U Z	25V
C212	403 162 4006	ELECT	22U M	6.3V	C247	403 164 0204	CERAMIC	0.1U Z	25V
C2121	403 305 9905	CERAMIC	680P J	25V	C248	403 164 0204	CERAMIC	0.1U Z	25V
C2122	403 149 9208	CERAMIC	0.01U Z	50V	C249	403 164 0204	CERAMIC	0.1U Z	25V
C2123	403 149 9208	CERAMIC	0.01U Z	50V	C250	403 164 0204	CERAMIC	0.1U Z	25V
C2127	403 164 0204	CERAMIC	0.1U Z	25V	C2501	403 162 5300	ELECT	4.7U M	25V
C213	403 157 2505	CERAMIC	27P J	50V	C2502	403 164 0204	CERAMIC	0.1U Z	25V
C214	403 304 1801	ELECT	100U M	6.3V	C2503	403 164 0204	CERAMIC	0.1U Z	25V
C215	403 283 6309	CERAMIC	1U Z	10V	C2504	403 164 0204	CERAMIC	0.1U Z	25V
C216	403 162 4006	ELECT	22U M	6.3V	C2506	403 164 0204	CERAMIC	0.1U Z	25V
C217	403 157 2505	CERAMIC	27P J	50V	C2507	403 321 2607	ELECT	10U M	16V
C218	403 162 4006	ELECT	22U M	6.3V	C2508	403 164 0204	CERAMIC	0.1U Z	25V
C219	403 157 2505	CERAMIC	27P J	50V	C251	403 351 4206	ELECT	1U M	50V
C220	403 283 6309	CERAMIC	1U Z	10V	C2511	403 162 5300	ELECT	4.7U M	25V
C221	403 304 1801	ELECT	100U M	6.3V	C2512	403 164 0204	CERAMIC	0.1U Z	25V
C227	403 322 7809	ELECT	220U M	6.3V	C2513	403 164 0204	CERAMIC	0.1U Z	25V

## Electrical Parts List

Key No.	Part No.	Description			Key No.	Part No.	Description		
C2514	403 164 0204	CERAMIC	0.1U Z	25V	C3128	403 164 0204	CERAMIC	0.1U Z	25V
C2516	403 164 0204	CERAMIC	0.1U Z	25V	C3129	403 164 0204	CERAMIC	0.1U Z	25V
C2517	403 321 2607	ELECT	10U M	16V	C313	403 164 0204	CERAMIC	0.1U Z	25V
C2518	403 164 0204	CERAMIC	0.1U Z	25V	C3131	403 284 4304	CERAMIC	0.022U K	50V
C252	403 164 0204	CERAMIC	0.1U Z	25V	C3132	403 162 6604	ELECT	2.2U M	50V
C2521	403 162 5300	ELECT	4.7U M	25V	C3133	403 113 3805	CERAMIC	1000P K	50V
C2522	403 164 0204	CERAMIC	0.1U Z	25V	C3134	403 157 2901	CERAMIC	47P J	50V
C2523	403 164 0204	CERAMIC	0.1U Z	25V	C3136	403 164 0204	CERAMIC	0.1U Z	25V
C2524	403 164 0204	CERAMIC	0.1U Z	25V	C3137	403 164 0204	CERAMIC	0.1U Z	25V
C2526	403 164 0204	CERAMIC	0.1U Z	25V	C3138	403 341 3905	POS-SOLID	100U M	6.3V
C2527	403 321 2607	ELECT	10U M	16V	C314	403 164 0204	CERAMIC	0.1U Z	25V
C2528	403 164 0204	CERAMIC	0.1U Z	25V	C315	403 164 0204	CERAMIC	0.1U Z	25V
C253	403 322 7809	ELECT	220U M	6.3V	C316	403 164 0204	CERAMIC	0.1U Z	25V
	403 349 4706	ELECT	220U M	6.3V	C317	403 164 0204	CERAMIC	0.1U Z	25V
C254	403 164 0204	CERAMIC	0.1U Z	25V	C318	403 164 0204	CERAMIC	0.1U Z	25V
C255	403 164 0204	CERAMIC	0.1U Z	25V	C319	403 164 0204	CERAMIC	0.1U Z	25V
C256	403 164 0204	CERAMIC	0.1U Z	25V	C321	403 164 0204	CERAMIC	0.1U Z	25V
C257	403 164 0204	CERAMIC	0.1U Z	25V	C3211	403 164 0204	CERAMIC	0.1U Z	25V
C258	403 164 0204	CERAMIC	0.1U Z	25V	C3212	403 164 0204	CERAMIC	0.1U Z	25V
C259	403 164 0204	CERAMIC	0.1U Z	25V	C3213	403 164 0204	CERAMIC	0.1U Z	25V
C2591	403 229 3508	ELECT	100U M	16V	C3214	403 164 0204	CERAMIC	0.1U Z	25V
	403 335 0408	ELECT	100U M	16V	C3215	403 164 0204	CERAMIC	0.1U Z	25V
C2592	403 164 0204	CERAMIC	0.1U Z	25V	C3216	403 164 0204	CERAMIC	0.1U Z	25V
C260	403 164 0204	CERAMIC	0.1U Z	25V	C3217	403 164 0204	CERAMIC	0.1U Z	25V
C261	403 164 0204	CERAMIC	0.1U Z	25V	C3218	403 164 0204	CERAMIC	0.1U Z	25V
C262	403 157 7203	CERAMIC	3900P K	50V	C322	403 164 0204	CERAMIC	0.1U Z	25V
C263	403 306 5401	CERAMIC	0.039U K	16V	C3227	403 164 0204	CERAMIC	0.1U Z	25V
C265	403 164 0204	CERAMIC	0.1U Z	25V	C3228	403 164 0204	CERAMIC	0.1U Z	25V
C266	403 321 2607	ELECT	10U M	16V	C3229	403 149 9208	CERAMIC	0.01U Z	50V
C267	403 322 7809	ELECT	220U M	6.3V	C323	403 164 0204	CERAMIC	0.1U Z	25V
	403 349 4706	ELECT	220U M	6.3V	C3231	403 164 0204	CERAMIC	0.1U Z	25V
C268	403 164 0204	CERAMIC	0.1U Z	25V	C3232	403 304 2105	ELECT	47U M	6.3V
C269	403 164 0204	CERAMIC	0.1U Z	25V	C324	403 164 0204	CERAMIC	0.1U Z	25V
C270	403 347 5507	POS-SOLID	470U M	4V	C326	403 149 9208	CERAMIC	0.01U Z	50V
C301	403 164 0204	CERAMIC	0.1U Z	25V	C329	403 164 0204	CERAMIC	0.1U Z	25V
C302	403 304 1801	ELECT	100U M	6.3V	C341	403 304 2105	ELECT	47U M	6.3V
C303	403 304 1801	ELECT	100U M	6.3V	C342	403 164 0204	CERAMIC	0.1U Z	25V
C304	403 164 0204	CERAMIC	0.1U Z	25V	C343	403 164 0204	CERAMIC	0.1U Z	25V
C305	403 304 1801	ELECT	100U M	6.3V	C3501	403 164 0204	CERAMIC	0.1U Z	25V
C306	403 304 1801	ELECT	100U M	6.3V	C3502	403 164 0204	CERAMIC	0.1U Z	25V
C307	403 164 0204	CERAMIC	0.1U Z	25V	C3503	403 304 2105	ELECT	47U M	6.3V
C308	403 164 0204	CERAMIC	0.1U Z	25V	C3504	403 164 0204	CERAMIC	0.1U Z	25V
C309	403 164 0204	CERAMIC	0.1U Z	25V	C3506	403 304 3300	ELECT	47U M	16V
C3101	403 164 0204	CERAMIC	0.1U Z	25V	C3507	403 164 0204	CERAMIC	0.1U Z	25V
C3102	403 164 0204	CERAMIC	0.1U Z	25V	C3508	403 229 3508	ELECT	100U M	16V
C3103	403 164 0204	CERAMIC	0.1U Z	25V		403 335 0408	ELECT	100U M	16V
C3104	403 149 9208	CERAMIC	0.01U Z	50V	C351	403 304 2105	ELECT	47U M	6.3V
C3106	403 304 2105	ELECT	47U M	6.3V	C352	403 164 0204	CERAMIC	0.1U Z	25V
C3107	403 343 8809	CERAMIC	0.47U Z	16V	C3551	403 164 0204	CERAMIC	0.1U Z	25V
C3108	403 304 2105	ELECT	47U M	6.3V	C3552	403 304 2105	ELECT	47U M	6.3V
C3109	403 343 8809	CERAMIC	0.47U Z	16V	C3553	403 164 0204	CERAMIC	0.1U Z	25V
C311	403 164 0204	CERAMIC	0.1U Z	25V	C3554	403 164 0204	CERAMIC	0.1U Z	25V
C3111	403 164 0204	CERAMIC	0.1U Z	25V	C3571	403 304 3300	ELECT	47U M	16V
C3112	403 164 0204	CERAMIC	0.1U Z	25V	C3572	403 304 1801	ELECT	100U M	6.3V
C3113	403 164 0204	CERAMIC	0.1U Z	25V	C3573	403 164 0204	CERAMIC	0.1U Z	25V
C3114	403 162 5300	ELECT	4.7U M	25V	C3574	403 283 6309	CERAMIC	1U Z	10V
C3116	403 304 2105	ELECT	47U M	6.3V	C3601	403 162 4709	ELECT	10U M	16V
C3117	403 164 0204	CERAMIC	0.1U Z	25V		403 335 0309	ELECT	10U M	16V
C3118	403 164 0204	CERAMIC	0.1U Z	25V	C361	403 164 0204	CERAMIC	0.1U Z	25V
C3119	403 304 2105	ELECT	47U M	6.3V	C3611	403 164 0204	CERAMIC	0.1U Z	25V
C312	403 164 0204	CERAMIC	0.1U Z	25V	C3612	403 304 3300	ELECT	47U M	16V
C3121	403 157 1706	CERAMIC	8P D	50V	C3613	403 164 0204	CERAMIC	0.1U Z	25V
C3122	403 164 0204	CERAMIC	0.1U Z	25V	C3614	403 164 0204	CERAMIC	0.1U Z	25V
C3123	403 149 9208	CERAMIC	0.01U Z	50V	C362	403 164 0204	CERAMIC	0.1U Z	25V
C3124	403 162 6000	ELECT	0.47U M	50V	C3631	403 164 0204	CERAMIC	0.1U Z	25V
C3126	403 164 0204	CERAMIC	0.1U Z	25V	C3632	403 304 3300	ELECT	47U M	16V
C3127	403 149 9208	CERAMIC	0.01U Z	50V	C3633	403 164 0204	CERAMIC	0.1U Z	25V

## Electrical Parts List

<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>			<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>		
C3634	403 164 0204	CERAMIC	0.1U Z	25V	C414	403 164 0204	CERAMIC	0.1U Z	25V
C3636	403 164 0204	CERAMIC	0.1U Z	25V	C4141	403 149 9208	CERAMIC	0.01U Z	50V
C3637	403 164 0204	CERAMIC	0.1U Z	25V	C4142	403 149 9208	CERAMIC	0.01U Z	50V
C3651	403 164 0204	CERAMIC	0.1U Z	25V	C4143	403 149 9208	CERAMIC	0.01U Z	50V
C3652	403 164 0204	CERAMIC	0.1U Z	25V	C4144	403 149 9208	CERAMIC	0.01U Z	50V
C3653	403 304 3300	ELECT	47U M	16V	C4145	403 149 9208	CERAMIC	0.01U Z	50V
C3654	403 164 0204	CERAMIC	0.1U Z	25V	C4146	403 149 9208	CERAMIC	0.01U Z	50V
C3656	403 164 0204	CERAMIC	0.1U Z	25V	C4147	403 149 9208	CERAMIC	0.01U Z	50V
C3657	403 164 0204	CERAMIC	0.1U Z	25V	C4148	403 149 9208	CERAMIC	0.01U Z	50V
C3671	403 229 3508	ELECT	100U M	16V	C4149	403 149 9208	CERAMIC	0.01U Z	50V
	403 335 0408	ELECT	100U M	16V	C415	403 164 0204	CERAMIC	0.1U Z	25V
C3672	403 164 0204	CERAMIC	0.1U Z	25V	C4151	403 155 2309	CERAMIC	4700P K	50V
C3673	403 157 3601	CERAMIC	100P J	50V	C4158	403 331 8101	ELECT	1000U M	10V
C3681	403 229 3508	ELECT	100U M	16V	C416	403 164 0204	CERAMIC	0.1U Z	25V
	403 335 0408	ELECT	100U M	16V	C4161	403 331 8101	ELECT	1000U M	10V
C3682	403 164 0204	CERAMIC	0.1U Z	25V	C4162	403 164 0204	CERAMIC	0.1U Z	25V
C3683	403 157 3601	CERAMIC	100P J	50V	C4163	403 322 1708	ELECT	22U M	16V
C3684	403 149 9208	CERAMIC	0.01U Z	50V	C4164	403 164 0204	CERAMIC	0.1U Z	25V
C391	403 164 0204	CERAMIC	0.1U Z	25V	C4166	403 283 6309	CERAMIC	1U Z	10V
C392	403 304 1801	ELECT	100U M	6.3V	C4167	403 149 9208	CERAMIC	0.01U Z	50V
C393	403 164 0204	CERAMIC	0.1U Z	25V	C4168	403 283 6309	CERAMIC	1U Z	10V
C394	403 304 1801	ELECT	100U M	6.3V	C4169	403 164 0204	CERAMIC	0.1U Z	25V
C395	403 164 0204	CERAMIC	0.1U Z	25V	C417	403 164 0204	CERAMIC	0.1U Z	25V
C396	403 347 5507	POS-SOLID	470U M	4V	C418	403 164 0204	CERAMIC	0.1U Z	25V
C401	403 304 1801	ELECT	100U M	6.3V	C4183	403 321 2607	ELECT	10U M	16V
C402	403 164 0204	CERAMIC	0.1U Z	25V	C4184	403 321 2607	ELECT	10U M	16V
C403	403 304 1801	ELECT	100U M	6.3V	C4185	403 163 9802	CERAMIC	0.047U Z	25V
C404	403 164 0204	CERAMIC	0.1U Z	25V	C4186	403 163 9802	CERAMIC	0.047U Z	25V
C405	403 164 0204	CERAMIC	0.1U Z	25V	C4187	403 321 2607	ELECT	10U M	16V
C406	403 164 0204	CERAMIC	0.1U Z	25V	C4188	403 164 0204	CERAMIC	0.1U Z	25V
C407	403 164 0204	CERAMIC	0.1U Z	25V	C4189	403 322 1708	ELECT	22U M	16V
C408	403 164 0204	CERAMIC	0.1U Z	25V	C419	403 164 0204	CERAMIC	0.1U Z	25V
C409	403 164 0204	CERAMIC	0.1U Z	25V	C4191	403 149 9208	CERAMIC	0.01U Z	50V
C4108	403 280 1604	ELECT	220U M	16V	C4192	403 149 9208	CERAMIC	0.01U Z	50V
C4109	403 164 0204	CERAMIC	0.1U Z	25V	C4193	403 149 9208	CERAMIC	0.01U Z	50V
C411	403 164 0204	CERAMIC	0.1U Z	25V	C4194	403 304 3300	ELECT	47U M	16V
C4110	403 164 0204	CERAMIC	0.1U Z	25V	C4195	403 149 9208	CERAMIC	0.01U Z	50V
C4111	403 164 0204	CERAMIC	0.1U Z	25V	C4196	403 149 9208	CERAMIC	0.01U Z	50V
C4112	403 321 2607	ELECT	10U M	16V	C4197	403 149 9208	CERAMIC	0.01U Z	50V
C4113	403 162 6000	ELECT	0.47U M	50V	C4201	403 164 0204	CERAMIC	0.1U Z	25V
C4114	403 149 9208	CERAMIC	0.01U Z	50V	C4202	403 164 0204	CERAMIC	0.1U Z	25V
C4115	403 321 2607	ELECT	10U M	16V	C4203	403 275 3002	CERAMIC	0.047U K	16V
C4116	403 164 0204	CERAMIC	0.1U Z	25V	C4204	403 164 0204	CERAMIC	0.1U Z	25V
C4117	403 164 0204	CERAMIC	0.1U Z	25V	C4205	403 304 2105	ELECT	47U M	6.3V
C4118	403 149 9208	CERAMIC	0.01U Z	50V	C4206	403 164 0204	CERAMIC	0.1U Z	25V
C4119	403 149 9208	CERAMIC	0.01U Z	50V	C4207	403 164 0204	CERAMIC	0.1U Z	25V
C412	403 164 0204	CERAMIC	0.1U Z	25V	C4208	403 164 0204	CERAMIC	0.1U Z	25V
C4120	403 149 9208	CERAMIC	0.01U Z	50V	C421	403 164 0204	CERAMIC	0.1U Z	25V
C4121	403 304 3300	ELECT	47U M	16V	C4213	403 164 0204	CERAMIC	0.1U Z	25V
C4122	403 149 9208	CERAMIC	0.01U Z	50V	C4217	403 164 0204	CERAMIC	0.1U Z	25V
C4123	403 149 9208	CERAMIC	0.01U Z	50V	C4222	403 164 0204	CERAMIC	0.1U Z	25V
C4124	403 149 9208	CERAMIC	0.01U Z	50V	C4223	403 164 0204	CERAMIC	0.1U Z	25V
C4125	403 321 2607	ELECT	10U M	16V	C4224	403 164 0204	CERAMIC	0.1U Z	25V
C4126	403 162 6000	ELECT	0.47U M	50V	C4225	403 164 0204	CERAMIC	0.1U Z	25V
C4127	403 149 9208	CERAMIC	0.01U Z	50V	C4226	403 164 0204	CERAMIC	0.1U Z	25V
C4128	403 149 9208	CERAMIC	0.01U Z	50V	C4227	403 164 0204	CERAMIC	0.1U Z	25V
C4129	403 149 9208	CERAMIC	0.01U Z	50V	C4228	403 164 0204	CERAMIC	0.1U Z	25V
C413	403 164 0204	CERAMIC	0.1U Z	25V	C4229	403 164 0204	CERAMIC	0.1U Z	25V
C4130	403 164 0204	CERAMIC	0.1U Z	25V	C4231	403 304 1801	ELECT	100U M	6.3V
C4131	403 164 0204	CERAMIC	0.1U Z	25V	C4232	403 164 0204	CERAMIC	0.1U Z	25V
C4132	403 164 0204	CERAMIC	0.1U Z	25V	C4233	403 321 2607	ELECT	10U M	16V
C4133	403 164 0204	CERAMIC	0.1U Z	25V	C4234	403 164 0204	CERAMIC	0.1U Z	25V
C4134	403 164 0204	CERAMIC	0.1U Z	25V	C4235	403 164 0204	CERAMIC	0.1U Z	25V
C4135	403 164 0204	CERAMIC	0.1U Z	25V	C4236	403 155 1609	CERAMIC	33P J	50V
C4136	403 283 6309	CERAMIC	1U Z	10V	C4237	403 157 7302	CERAMIC	6800P K	50V
C4137	403 322 1708	ELECT	22U M	16V	C4238	403 164 0204	CERAMIC	0.1U Z	25V
C4138	403 175 4802	NP-ELECT	10U M	10V	C4239	403 304 1801	ELECT	100U M	6.3V

## Electrical Parts List

Key No.	Part No.	Description			Key No.	Part No.	Description		
C4240	403 283 6309	CERAMIC	1U Z	10V	C534	403 164 0204	CERAMIC	0.1U Z	25V
C4241	403 149 9208	CERAMIC	0.01U Z	50V	C537	403 164 0204	CERAMIC	0.1U Z	25V
C4242	403 164 0204	CERAMIC	0.1U Z	25V	C538	403 164 0204	CERAMIC	0.1U Z	25V
C4243	403 113 3805	CERAMIC	1000P K	50V	C539	403 164 0204	CERAMIC	0.1U Z	25V
C4244	403 321 2607	ELECT	10U M	16V	C541	403 304 3300	ELECT	47U M	16V
C4245	403 164 0204	CERAMIC	0.1U Z	25V	C542	403 164 0204	CERAMIC	0.1U Z	25V
C4246	403 164 0204	CERAMIC	0.1U Z	25V	C543	403 149 9208	CERAMIC	0.01U Z	50V
C4247	403 164 0204	CERAMIC	0.1U Z	25V	C544	403 164 0204	CERAMIC	0.1U Z	25V
C4248	403 164 0204	CERAMIC	0.1U Z	25V	C546	403 164 0204	CERAMIC	0.1U Z	25V
C4249	403 164 0204	CERAMIC	0.1U Z	25V	C547	403 164 0204	CERAMIC	0.1U Z	25V
C4251	403 347 5507	POS-SOLID	470U M	4V	C561	403 304 1801	ELECT	100U M	6.3V
C4252	403 164 0204	CERAMIC	0.1U Z	25V	C562	403 164 0204	CERAMIC	0.1U Z	25V
C4253	403 164 0204	CERAMIC	0.1U Z	25V	C563	403 164 0204	CERAMIC	0.1U Z	25V
C4254	403 164 0204	CERAMIC	0.1U Z	25V	C564	403 164 0204	CERAMIC	0.1U Z	25V
C4256	403 164 0204	CERAMIC	0.1U Z	25V	C567	403 164 0204	CERAMIC	0.1U Z	25V
C4271	403 164 0204	CERAMIC	0.1U Z	25V	C568	403 164 0204	CERAMIC	0.1U Z	25V
C4272	403 164 0204	CERAMIC	0.1U Z	25V	C569	403 164 0204	CERAMIC	0.1U Z	25V
C4273	403 164 0204	CERAMIC	0.1U Z	25V	C571	403 304 3300	ELECT	47U M	16V
C4274	403 164 0204	CERAMIC	0.1U Z	25V	C572	403 164 0204	CERAMIC	0.1U Z	25V
C4275	403 162 4709	ELECT	10U M	16V	C573	403 149 9208	CERAMIC	0.01U Z	50V
C4276	403 164 0204	CERAMIC	0.1U Z	25V	C574	403 164 0204	CERAMIC	0.1U Z	25V
C4501	403 304 2105	ELECT	47U M	6.3V	C576	403 164 0204	CERAMIC	0.1U Z	25V
C4502	403 164 0204	CERAMIC	0.1U Z	25V	C577	403 164 0204	CERAMIC	0.1U Z	25V
C4503	403 164 0204	CERAMIC	0.1U Z	25V	C6301	403 304 1801	ELECT	100U M	6.3V
C4504	403 164 0204	CERAMIC	0.1U Z	25V	C6302	403 164 0204	CERAMIC	0.1U Z	25V
C4505	403 164 0204	CERAMIC	0.1U Z	25V	C6303	403 113 3805	CERAMIC	1000P K	50V
C4506	403 164 0204	CERAMIC	0.1U Z	25V	C6304	403 113 3805	CERAMIC	1000P K	50V
C4507	403 164 0204	CERAMIC	0.1U Z	25V	C6305	403 164 0204	CERAMIC	0.1U Z	25V
C451	403 304 1801	ELECT	100U M	6.3V	C6306	403 164 0204	CERAMIC	0.1U Z	25V
C452	403 164 0204	CERAMIC	0.1U Z	25V	C6307	403 164 0204	CERAMIC	0.1U Z	25V
C453	403 304 1801	ELECT	100U M	6.3V	C6308	403 113 3805	CERAMIC	1000P K	50V
C454	403 164 0204	CERAMIC	0.1U Z	25V	C6309	403 164 0204	CERAMIC	0.1U Z	25V
C4551	403 164 0204	CERAMIC	0.1U Z	25V	C6311	403 113 3805	CERAMIC	1000P K	50V
C4552	403 164 0204	CERAMIC	0.1U Z	25V	C6312	403 164 0204	CERAMIC	0.1U Z	25V
C4553	403 164 0204	CERAMIC	0.1U Z	25V	C6313	403 164 0204	CERAMIC	0.1U Z	25V
C4554	403 164 0204	CERAMIC	0.1U Z	25V	C8001	403 304 1801	ELECT	100U M	6.3V
C4555	403 164 0204	CERAMIC	0.1U Z	25V	C8002	403 283 6309	CERAMIC	1U Z	10V
C4556	403 164 0204	CERAMIC	0.1U Z	25V	C8003	403 304 1801	ELECT	100U M	6.3V
C4558	403 164 0204	CERAMIC	0.1U Z	25V	C8004	403 283 6309	CERAMIC	1U Z	10V
C4559	403 164 0204	CERAMIC	0.1U Z	25V	C8005	403 169 2807	CERAMIC	330P J	50V
C4561	403 149 9208	CERAMIC	0.01U Z	50V	C8006	403 283 6309	CERAMIC	1U Z	10V
C4801	403 164 0204	CERAMIC	0.1U Z	25V	C8007	403 304 1801	ELECT	100U M	6.3V
C4802	403 164 0204	CERAMIC	0.1U Z	25V	C8008	403 157 3601	CERAMIC	100P J	50V
C4803	403 164 0204	CERAMIC	0.1U Z	25V	C8009	403 157 3601	CERAMIC	100P J	50V
C4804	403 164 0204	CERAMIC	0.1U Z	25V	C801	403 164 0204	CERAMIC	0.1U Z	25V
C4808	403 304 1801	ELECT	100U M	6.3V	C8010	403 157 3601	CERAMIC	100P J	50V
C4811	403 283 6309	CERAMIC	1U Z	10V	C8011	403 157 3601	CERAMIC	100P J	50V
	403 336 5600	CERAMIC	1U Z	10V	C8012	403 157 3601	CERAMIC	100P J	50V
C4813	403 304 1801	ELECT	100U M	6.3V	C8013	403 164 0204	CERAMIC	0.1U Z	25V
C4814	403 164 0204	CERAMIC	0.1U Z	25V	C8014	403 304 1801	ELECT	100U M	6.3V
C4817	403 304 1801	ELECT	100U M	6.3V	C8015	403 283 6309	CERAMIC	1U Z	10V
C501	403 304 1801	ELECT	100U M	6.3V	C8016	403 155 1500	CERAMIC	180P J	50V
C502	403 164 0204	CERAMIC	0.1U Z	25V	C8017	403 169 2807	CERAMIC	330P J	50V
C503	403 164 0204	CERAMIC	0.1U Z	25V	C8018	403 169 2807	CERAMIC	330P J	50V
C504	403 164 0204	CERAMIC	0.1U Z	25V	C8019	403 155 1500	CERAMIC	180P J	50V
C507	403 164 0204	CERAMIC	0.1U Z	25V	C802	403 164 0204	CERAMIC	0.1U Z	25V
C508	403 164 0204	CERAMIC	0.1U Z	25V	C8020	403 169 2807	CERAMIC	330P J	50V
C509	403 164 0204	CERAMIC	0.1U Z	25V	C8021	403 169 2807	CERAMIC	330P J	50V
C511	403 304 3300	ELECT	47U M	16V	C8022	403 155 1500	CERAMIC	180P J	50V
C512	403 164 0204	CERAMIC	0.1U Z	25V	C803	403 155 1609	CERAMIC	33P J	50V
C513	403 149 9208	CERAMIC	0.01U Z	50V	C8031	403 304 2105	ELECT	47U M	6.3V
C514	403 164 0204	CERAMIC	0.1U Z	25V	C8032	403 164 0204	CERAMIC	0.1U Z	25V
C526	403 164 0204	CERAMIC	0.1U Z	25V	C8033	403 164 0204	CERAMIC	0.1U Z	25V
C527	403 164 0204	CERAMIC	0.1U Z	25V	C804	403 155 1609	CERAMIC	33P J	50V
C531	403 304 1801	ELECT	100U M	6.3V	C806	403 304 2105	ELECT	47U M	6.3V
C532	403 164 0204	CERAMIC	0.1U Z	25V	C807	403 164 0204	CERAMIC	0.1U Z	25V
C533	403 164 0204	CERAMIC	0.1U Z	25V	C808	403 215 1006	CERAMIC	470P J	50V

## Electrical Parts List

<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>			<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>		
C809	403 283 6309	CERAMIC	1U Z	10V		645 021 4943	R-NETWORK	22X4	1/16W
C811	403 164 0204	CERAMIC	0.1U Z	25V	RB407	645 037 0663	R-NETWORK	22X4	0.063W
C812	403 164 0204	CERAMIC	0.1U Z	25V		645 021 4943	R-NETWORK	22X4	1/16W
C813	403 164 0204	CERAMIC	0.1U Z	25V	RB408	645 037 0663	R-NETWORK	22X4	0.063W
C814	403 304 1801	ELECT	100U M	6.3V		645 021 4943	R-NETWORK	22X4	1/16W
C815	403 164 0204	CERAMIC	0.1U Z	25V	RB409	645 037 0663	R-NETWORK	22X4	0.063W
C816	403 164 0204	CERAMIC	0.1U Z	25V		645 021 4943	R-NETWORK	22X4	1/16W
C817	403 164 0204	CERAMIC	0.1U Z	25V	RB411	645 037 0663	R-NETWORK	22X4	0.063W
C818	403 304 1801	ELECT	100U M	6.3V		645 021 4943	R-NETWORK	22X4	1/16W
C819	403 164 0204	CERAMIC	0.1U Z	25V	RB412	645 037 0663	R-NETWORK	22X4	0.063W
C820	403 164 0204	CERAMIC	0.1U Z	25V		645 021 4943	R-NETWORK	22X4	1/16W
C821	403 164 0204	CERAMIC	0.1U Z	25V	RB413	645 037 0663	R-NETWORK	22X4	0.063W
C822	403 164 0204	CERAMIC	0.1U Z	25V		645 021 4943	R-NETWORK	22X4	1/16W
C823	403 164 0204	CERAMIC	0.1U Z	25V	RB414	645 037 0663	R-NETWORK	22X4	0.063W
C824	403 164 0204	CERAMIC	0.1U Z	25V		645 021 4943	R-NETWORK	22X4	1/16W
C831	403 164 0204	CERAMIC	0.1U Z	25V	RB4201	645 037 0656	R-NETWORK	0X4	0.063W
C832	403 283 6309	CERAMIC	1U Z	10V		645 024 7477	R-NETWORK	0X4	1/16W
	403 336 5600	CERAMIC	1U Z	10V	RB4202	645 037 0656	R-NETWORK	0X4	0.063W
C834	403 164 0204	CERAMIC	0.1U Z	25V		645 024 7477	R-NETWORK	0X4	1/16W
C9401	403 164 0204	CERAMIC	0.1U Z	25V	RB4801	645 021 0358	R-NETWORK	100X4	0.063W
C9402	403 164 0204	CERAMIC	0.1U Z	25V		645 031 3325	R-NETWORK	100X4	1/16W
C9403	403 164 0204	CERAMIC	0.1U Z	25V	RB501	645 037 3107	R-NETWORK	10X4	0.063W
C9404	403 164 0204	CERAMIC	0.1U Z	25V		645 028 5981	R-NETWORK	10X4	1/16W
C9405	403 164 0204	CERAMIC	0.1U Z	25V	RB502	645 037 3107	R-NETWORK	10X4	0.063W
C9406	403 164 0204	CERAMIC	0.1U Z	25V		645 028 5981	R-NETWORK	10X4	1/16W
C9407	403 164 0204	CERAMIC	0.1U Z	25V	RB503	645 037 3107	R-NETWORK	10X4	0.063W
C9408	403 164 0204	CERAMIC	0.1U Z	25V		645 028 5981	R-NETWORK	10X4	1/16W
C9409	403 164 0204	CERAMIC	0.1U Z	25V	RB531	645 037 3107	R-NETWORK	10X4	0.063W
C9411	403 164 0204	CERAMIC	0.1U Z	25V		645 028 5981	R-NETWORK	10X4	1/16W
C9412	403 164 0204	CERAMIC	0.1U Z	25V	RB532	645 037 3107	R-NETWORK	10X4	0.063W
C9413	403 164 0204	CERAMIC	0.1U Z	25V		645 028 5981	R-NETWORK	10X4	1/16W
C9414	403 304 1801	ELECT	100U M	6.3V	RB533	645 037 3107	R-NETWORK	10X4	0.063W
C9801	403 304 1801	ELECT	100U M	6.3V		645 028 5981	R-NETWORK	10X4	1/16W
C9802	403 164 0204	CERAMIC	0.1U Z	25V	RB561	645 037 3107	R-NETWORK	10X4	0.063W
C9803	403 153 9102	CERAMIC	5P C	50V		645 028 5981	R-NETWORK	10X4	1/16W
C9804	403 113 3805	CERAMIC	1000P K	50V	RB562	645 037 3107	R-NETWORK	10X4	0.063W
C9805	403 298 9609	CERAMIC	0.1U K	16V		645 028 5981	R-NETWORK	10X4	1/16W
C9806	403 164 0204	CERAMIC	0.1U Z	25V	RB563	645 037 3107	R-NETWORK	10X4	0.063W
C9807	403 304 1801	ELECT	100U M	6.3V		645 028 5981	R-NETWORK	10X4	1/16W
C9808	403 164 0204	CERAMIC	0.1U Z	25V	RB8001	645 037 3107	R-NETWORK	10X4	0.063W
C9809	403 164 0204	CERAMIC	0.1U Z	25V		645 028 5981	R-NETWORK	10X4	1/16W
C9821	403 164 0204	CERAMIC	0.1U Z	25V	RB8002	645 037 3107	R-NETWORK	10X4	0.063W
C9822	403 164 0204	CERAMIC	0.1U Z	25V		645 028 5981	R-NETWORK	10X4	1/16W
<b>RESISTOR</b>					RB8003	645 037 3107	R-NETWORK	10X4	0.063W
RB1841	645 026 8038	R-NETWORK	22KX4	1/16W		645 028 5981	R-NETWORK	10X4	1/16W
RB2301	645 037 3107	R-NETWORK	10X4	0.063W	RB8004	645 037 3107	R-NETWORK	10X4	0.063W
	645 028 5981	R-NETWORK	10X4	1/16W		645 028 5981	R-NETWORK	10X4	1/16W
RB2302	645 037 3107	R-NETWORK	10X4	0.063W	RB8005	645 037 3107	R-NETWORK	10X4	0.063W
	645 028 5981	R-NETWORK	10X4	1/16W		645 028 5981	R-NETWORK	10X4	1/16W
RB2303	645 037 3107	R-NETWORK	10X4	0.063W	RB8006	645 037 3107	R-NETWORK	10X4	0.063W
	645 028 5981	R-NETWORK	10X4	1/16W		645 028 5981	R-NETWORK	10X4	1/16W
RB2304	645 037 3107	R-NETWORK	10X4	0.063W	RB8007	645 037 3107	R-NETWORK	10X4	0.063W
	645 028 5981	R-NETWORK	10X4	1/16W		645 028 5981	R-NETWORK	10X4	1/16W
RB2305	645 037 3107	R-NETWORK	10X4	0.063W	RB8008	645 037 3107	R-NETWORK	10X4	0.063W
	645 028 5981	R-NETWORK	10X4	1/16W		645 028 5981	R-NETWORK	10X4	1/16W
RB2306	645 037 3107	R-NETWORK	10X4	0.063W	RB8009	645 037 3107	R-NETWORK	10X4	0.063W
	645 028 5981	R-NETWORK	10X4	1/16W		645 028 5981	R-NETWORK	10X4	1/16W
RB401	645 037 0663	R-NETWORK	22X4	0.063W	RB801	645 037 4920	R-NETWORK	3.3KX4	0.063W
	645 021 4943	R-NETWORK	22X4	1/16W		645 031 4070	R-NETWORK	3.3KX4	1/16W
RB402	645 037 0663	R-NETWORK	22X4	0.063W	RB8010	645 037 3107	R-NETWORK	10X4	0.063W
	645 021 4943	R-NETWORK	22X4	1/16W		645 028 5981	R-NETWORK	10X4	1/16W
RB403	645 037 0663	R-NETWORK	22X4	0.063W		645 037 3107	R-NETWORK	10X4	0.063W
	645 021 4943	R-NETWORK	22X4	1/16W	RB8011	645 028 5981	R-NETWORK	10X4	1/16W
RB404	645 037 0663	R-NETWORK	22X4	0.063W		645 037 3107	R-NETWORK	10X4	0.063W
	645 021 4943	R-NETWORK	22X4	1/16W	RB8012	645 028 5981	R-NETWORK	10X4	1/16W
RB406	645 037 0663	R-NETWORK	22X4	0.063W		645 037 3107	R-NETWORK	10X4	0.063W
	645 021 4943	R-NETWORK	22X4	1/16W	RB8013	645 028 5981	R-NETWORK	10X4	1/16W

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
RB802	645 037 4920	R-NETWORK 3.3KX4 0.063W	R147	401 105 6001	MT-GLAZE 5.6K JA 1/16W
	645 031 4070	R-NETWORK 3.3KX4 1/16W	R148	401 105 0405	MT-GLAZE 100 JA 1/16W
RB803	645 037 4920	R-NETWORK 3.3KX4 0.063W	R149	401 105 0504	MT-GLAZE 1K JA 1/16W
	645 031 4070	R-NETWORK 3.3KX4 1/16W	R1502	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
RB804	645 037 4920	R-NETWORK 3.3KX4 0.063W	R1504	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
	645 031 4070	R-NETWORK 3.3KX4 1/16W	R151	401 105 6506	MT-GLAZE 680 JA 1/16W
RB9801	645 021 0365	R-NETWORK 100KX4 0.063W	R152	401 105 3307	MT-GLAZE 2.7K JA 1/16W
	645 025 5397	R-NETWORK 100KX4 1/16W	R153	401 105 0504	MT-GLAZE 1K JA 1/16W
RB9802	645 021 0365	R-NETWORK 100KX4 0.063W	R1532	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
	645 025 5397	R-NETWORK 100KX4 1/16W	R1533	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1101	401 105 5202	MT-GLAZE 470 JA 1/16W	R154	401 105 0405	MT-GLAZE 100 JA 1/16W
R1102	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R155	401 105 0504	MT-GLAZE 1K JA 1/16W
R1103	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R156	401 105 0405	MT-GLAZE 100 JA 1/16W
R1104	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R1562	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1105	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R1563	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1106	401 105 5202	MT-GLAZE 470 JA 1/16W	R157	401 105 0504	MT-GLAZE 1K JA 1/16W
R1107	401 105 5202	MT-GLAZE 470 JA 1/16W	R158	401 105 2706	MT-GLAZE 220 JA 1/16W
R1108	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R159	401 105 3000	MT-GLAZE 220K JA 1/16W
R1109	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R161	401 105 5400	MT-GLAZE 47K JA 1/16W
R1111	401 105 0405	MT-GLAZE 100 JA 1/16W	R162	401 105 0504	MT-GLAZE 1K JA 1/16W
R1112	401 105 0405	MT-GLAZE 100 JA 1/16W	R163	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1113	401 105 0405	MT-GLAZE 100 JA 1/16W	R164	401 105 5202	MT-GLAZE 470 JA 1/16W
R1114	401 105 7305	MT-GLAZE 820 JA 1/16W	R165	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R1116	401 105 6605	MT-GLAZE 6.8K JA 1/16W	R1803	401 105 0603	MT-GLAZE 10K JA 1/16W
R1117	401 105 0504	MT-GLAZE 1K JA 1/16W	R1804	401 105 0603	MT-GLAZE 10K JA 1/16W
R1121	401 105 0504	MT-GLAZE 1K JA 1/16W	R1805	401 105 0603	MT-GLAZE 10K JA 1/16W
R1123	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R1806	401 105 0405	MT-GLAZE 100 JA 1/16W
R1124	401 105 0504	MT-GLAZE 1K JA 1/16W	R1807	401 105 0405	MT-GLAZE 100 JA 1/16W
R1126	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R1810	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1127	401 105 4601	MT-GLAZE 3.9K JA 1/16W	R1811	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1128	401 105 0603	MT-GLAZE 10K JA 1/16W	R1812	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1129	401 105 8104	MT-GLAZE 56K JA 1/16W	R1813	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1131	401 105 5400	MT-GLAZE 47K JA 1/16W	R1814	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1132	401 105 0504	MT-GLAZE 1K JA 1/16W	R1816	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1133	401 105 2003	MT-GLAZE 1.8K JA 1/16W	R1817	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1134	401 105 6506	MT-GLAZE 680 JA 1/16W	R1821	401 105 0603	MT-GLAZE 10K JA 1/16W
R1135	401 105 3307	MT-GLAZE 2.7K JA 1/16W	R1822	401 105 0603	MT-GLAZE 10K JA 1/16W
R1136	401 105 2706	MT-GLAZE 220 JA 1/16W	R1823	401 105 0603	MT-GLAZE 10K JA 1/16W
R1137	401 105 6506	MT-GLAZE 680 JA 1/16W	R1833	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1139	401 105 5103	MT-GLAZE 47 JA 1/16W	R1834	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1141	401 105 0504	MT-GLAZE 1K JA 1/16W	R1836	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1142	401 105 8104	MT-GLAZE 56K JA 1/16W	R1841	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1143	401 105 5400	MT-GLAZE 47K JA 1/16W	R1842	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1144	401 105 0504	MT-GLAZE 1K JA 1/16W	R1843	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1145	401 105 2003	MT-GLAZE 1.8K JA 1/16W	R1844	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1146	401 105 6506	MT-GLAZE 680 JA 1/16W	R1846	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1147	401 105 3307	MT-GLAZE 2.7K JA 1/16W	R1847	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1148	401 105 2706	MT-GLAZE 220 JA 1/16W	R1848	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1149	401 105 6506	MT-GLAZE 680 JA 1/16W	R1849	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1152	401 105 4502	MT-GLAZE 390 JA 1/16W	R1851	401 105 6100	MT-GLAZE 560K JA 1/16W
R1153	401 105 5103	MT-GLAZE 47 JA 1/16W	R1852	401 105 0405	MT-GLAZE 100 JA 1/16W
R1154	401 105 0504	MT-GLAZE 1K JA 1/16W	R1854	401 105 0405	MT-GLAZE 100 JA 1/16W
R1165	401 113 5409	MT-GLAZE 510 JA 1/16W	R1855	401 105 0405	MT-GLAZE 100 JA 1/16W
R1303	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R1856	401 105 0504	MT-GLAZE 1K JA 1/16W
R1304	401 105 0603	MT-GLAZE 10K JA 1/16W	R1857	401 105 8005	MT-GLAZE 1M JA 1/16W
R1305	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R1858	401 105 0504	MT-GLAZE 1K JA 1/16W
R1307	401 105 0603	MT-GLAZE 10K JA 1/16W	R1859	401 105 0504	MT-GLAZE 1K JA 1/16W
R1308	401 105 0603	MT-GLAZE 10K JA 1/16W	R1860	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1309	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R1861	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1313	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R1862	401 105 0603	MT-GLAZE 10K JA 1/16W
R140	401 105 3307	MT-GLAZE 2.7K JA 1/16W	R1863	401 105 0603	MT-GLAZE 10K JA 1/16W
R141	401 105 2904	MT-GLAZE 22K JA 1/16W	R1871	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R142	401 105 1600	MT-GLAZE 15K JA 1/16W	R1872	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R143	401 105 0504	MT-GLAZE 1K JA 1/16W	R1876	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R144	401 105 0504	MT-GLAZE 1K JA 1/16W	R1877	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R145	401 105 4809	MT-GLAZE 390K JA 1/16W	R1881	401 105 0603	MT-GLAZE 10K JA 1/16W
R146	401 105 4106	MT-GLAZE 3.3K JA 1/16W	R1882	401 105 0603	MT-GLAZE 10K JA 1/16W

## Electrical Parts List

<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>		<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>	
R1883	401 105 0603	MT-GLAZE	10K JA 1/16W	R2343	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R1884	401 105 0603	MT-GLAZE	10K JA 1/16W	R2344	401 105 4106	MT-GLAZE	3.3K JA 1/16W
R1886	401 105 0603	MT-GLAZE	10K JA 1/16W	R235	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R1887	401 105 0603	MT-GLAZE	10K JA 1/16W	R2351	401 105 4106	MT-GLAZE	3.3K JA 1/16W
R1888	401 105 0603	MT-GLAZE	10K JA 1/16W	R2352	401 105 4106	MT-GLAZE	3.3K JA 1/16W
R1891	401 105 5301	MT-GLAZE	4.7K JA 1/16W	R2353	401 105 6605	MT-GLAZE	6.8K JA 1/16W
R1892	401 105 0405	MT-GLAZE	100 JA 1/16W	R2354	401 105 2904	MT-GLAZE	22K JA 1/16W
R1893	401 105 5301	MT-GLAZE	4.7K JA 1/16W	R2355	401 105 0504	MT-GLAZE	1K JA 1/16W
R1894	401 105 0405	MT-GLAZE	100 JA 1/16W	R2356	401 105 3307	MT-GLAZE	2.7K JA 1/16W
R201	401 105 3901	MT-GLAZE	33 JA 1/16W	R2357	401 105 1006	MT-GLAZE	1.2K JA 1/16W
R202	401 105 0900	MT-GLAZE	120 JA 1/16W	R2358	401 105 0504	MT-GLAZE	1K JA 1/16W
R203	401 105 3901	MT-GLAZE	33 JA 1/16W	R2361	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R204	401 105 0900	MT-GLAZE	120 JA 1/16W	R2362	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R205	401 105 3901	MT-GLAZE	33 JA 1/16W	R2363	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R206	401 105 0900	MT-GLAZE	120 JA 1/16W	R244	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R207	401 105 0405	MT-GLAZE	100 JA 1/16W	R245	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R208	401 105 0603	MT-GLAZE	10K JA 1/16W	R246	401 105 2805	MT-GLAZE	2.2K JA 1/16W
R209	401 105 0405	MT-GLAZE	100 JA 1/16W	R247	401 105 2805	MT-GLAZE	2.2K JA 1/16W
R210	401 105 0603	MT-GLAZE	10K JA 1/16W	R248	401 105 2805	MT-GLAZE	2.2K JA 1/16W
R2101	401 105 4601	MT-GLAZE	3.9K JA 1/16W	R2501	401 148 6006	MT-GLAZE	2.2 JA 1/16W
R2102	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R2502	401 148 6006	MT-GLAZE	2.2 JA 1/16W
R2103	401 105 0405	MT-GLAZE	100 JA 1/16W	R2503	401 148 6006	MT-GLAZE	2.2 JA 1/16W
R2104	401 105 0405	MT-GLAZE	100 JA 1/16W	R2504	401 148 6006	MT-GLAZE	2.2 JA 1/16W
R2106	401 105 4007	MT-GLAZE	330 JA 1/16W	R2506	401 105 2805	MT-GLAZE	2.2K JA 1/16W
R2107	401 105 0504	MT-GLAZE	1K JA 1/16W	R2507	401 105 4601	MT-GLAZE	3.9K JA 1/16W
R2108	401 105 0504	MT-GLAZE	1K JA 1/16W	R2508	401 105 4700	MT-GLAZE	39K JA 1/16W
R2109	401 105 0504	MT-GLAZE	1K JA 1/16W	R2509	401 105 0504	MT-GLAZE	1K JA 1/16W
R211	401 105 0405	MT-GLAZE	100 JA 1/16W	R251	401 105 0504	MT-GLAZE	1K JA 1/16W
R2111	401 105 0504	MT-GLAZE	1K JA 1/16W	R2511	401 148 6006	MT-GLAZE	2.2 JA 1/16W
R2112	401 105 4601	MT-GLAZE	3.9K JA 1/16W	R2512	401 148 6006	MT-GLAZE	2.2 JA 1/16W
R2113	401 105 6605	MT-GLAZE	6.8K JA 1/16W	R2513	401 148 6006	MT-GLAZE	2.2 JA 1/16W
R212	401 105 0603	MT-GLAZE	10K JA 1/16W	R2514	401 148 6006	MT-GLAZE	2.2 JA 1/16W
R213	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R2516	401 105 2805	MT-GLAZE	2.2K JA 1/16W
R214	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R2517	401 105 4601	MT-GLAZE	3.9K JA 1/16W
R215	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R2518	401 105 4700	MT-GLAZE	39K JA 1/16W
R216	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R2519	401 105 0504	MT-GLAZE	1K JA 1/16W
R217	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R252	401 105 0504	MT-GLAZE	1K JA 1/16W
R219	401 105 3901	MT-GLAZE	33 JA 1/16W	R2521	401 148 6006	MT-GLAZE	2.2 JA 1/16W
R221	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R2522	401 148 6006	MT-GLAZE	2.2 JA 1/16W
R224	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R2523	401 148 6006	MT-GLAZE	2.2 JA 1/16W
R226	401 105 3901	MT-GLAZE	33 JA 1/16W	R2524	401 148 6006	MT-GLAZE	2.2 JA 1/16W
R228	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R2526	401 105 2805	MT-GLAZE	2.2K JA 1/16W
R2301	401 105 0405	MT-GLAZE	100 JA 1/16W	R2527	401 105 4601	MT-GLAZE	3.9K JA 1/16W
R2302	401 105 0504	MT-GLAZE	1K JA 1/16W	R2528	401 105 4700	MT-GLAZE	39K JA 1/16W
R2303	401 105 0405	MT-GLAZE	100 JA 1/16W	R2529	401 105 0504	MT-GLAZE	1K JA 1/16W
R2304	401 105 0504	MT-GLAZE	1K JA 1/16W	R253	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R2305	401 105 0405	MT-GLAZE	100 JA 1/16W	R254	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R2306	401 105 0504	MT-GLAZE	1K JA 1/16W	R255	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R2307	401 105 0504	MT-GLAZE	1K JA 1/16W	R256	401 105 0504	MT-GLAZE	1K JA 1/16W
R2308	401 105 0504	MT-GLAZE	1K JA 1/16W	R257	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R2309	401 105 0504	MT-GLAZE	1K JA 1/16W	R258	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R231	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R259	401 105 0603	MT-GLAZE	10K JA 1/16W
R2310	401 105 7305	MT-GLAZE	820 JA 1/16W	R260	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R2313	401 105 0603	MT-GLAZE	10K JA 1/16W	R261	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R2317	401 105 0405	MT-GLAZE	100 JA 1/16W	R262	401 105 0405	MT-GLAZE	100 JA 1/16W
R2319	401 105 1402	MT-GLAZE	150 JA 1/16W	R263	401 105 0405	MT-GLAZE	100 JA 1/16W
R2321	401 105 1402	MT-GLAZE	150 JA 1/16W	R264	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R2322	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R265	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R2323	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R266	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R2324	401 035 4108	MT-GLAZE	0.000 ZA 1/8W	R267	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R2325	401 035 4108	MT-GLAZE	0.000 ZA 1/8W	R268	401 105 0306	MT-GLAZE	10 JA 1/16W
R2327	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R269	401 105 0306	MT-GLAZE	10 JA 1/16W
R2328	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R270	401 105 0306	MT-GLAZE	10 JA 1/16W
R2329	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R271	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R233	401 105 3901	MT-GLAZE	33 JA 1/16W	R272	401 105 4106	MT-GLAZE	3.3K JA 1/16W
R2333	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R273	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R2334	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R274	401 105 2003	MT-GLAZE	1.8K JA 1/16W

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
R275	401 105 2003	MT-GLAZE 1.8K JA 1/16W	R3211	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R276	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3212	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R277	401 105 0405	MT-GLAZE 100 JA 1/16W	R3213	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R278	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3214	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R283	401 105 2706	MT-GLAZE 220 JA 1/16W	R322	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R284	401 105 2706	MT-GLAZE 220 JA 1/16W	R3221	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R285	401 105 2706	MT-GLAZE 220 JA 1/16W	R3222	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R286	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3223	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R287	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3224	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R288	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3226	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R301	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3228	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R304	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3231	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R308	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3232	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3101	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3233	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3102	401 105 6605	MT-GLAZE 6.8K JA 1/16W	R3239	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3104	401 105 0405	MT-GLAZE 100 JA 1/16W	R3241	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3106	401 105 0405	MT-GLAZE 100 JA 1/16W	R3242	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3107	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3243	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3108	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R326	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R311	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R327	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3111	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R328	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3112	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R330	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3113	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R332	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3114	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R333	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3116	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R334	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3117	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R336	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3118	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R337	401 105 0603	MT-GLAZE 10K JA 1/16W
R3119	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R338	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R312	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R341	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3121	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R342	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R3122	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R343	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R3123	401 105 3406	MT-GLAZE 27K JA 1/16W	R344	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3124	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R345	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3127	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3501	401 105 0405	MT-GLAZE 100 JA 1/16W
R3128	401 105 2805	MT-GLAZE 2.2K JA 1/16W	R3502	401 105 0405	MT-GLAZE 100 JA 1/16W
R3129	401 177 2406	MT-GLAZE 10M JA 1/16W	R3503	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R313	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3506	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3131	401 105 3406	MT-GLAZE 27K JA 1/16W	R351	401 105 0405	MT-GLAZE 100 JA 1/16W
R3132	401 105 7503	MT-GLAZE 82K JA 1/16W	R352	401 105 0603	MT-GLAZE 10K JA 1/16W
R3133	401 105 1006	MT-GLAZE 1.2K JA 1/16W	R354	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3134	401 105 0504	MT-GLAZE 1K JA 1/16W	R3551	401 105 0405	MT-GLAZE 100 JA 1/16W
R3136	401 105 0504	MT-GLAZE 1K JA 1/16W	R3552	401 105 0405	MT-GLAZE 100 JA 1/16W
R3137	401 105 0405	MT-GLAZE 100 JA 1/16W	R3554	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3139	401 105 0504	MT-GLAZE 1K JA 1/16W	R3555	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R314	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3556	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3141	401 105 5905	MT-GLAZE 560 JA 1/16W	R3557	401 105 0405	MT-GLAZE 100 JA 1/16W
R3142	401 105 1501	MT-GLAZE 1.5K JA 1/16W	R356	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3143	401 105 0504	MT-GLAZE 1K JA 1/16W	R3561	401 105 0504	MT-GLAZE 1K JA 1/16W
R3144	401 105 5905	MT-GLAZE 560 JA 1/16W	R3562	401 105 0504	MT-GLAZE 1K JA 1/16W
R3145	401 105 1501	MT-GLAZE 1.5K JA 1/16W	R3563	401 105 0405	MT-GLAZE 100 JA 1/16W
R3146	401 105 0504	MT-GLAZE 1K JA 1/16W	R3564	401 105 0405	MT-GLAZE 100 JA 1/16W
R3147	401 105 5905	MT-GLAZE 560 JA 1/16W	R357	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3148	401 105 1501	MT-GLAZE 1.5K JA 1/16W	R3571	401 105 0603	MT-GLAZE 10K JA 1/16W
R3149	401 105 0504	MT-GLAZE 1K JA 1/16W	R3572	401 105 0603	MT-GLAZE 10K JA 1/16W
R315	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3573	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R3151	401 105 0405	MT-GLAZE 100 JA 1/16W	R3574	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3152	401 105 0504	MT-GLAZE 1K JA 1/16W	R358	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3153	401 105 0405	MT-GLAZE 100 JA 1/16W	R359	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3154	401 105 0504	MT-GLAZE 1K JA 1/16W	R3601	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R3155	401 105 0405	MT-GLAZE 100 JA 1/16W	R3602	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R3156	401 105 0504	MT-GLAZE 1K JA 1/16W	R3603	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R316	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3604	401 105 0603	MT-GLAZE 10K JA 1/16W
R3160	401 105 4106	MT-GLAZE 3.3K JA 1/16W	R361	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3161	401 105 6605	MT-GLAZE 6.8K JA 1/16W	R3611	401 105 0306	MT-GLAZE 10 JA 1/16W
R317	401 105 0306	MT-GLAZE 10 JA 1/16W	R3612	401 105 0306	MT-GLAZE 10 JA 1/16W
R318	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3613	401 105 0306	MT-GLAZE 10 JA 1/16W
R320	401 105 7909	MT-GLAZE 0.000 ZA 1/16W	R3614	401 105 0306	MT-GLAZE 10 JA 1/16W

## Electrical Parts List

<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>		<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>	
R3616	401 105 0306	MT-GLAZE	10 JA 1/16W	R403	401 105 2607	MT-GLAZE	22 JA 1/16W
R3617	401 105 0306	MT-GLAZE	10 JA 1/16W	R404	401 105 2607	MT-GLAZE	22 JA 1/16W
R3618	401 105 0306	MT-GLAZE	10 JA 1/16W	R406	401 105 2607	MT-GLAZE	22 JA 1/16W
R3619	401 105 0306	MT-GLAZE	10 JA 1/16W	R407	401 105 2607	MT-GLAZE	22 JA 1/16W
R362	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4101	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3621	401 105 0306	MT-GLAZE	10 JA 1/16W	R4102	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3622	401 105 0306	MT-GLAZE	10 JA 1/16W	R4103	401 105 0405	MT-GLAZE	100 JA 1/16W
R3623	401 105 0306	MT-GLAZE	10 JA 1/16W	R4104	401 105 0405	MT-GLAZE	100 JA 1/16W
R3624	401 105 0306	MT-GLAZE	10 JA 1/16W	R4105	401 105 3000	MT-GLAZE	220K JA 1/16W
R3626	401 105 0306	MT-GLAZE	10 JA 1/16W	R4106	401 105 1006	MT-GLAZE	1.2K JA 1/16W
R3627	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4107	401 105 2805	MT-GLAZE	2.2K JA 1/16W
R363	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4108	401 105 5202	MT-GLAZE	470 JA 1/16W
R3631	401 105 0306	MT-GLAZE	10 JA 1/16W	R4109	401 217 5404	MT-GLAZE	47K FA 1/16W
R3632	401 105 0306	MT-GLAZE	10 JA 1/16W	R411	401 105 3901	MT-GLAZE	33 JA 1/16W
R3633	401 105 0306	MT-GLAZE	10 JA 1/16W	R4111	401 105 0405	MT-GLAZE	100 JA 1/16W
R3634	401 105 0306	MT-GLAZE	10 JA 1/16W	R4112	401 105 0405	MT-GLAZE	100 JA 1/16W
R3636	401 105 0306	MT-GLAZE	10 JA 1/16W	R4113	401 105 0603	MT-GLAZE	10K JA 1/16W
R3637	401 105 0306	MT-GLAZE	10 JA 1/16W	R4114	401 105 0603	MT-GLAZE	10K JA 1/16W
R3638	401 105 0306	MT-GLAZE	10 JA 1/16W	R4115	401 105 0603	MT-GLAZE	10K JA 1/16W
R3639	401 105 0306	MT-GLAZE	10 JA 1/16W	R4117	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R364	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4118	401 105 0504	MT-GLAZE	1K JA 1/16W
R3641	401 105 0306	MT-GLAZE	10 JA 1/16W	R4119	401 105 0504	MT-GLAZE	1K JA 1/16W
R3642	401 105 0306	MT-GLAZE	10 JA 1/16W	R412	401 105 3901	MT-GLAZE	33 JA 1/16W
R3643	401 105 0306	MT-GLAZE	10 JA 1/16W	R4120	401 105 0603	MT-GLAZE	10K JA 1/16W
R3644	401 105 0306	MT-GLAZE	10 JA 1/16W	R4121	401 105 0603	MT-GLAZE	10K JA 1/16W
R3646	401 105 0306	MT-GLAZE	10 JA 1/16W	R4122	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3647	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4123	401 105 0603	MT-GLAZE	10K JA 1/16W
R3648	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4124	401 105 2805	MT-GLAZE	2.2K JA 1/16W
R3649	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4125	401 105 0504	MT-GLAZE	1K JA 1/16W
R365	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4126	401 105 0603	MT-GLAZE	10K JA 1/16W
R3651	401 105 0306	MT-GLAZE	10 JA 1/16W	R4127	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3652	401 105 0306	MT-GLAZE	10 JA 1/16W	R4129	401 105 3307	MT-GLAZE	2.7K JA 1/16W
R3653	401 105 0306	MT-GLAZE	10 JA 1/16W	R413	401 105 3901	MT-GLAZE	33 JA 1/16W
R3654	401 105 0306	MT-GLAZE	10 JA 1/16W	R4131	401 105 6001	MT-GLAZE	5.6K JA 1/16W
R3656	401 105 0306	MT-GLAZE	10 JA 1/16W	R4132	401 105 0603	MT-GLAZE	10K JA 1/16W
R3657	401 105 0306	MT-GLAZE	10 JA 1/16W	R4134	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3658	401 105 0306	MT-GLAZE	10 JA 1/16W	R4135	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3659	401 105 0306	MT-GLAZE	10 JA 1/16W	R4136	401 105 0405	MT-GLAZE	100 JA 1/16W
R366	401 105 0603	MT-GLAZE	10K JA 1/16W	R4137	401 114 0908	MT-GLAZE	3.3M JA 1/16W
R3661	401 105 0306	MT-GLAZE	10 JA 1/16W	R4138	401 113 5409	MT-GLAZE	510 JA 1/16W
R3662	401 105 0306	MT-GLAZE	10 JA 1/16W	R4139	401 113 5409	MT-GLAZE	510 JA 1/16W
R3663	401 105 0306	MT-GLAZE	10 JA 1/16W	R414	401 105 3901	MT-GLAZE	33 JA 1/16W
R3664	401 105 0306	MT-GLAZE	10 JA 1/16W	R4141	401 105 0405	MT-GLAZE	100 JA 1/16W
R3666	401 105 0306	MT-GLAZE	10 JA 1/16W	R4143	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3667	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4144	401 105 0405	MT-GLAZE	100 JA 1/16W
R3668	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4145	401 105 0405	MT-GLAZE	100 JA 1/16W
R3669	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4146	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3672	401 105 2805	MT-GLAZE	2.2K JA 1/16W	R4147	401 105 0405	MT-GLAZE	100 JA 1/16W
R3673	401 105 0504	MT-GLAZE	1K JA 1/16W	R4148	401 105 0405	MT-GLAZE	100 JA 1/16W
R3676	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4149	401 217 4100	MT-GLAZE	22K FA 1/16W
R3678	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4151	401 105 0504	MT-GLAZE	1K JA 1/16W
R368	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4152	401 105 0405	MT-GLAZE	100 JA 1/16W
R3681	401 105 2805	MT-GLAZE	2.2K JA 1/16W	R4153	401 105 6001	MT-GLAZE	5.6K JA 1/16W
R3682	401 105 0504	MT-GLAZE	1K JA 1/16W	R4154	401 105 6001	MT-GLAZE	5.6K JA 1/16W
R369	401 105 0603	MT-GLAZE	10K JA 1/16W	R4155	401 105 7305	MT-GLAZE	820 JA 1/16W
R370	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4156	401 105 0504	MT-GLAZE	1K JA 1/16W
R371	401 105 0603	MT-GLAZE	10K JA 1/16W	R4157	401 105 2904	MT-GLAZE	22K JA 1/16W
R373	401 105 0603	MT-GLAZE	10K JA 1/16W	R4158	401 158 4108	MT-GLAZE	4.7 JA 1/16W
R375	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4159	401 105 1907	MT-GLAZE	180 JA 1/16W
R376	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R416	401 105 3901	MT-GLAZE	33 JA 1/16W
R379	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4161	401 112 8005	MT-GLAZE	5.6 JA 1/16W
R382	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4162	401 105 0504	MT-GLAZE	1K JA 1/16W
R384	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4163	401 105 6001	MT-GLAZE	5.6K JA 1/16W
R387	401 105 0603	MT-GLAZE	10K JA 1/16W	R4164	401 105 0504	MT-GLAZE	1K JA 1/16W
R392	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4165	401 105 0504	MT-GLAZE	1K JA 1/16W
R401	401 105 2607	MT-GLAZE	22 JA 1/16W	R4166	401 105 0504	MT-GLAZE	1K JA 1/16W
R402	401 105 2607	MT-GLAZE	22 JA 1/16W	R4167	401 105 0504	MT-GLAZE	1K JA 1/16W

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description	
R4168	403 145 9905	CERAMIC	22P J 50V	R4244	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4169	403 145 9905	CERAMIC	22P J 50V	R4245	401 105 0603	MT-GLAZE 10K JA 1/16W
R417	401 105 2607	MT-GLAZE	22 JA 1/16W	R4247	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R4171	403 145 9905	CERAMIC	22P J 50V	R4248	401 105 4007	MT-GLAZE 330 JA 1/16W
R4172	401 105 0504	MT-GLAZE	1K JA 1/16W	R4249	401 105 0702	MT-GLAZE 100K JA 1/16W
R4173	401 105 0504	MT-GLAZE	1K JA 1/16W	R4251	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4174	401 105 0504	MT-GLAZE	1K JA 1/16W	R4252	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4175	401 105 0504	MT-GLAZE	1K JA 1/16W	R4253	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4176	401 105 0504	MT-GLAZE	1K JA 1/16W	R426	401 105 3901	MT-GLAZE 33 JA 1/16W
R4177	401 105 0504	MT-GLAZE	1K JA 1/16W	R427	401 105 3901	MT-GLAZE 33 JA 1/16W
R418	401 105 2607	MT-GLAZE	22 JA 1/16W	R4271	401 262 8405	MT-GLAZE 510 FA 1/16W
R4181	401 105 8104	MT-GLAZE	56K JA 1/16W	R4273	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4182	401 105 8104	MT-GLAZE	56K JA 1/16W	R428	401 105 2607	MT-GLAZE 22 JA 1/16W
R4183	401 105 0504	MT-GLAZE	1K JA 1/16W	R4282	401 190 2209	MT-GLAZE 220 FA 1/16W
R4184	401 105 0504	MT-GLAZE	1K JA 1/16W	R4283	401 229 9100	MT-GLAZE 15 FA 1/16W
R4185	401 105 0504	MT-GLAZE	1K JA 1/16W	R4284	401 105 0603	MT-GLAZE 10K JA 1/16W
R4188	401 105 1501	MT-GLAZE	1.5K JA 1/16W	R429	401 105 2607	MT-GLAZE 22 JA 1/16W
R419	401 105 2607	MT-GLAZE	22 JA 1/16W	R431	401 105 3901	MT-GLAZE 33 JA 1/16W
R4191	401 105 7305	MT-GLAZE	820 JA 1/16W	R432	401 105 3901	MT-GLAZE 33 JA 1/16W
R4192	401 105 0504	MT-GLAZE	1K JA 1/16W	R433	401 105 3901	MT-GLAZE 33 JA 1/16W
R4201	401 113 8103	MT-GLAZE	43K JA 1/16W	R434	401 105 3901	MT-GLAZE 33 JA 1/16W
R4202	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R436	401 105 3901	MT-GLAZE 33 JA 1/16W
R4203	401 105 0504	MT-GLAZE	1K JA 1/16W	R437	401 105 3901	MT-GLAZE 33 JA 1/16W
R4204	401 105 0504	MT-GLAZE	1K JA 1/16W	R438	401 105 3901	MT-GLAZE 33 JA 1/16W
R4205	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R439	401 105 3901	MT-GLAZE 33 JA 1/16W
R4206	401 105 0603	MT-GLAZE	10K JA 1/16W	R441	401 105 0603	MT-GLAZE 10K JA 1/16W
R4207	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R442	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4208	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R443	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4209	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R444	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R421	401 105 2607	MT-GLAZE	22 JA 1/16W	R446	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4210	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R447	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4211	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R448	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4212	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R449	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4213	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4501	401 105 0405	MT-GLAZE 100 JA 1/16W
R4214	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4502	401 105 0405	MT-GLAZE 100 JA 1/16W
R4215	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4503	401 105 0405	MT-GLAZE 100 JA 1/16W
R4216	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4504	401 105 0405	MT-GLAZE 100 JA 1/16W
R4217	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4505	401 105 0405	MT-GLAZE 100 JA 1/16W
R4218	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4506	401 105 0405	MT-GLAZE 100 JA 1/16W
R4219	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4507	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R422	401 105 3901	MT-GLAZE	33 JA 1/16W	R4509	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4220	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R451	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4221	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4513	401 105 0603	MT-GLAZE 10K JA 1/16W
R4222	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4514	401 105 0603	MT-GLAZE 10K JA 1/16W
R4223	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4515	401 105 0603	MT-GLAZE 10K JA 1/16W
R4224	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4537	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4225	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4551	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R4226	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4552	401 105 0603	MT-GLAZE 10K JA 1/16W
R4227	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4553	401 105 0603	MT-GLAZE 10K JA 1/16W
R4228	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4554	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R4229	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R4555	401 105 0405	MT-GLAZE 100 JA 1/16W
R423	401 105 3901	MT-GLAZE	33 JA 1/16W	R461	401 105 3901	MT-GLAZE 33 JA 1/16W
R4230	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R462	401 105 3901	MT-GLAZE 33 JA 1/16W
R4231	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R463	401 105 3901	MT-GLAZE 33 JA 1/16W
R4232	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R464	401 105 3901	MT-GLAZE 33 JA 1/16W
R4233	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R466	401 105 3901	MT-GLAZE 33 JA 1/16W
R4234	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R467	401 105 3901	MT-GLAZE 33 JA 1/16W
R4235	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R468	401 105 3901	MT-GLAZE 33 JA 1/16W
R4236	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R469	401 105 3901	MT-GLAZE 33 JA 1/16W
R4237	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R471	401 105 3901	MT-GLAZE 33 JA 1/16W
R4238	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R472	401 105 3901	MT-GLAZE 33 JA 1/16W
R4239	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R473	401 105 3901	MT-GLAZE 33 JA 1/16W
R424	401 105 3901	MT-GLAZE	33 JA 1/16W	R474	401 105 3901	MT-GLAZE 33 JA 1/16W
R4240	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R476	401 105 3901	MT-GLAZE 33 JA 1/16W
R4241	401 105 0405	MT-GLAZE	100 JA 1/16W	R477	401 105 3901	MT-GLAZE 33 JA 1/16W
R4242	401 105 0405	MT-GLAZE	100 JA 1/16W	R478	401 105 3901	MT-GLAZE 33 JA 1/16W
R4243	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R479	401 105 3901	MT-GLAZE 33 JA 1/16W

## Electrical Parts List

<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>		<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>	
R4801	401 105 0603	MT-GLAZE	10K JA 1/16W	R571	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R4802	401 105 0405	MT-GLAZE	100 JA 1/16W	R572	401 105 3406	MT-GLAZE	27K JA 1/16W
R4803	401 105 0603	MT-GLAZE	10K JA 1/16W	R573	401 105 0603	MT-GLAZE	10K JA 1/16W
R4804	401 105 0405	MT-GLAZE	100 JA 1/16W	R574	401 113 6802	MT-GLAZE	11K JA 1/16W
R4805	401 105 0603	MT-GLAZE	10K JA 1/16W	R581	401 105 0603	MT-GLAZE	10K JA 1/16W
R4806	401 105 0405	MT-GLAZE	100 JA 1/16W	R582	401 105 0603	MT-GLAZE	10K JA 1/16W
R4807	401 105 0504	MT-GLAZE	1K JA 1/16W	R583	401 105 0603	MT-GLAZE	10K JA 1/16W
R4808	401 105 0504	MT-GLAZE	1K JA 1/16W	R584	401 105 0603	MT-GLAZE	10K JA 1/16W
R4809	401 105 5202	MT-GLAZE	470 JA 1/16W	R586	401 105 0603	MT-GLAZE	10K JA 1/16W
R481	401 105 3901	MT-GLAZE	33 JA 1/16W	R587	401 105 0603	MT-GLAZE	10K JA 1/16W
R4811	401 105 2003	MT-GLAZE	1.8K JA 1/16W	R8001	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R4812	401 105 5301	MT-GLAZE	4.7K JA 1/16W	R8002	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R4814	401 105 0405	MT-GLAZE	100 JA 1/16W	R8003	401 105 5202	MT-GLAZE	470 JA 1/16W
R4815	401 105 2904	MT-GLAZE	22K JA 1/16W	R8004	401 105 3109	MT-GLAZE	27 JA 1/16W
R4816	401 105 5202	MT-GLAZE	470 JA 1/16W	R8005	401 105 4205	MT-GLAZE	33K JA 1/16W
R4817	401 105 0405	MT-GLAZE	100 JA 1/16W	R8006	401 105 4205	MT-GLAZE	33K JA 1/16W
R4818	401 105 6001	MT-GLAZE	5.6K JA 1/16W	R8008	401 105 4205	MT-GLAZE	33K JA 1/16W
R482	401 105 3901	MT-GLAZE	33 JA 1/16W	R8009	401 105 4205	MT-GLAZE	33K JA 1/16W
R4822	401 105 0603	MT-GLAZE	10K JA 1/16W	R801	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R4823	401 105 4502	MT-GLAZE	390 JA 1/16W	R8010	401 105 4205	MT-GLAZE	33K JA 1/16W
R4824	401 105 4502	MT-GLAZE	390 JA 1/16W	R8011	401 105 4205	MT-GLAZE	33K JA 1/16W
R4825	401 105 4502	MT-GLAZE	390 JA 1/16W	R8013	401 105 4205	MT-GLAZE	33K JA 1/16W
R4826	401 105 2904	MT-GLAZE	22K JA 1/16W	R8015	401 113 6406	MT-GLAZE	5.1K JA 1/16W
R4827	401 105 2904	MT-GLAZE	22K JA 1/16W	R8016	401 113 6406	MT-GLAZE	5.1K JA 1/16W
R4828	401 105 0405	MT-GLAZE	100 JA 1/16W	R8018	401 113 6406	MT-GLAZE	5.1K JA 1/16W
R4829	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R802	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R483	401 105 3901	MT-GLAZE	33 JA 1/16W	R8020	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R4831	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R803	401 105 0405	MT-GLAZE	100 JA 1/16W
R4834	401 105 0603	MT-GLAZE	10K JA 1/16W	R8031	401 105 0405	MT-GLAZE	100 JA 1/16W
R4835	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R8032	401 105 0405	MT-GLAZE	100 JA 1/16W
R4836	401 105 0603	MT-GLAZE	10K JA 1/16W	R8033	401 105 0603	MT-GLAZE	10K JA 1/16W
R4838	401 036 1403	MT-GLAZE	220 JA 1/8W	R8034	401 105 0603	MT-GLAZE	10K JA 1/16W
R484	401 105 3901	MT-GLAZE	33 JA 1/16W	R8036	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R4844	401 105 0306	MT-GLAZE	10 JA 1/16W	R8037	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R4845	401 105 0306	MT-GLAZE	10 JA 1/16W	R8039	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R4847	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R804	401 105 0405	MT-GLAZE	100 JA 1/16W
R4849	401 105 0405	MT-GLAZE	100 JA 1/16W	R806	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R4851	401 105 0405	MT-GLAZE	100 JA 1/16W	R808	401 105 0405	MT-GLAZE	100 JA 1/16W
R4852	401 105 0405	MT-GLAZE	100 JA 1/16W	R809	401 105 0405	MT-GLAZE	100 JA 1/16W
R4853	401 105 0405	MT-GLAZE	100 JA 1/16W	R810	401 105 0603	MT-GLAZE	10K JA 1/16W
R4855	401 105 2904	MT-GLAZE	22K JA 1/16W	R811	401 105 0603	MT-GLAZE	10K JA 1/16W
R4856	401 105 2904	MT-GLAZE	22K JA 1/16W	R812	401 105 0603	MT-GLAZE	10K JA 1/16W
R4857	401 105 0405	MT-GLAZE	100 JA 1/16W	R813	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R4858	401 105 0405	MT-GLAZE	100 JA 1/16W	R815	401 105 0405	MT-GLAZE	100 JA 1/16W
R4859	401 105 0603	MT-GLAZE	10K JA 1/16W	R816	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R486	401 105 3901	MT-GLAZE	33 JA 1/16W	R817	401 105 0405	MT-GLAZE	100 JA 1/16W
R4861	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	R818	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R4862	401 038 9605	MT-GLAZE	750 JA 1/10W	R819	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R4864	401 105 6506	MT-GLAZE	680 JA 1/16W	R820	401 105 0603	MT-GLAZE	10K JA 1/16W
R4866	401 105 0603	MT-GLAZE	10K JA 1/16W	R821	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R4867	401 105 5301	MT-GLAZE	4.7K JA 1/16W	R822	401 105 0603	MT-GLAZE	10K JA 1/16W
R4868	401 105 0603	MT-GLAZE	10K JA 1/16W	R823	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R4869	401 105 0603	MT-GLAZE	10K JA 1/16W	R824	401 105 4601	MT-GLAZE	3.9K JA 1/16W
R501	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R825	401 105 4502	MT-GLAZE	390 JA 1/16W
R504	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R826	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R511	401 105 5301	MT-GLAZE	4.7K JA 1/16W	R828	401 105 2904	MT-GLAZE	22K JA 1/16W
R512	401 105 3406	MT-GLAZE	27K JA 1/16W	R829	401 105 2904	MT-GLAZE	22K JA 1/16W
R513	401 105 0603	MT-GLAZE	10K JA 1/16W	R830	401 105 2607	MT-GLAZE	22 JA 1/16W
R514	401 113 6802	MT-GLAZE	11K JA 1/16W	R831	401 105 0900	MT-GLAZE	120 JA 1/16W
R531	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R832	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R534	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R833	401 105 0603	MT-GLAZE	10K JA 1/16W
R541	401 105 5301	MT-GLAZE	4.7K JA 1/16W	R834	401 105 0603	MT-GLAZE	10K JA 1/16W
R542	401 105 3406	MT-GLAZE	27K JA 1/16W	R835	401 105 0603	MT-GLAZE	10K JA 1/16W
R543	401 105 0603	MT-GLAZE	10K JA 1/16W	R836	401 105 0603	MT-GLAZE	10K JA 1/16W
R544	401 113 6802	MT-GLAZE	11K JA 1/16W	R837	401 105 0603	MT-GLAZE	10K JA 1/16W
R561	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R838	401 105 0603	MT-GLAZE	10K JA 1/16W
R564	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R841	401 105 8203	MT-GLAZE	68K JA 1/16W

## Electrical Parts List

<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>		<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>	
R843	401 105 0504	MT-GLAZE	1K JA 1/16W	R9819	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R844	401 105 0405	MT-GLAZE	100 JA 1/16W	R9821	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R846	401 105 0603	MT-GLAZE	10K JA 1/16W	R9822	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R848	401 105 2904	MT-GLAZE	22K JA 1/16W	R9823	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R849	401 105 2904	MT-GLAZE	22K JA 1/16W	R9824	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R850	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R9825	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R851	401 105 2904	MT-GLAZE	22K JA 1/16W	R9826	401 105 0405	MT-GLAZE	100 JA 1/16W
R854	401 105 0603	MT-GLAZE	10K JA 1/16W	R9827	401 105 0504	MT-GLAZE	1K JA 1/16W
R855	401 105 0405	MT-GLAZE	100 JA 1/16W	R9829	401 105 0603	MT-GLAZE	10K JA 1/16W
R856	401 105 2003	MT-GLAZE	1.8K JA 1/16W	<b>TRANSFORMER</b>			
R857	401 105 4106	MT-GLAZE	3.3K JA 1/16W	T1151	645 044 3626	FILTER,LP	7MHZ
R858	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	T1161	645 044 3626	FILTER,LP	7MHZ
R861	401 105 0603	MT-GLAZE	10K JA 1/16W	T161	645 044 3626	FILTER,LP	7MHZ
R863	401 105 0603	MT-GLAZE	10K JA 1/16W	<b>COIL</b>			
R864	401 105 4106	MT-GLAZE	3.3K JA 1/16W	L1101	645 026 1008	INDUCTOR,3.3U	M
R865	401 105 0603	MT-GLAZE	10K JA 1/16W	L1102	645 021 1720	INDUCTOR,4.7U	J
R866	401 105 0405	MT-GLAZE	100 JA 1/16W	L1131	645 026 0964	INDUCTOR,10U	K
R867	401 105 0405	MT-GLAZE	100 JA 1/16W	L1133	401 037 5004	MT-GLAZE	0.000 ZA 1/10W
R868	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L1151	645 026 1008	INDUCTOR,3.3U	M
R869	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L1161	645 021 1614	INDUCTOR,12U	J
R871	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L1501	645 020 1776	INDUCTOR,3.3U	M
R872	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L1502	645 020 1776	INDUCTOR,3.3U	M
R873	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L1531	645 020 1776	INDUCTOR,3.3U	M
R874	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L1532	645 020 1776	INDUCTOR,3.3U	M
R875	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L1561	645 020 1776	INDUCTOR,3.3U	M
R876	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L1562	645 020 1776	INDUCTOR,3.3U	M
R877	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L201	645 020 1776	INDUCTOR,3.3U	M
R878	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L202	645 020 1776	INDUCTOR,3.3U	M
R879	401 105 0603	MT-GLAZE	10K JA 1/16W	L203	645 020 1776	INDUCTOR,3.3U	M
R880	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L2101	645 021 1669	INDUCTOR,22U	J
R881	401 105 0603	MT-GLAZE	10K JA 1/16W	L2102	645 021 1737	INDUCTOR,47U	J
R882	401 105 0603	MT-GLAZE	10K JA 1/16W	L2103	645 021 1737	INDUCTOR,47U	J
R883	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L2116	645 017 4520	INDUCTOR,100U	J
R884	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L2304	401 035 4108	MT-GLAZE	0.000 ZA 1/8W
R885	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L2305	645 020 1776	INDUCTOR,3.3U	M
R886	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L231	401 035 4108	MT-GLAZE	0.000 ZA 1/8W
R887	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L232	401 035 4108	MT-GLAZE	0.000 ZA 1/8W
R889	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L2591	401 035 4108	MT-GLAZE	0.000 ZA 1/8W
R890	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L3101	401 037 5004	MT-GLAZE	0.000 ZA 1/10W
R891	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L3102	401 037 5004	MT-GLAZE	0.000 ZA 1/10W
R892	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L3103	401 035 4108	MT-GLAZE	0.000 ZA 1/8W
R893	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L3211	645 020 1776	INDUCTOR,3.3U	M
R894	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L3221	645 020 1776	INDUCTOR,3.3U	M
R895	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L3231	645 020 1776	INDUCTOR,3.3U	M
R896	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L3501	645 026 1008	INDUCTOR,3.3U	M
R897	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L3551	645 026 1008	INDUCTOR,3.3U	M
R898	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L3601	401 035 4306	MT-GLAZE	10 JA 1/8W
R9401	401 105 0603	MT-GLAZE	10K JA 1/16W	L3611	645 020 1776	INDUCTOR,3.3U	M
R9402	401 105 0603	MT-GLAZE	10K JA 1/16W	L3631	645 020 1776	INDUCTOR,3.3U	M
R9403	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L3651	645 020 1776	INDUCTOR,3.3U	M
R9404	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L4102	645 001 4512	INDUCTOR,10U	K
R9405	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L4103	645 001 4512	INDUCTOR,10U	K
R9406	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L4104	401 037 5004	MT-GLAZE	0.000 ZA 1/10W
R9407	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L4105	645 001 4512	INDUCTOR,10U	K
R9408	401 105 0603	MT-GLAZE	10K JA 1/16W	L4106	645 026 1015	INDUCTOR,33U	K
R9411	401 105 0603	MT-GLAZE	10K JA 1/16W	L4107	645 001 4512	INDUCTOR,10U	K
R9412	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L4108	645 026 1008	INDUCTOR,3.3U	M
R9801	401 105 1501	MT-GLAZE	1.5K JA 1/16W	L4201	645 020 1776	INDUCTOR,3.3U	M
R9803	401 105 8005	MT-GLAZE	1M JA 1/16W	L4202	645 020 1776	INDUCTOR,3.3U	M
R9804	401 105 0405	MT-GLAZE	100 JA 1/16W	L4203	645 020 1776	INDUCTOR,3.3U	M
R9805	401 105 0405	MT-GLAZE	100 JA 1/16W	L4204	645 020 1776	INDUCTOR,3.3U	M
R9806	401 105 0405	MT-GLAZE	100 JA 1/16W	L4231	401 037 5004	MT-GLAZE	0.000 ZA 1/10W
R9807	401 105 0405	MT-GLAZE	100 JA 1/16W	L4501	645 020 1776	INDUCTOR,3.3U	M
R9808	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L501	645 020 1776	INDUCTOR,3.3U	M
R9812	401 105 5400	MT-GLAZE	47K JA 1/16W	L502	645 020 1776	INDUCTOR,3.3U	M
R9813	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	L531	645 020 1776	INDUCTOR,3.3U	M
R9814	401 105 7909	MT-GLAZE	0.000 ZA 1/16W				

**Electrical Parts List**

<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>			
L532	645 020 1776	INDUCTOR, 3.3U M	Q602	405 161 9600	TR SPP20N60S5			
L561	645 020 1776	INDUCTOR, 3.3U M	Q621	405 014 4509	TR 2SC2412K T146 R			
L562	645 020 1776	INDUCTOR, 3.3U M	Q622	405 134 5905	TR 2SA1037AK-T146-R			
L6301	401 035 4108	MT-GLAZE 0.000 ZA 1/8W	Q623	405 014 4509	TR 2SC2412K T146 R			
L8001	645 026 0988	INDUCTOR, 2.2U M	Q624	405 134 5905	TR 2SA1037AK-T146-R			
L8002	645 026 0988	INDUCTOR, 2.2U M	Q681	405 014 4509	TR 2SC2412K T146 R			
L8003	645 026 0988	INDUCTOR, 2.2U M	<b>INTEGRATED CIRCUIT</b>					
L8004	645 026 0988	INDUCTOR, 2.2U M	IC601	409 483 3803	IC FA5332M			
L9401	645 026 1008	INDUCTOR, 3.3U M	IC651	409 421 4701	IC STR-Z2156			
L9801	645 021 1645	INDUCTOR, 2.2U J	IC681	409 344 6509	IC UPC1093T-E1			
DIODE			<b>CAPACITOR</b>					
D1101	407 149 0807	DIODE 1SS355-TE-17	CN6A	645 008 3679	SOCKET, 15P			
D1161	407 149 0807	DIODE 1SS355-TE-17	CN6C	645 005 8615	SOCKET, 12P			
D1162	407 149 0807	DIODE 1SS355-TE-17	C607	403 260 1600	MT-POLYEST 1U J 400V			
D1851	407 149 0807	DIODE 1SS355-TE-17	C608	403 222 1303	CERAMIC 1000P K 1K			
D2303	407 149 0807	DIODE 1SS355-TE-17	C609	403 222 1303	CERAMIC 1000P K 1K			
D2304	407 149 0807	DIODE 1SS355-TE-17	C611	403 260 1600	MT-POLYEST 1U J 400V			
D2305	407 149 0807	DIODE 1SS355-TE-17	C612	403 356 1804	ELECT 220U M 35V			
D2306	407 149 0807	DIODE 1SS355-TE-17	C613	403 341 6104	ELECT 100U M 25V			
D3501	407 149 0807	DIODE 1SS355-TE-17	C614	403 341 6104	ELECT 100U M 25V			
D3571	407 149 0807	DIODE 1SS355-TE-17	C616	404 088 2602	ELECT 390U M 450V			
D3601	407 149 0807	DIODE 1SS355-TE-17	C618	403 323 8706	MT-POLYEST 0.047U K 450V			
D4181	407 149 0807	DIODE 1SS355-TE-17	C621	403 215 2904	CERAMIC 0.022U K 25V			
D4182	407 149 0807	DIODE 1SS355-TE-17	C622	403 157 6800	CERAMIC 680P K 50V			
D4201	407 149 0807	DIODE 1SS355-TE-17	C623	403 215 2201	CERAMIC 0.01U K 50V			
D4501	407 149 0807	DIODE 1SS355-TE-17	C624	403 338 0207	CERAMIC 0.068U Z 50V			
D4502	407 149 0807	DIODE 1SS355-TE-17	C626	403 164 0204	CERAMIC 0.1U Z 25V			
D4801	407 223 0501	ZENER DIODE 02DZ12Y(TPH3)	C627	403 164 0204	CERAMIC 0.1U Z 25V			
D4802	407 223 0501	ZENER DIODE 02DZ12Y(TPH3)	C628	403 157 3304	CERAMIC 68P J 50V			
D4803	407 223 0501	ZENER DIODE 02DZ12Y(TPH3)	C629	403 157 6602	CERAMIC 470P K 50V			
D4804	407 223 0501	ZENER DIODE 02DZ12Y(TPH3)	C631	403 281 5007	CERAMIC 0.033U K 25V			
D4805	407 223 0501	ZENER DIODE 02DZ12Y(TPH3)	C632	403 164 0204	CERAMIC 0.1U Z 25V			
D4806	407 223 0501	ZENER DIODE 02DZ12Y(TPH3)	C633	403 164 0204	CERAMIC 0.1U Z 25V			
D4807	407 223 0501	ZENER DIODE 02DZ12Y(TPH3)	C634	403 164 0204	CERAMIC 0.1U Z 25V			
D4808	407 223 0501	ZENER DIODE 02DZ12Y(TPH3)	C636	403 323 8706	MT-POLYEST 0.047U K 450V			
D4809	407 223 1102	ZENER DIODE 02DZ6.2Y(TPH3)	C651	403 162 6604	ELECT 2.2U M 50V			
D4811	407 223 1102	ZENER DIODE 02DZ6.2Y(TPH3)	C652	403 237 7901	MT-COMPO 0.22U J 50V			
D4812	407 223 1102	ZENER DIODE 02DZ6.2Y(TPH3)	C653	403 113 3805	CERAMIC 1000P K 50V			
D4813	407 223 1102	ZENER DIODE 02DZ6.2Y(TPH3)	C654	403 247 3306	CERAMIC 330P K 2K			
D4814	407 149 0807	DIODE 1SS355-TE-17	C656	403 164 0204	CERAMIC 0.1U Z 25V			
D4816	407 223 1102	ZENER DIODE 02DZ6.2Y(TPH3)	C657	403 218 8804	CERAMIC 220P K 2K			
D8001	407 149 0807	DIODE 1SS355-TE-17	C658	403 083 4307	POLYPRO 0.022U J 400V			
D801	407 149 0807	DIODE 1SS355-TE-17	C659	403 157 6800	CERAMIC 680P K 50V			
D8031	407 149 0807	DIODE 1SS355-TE-17	C661	403 162 6208	ELECT 1U M 50V			
D8032	407 149 0807	DIODE 1SS355-TE-17	C662	403 356 1804	ELECT 220U M 35V			
<b>MISCELLANEOUS</b>								
IC4121	405 154 9501	TR MCH6602-TL	C663	403 164 0204	CERAMIC 0.1U Z 25V			
IC4122	405 154 9501	TR MCH6602-TL	C664	403 281 5205	CERAMIC 0.22U Z 16V			
IC806	407 221 9704	SENSOR MPXAX4115A6T1	C681	403 355 9504	ELECT 4700U M 25V			
X1101	645 045 9122	OSC, CRYSTAL 20MHZ	C682	403 164 0204	CERAMIC 0.1U Z 25V			
X1851	645 037 4609	OSC, CRYSTAL 32.768KHZ	C683	403 368 8808	ELECT 4700U M 10V			
X3101	645 047 1568	OSC, CRYSTAL 16.200MHZ	C684	403 164 0204	CERAMIC 0.1U Z 25V			
X361	645 047 6587	OSC, CRYSTAL 26.000MHZ	C685	403 325 8605	ELECT 220U M 16V			
X362	645 047 6846	OSC, CRYSTAL 24.000MHZ	C686	403 323 1301	CERAMIC 0.47U Z 10V			
X801	645 035 2249	OSC, CRYSTAL 6.7584MHZ	C688	403 164 0204	CERAMIC 0.1U Z 25V			
X9801	645 035 8906	OSC, CRYSTAL 48MHZ	C689	403 325 8506	ELECT 1000U M 16V			
<b>POWER BOARD</b>								
<b>610 297 3631 ASSY,PWB,POWER MA8AA 1AA0B10C3630A</b>								
<b>TRANSISTOR</b>								
Q601	405 161 9600	TR SPP20N60S5	R602	401 242 3901	MT-GLAZE 240K JA 1/2W			
			R603	401 242 3901	MT-GLAZE 240K JA 1/2W			
			R604	401 258 8204	MT-GLAZE 680 JA 1/3W			
			R606	402 080 8806	MT-GLAZE 680 KA 1W			
			R607	401 237 0007	MT-GLAZE 47K JA 1W			
			R608	401 237 0007	MT-GLAZE 47K JA 1W			
			R609	401 237 0007	MT-GLAZE 47K JA 1W			
			R610	401 237 0007	MT-GLAZE 47K JA 1W			

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description		
R611	401 237 0007	MT-GLAZE	47K JA	1W	VR681	645 025 7414	VR, SEMI, 1K S
R612	401 237 0007	MT-GLAZE	47K JA	1W			
R613	402 088 1809	RESISTER	0.1 JB	5W			
R614	402 088 1809	RESISTER	0.1 JB	5W			
R615	401 105 0405	MT-GLAZE	100 JA	1/16W			
R616	401 105 0504	MT-GLAZE	1K JA	1/16W			
R617	401 105 1600	MT-GLAZE	15K JA	1/16W			
R618	401 105 0306	MT-GLAZE	10 JA	1/16W			
R620	401 105 0405	MT-GLAZE	100 JA	1/16W			
R621	401 105 2607	MT-GLAZE	22 JA	1/16W			
R622	401 234 5500	MT-GLAZE	18K FA	1/16W			
R623	401 105 4304	MT-GLAZE	330K JA	1/16W			
R624	401 105 2607	MT-GLAZE	22 JA	1/16W			
R625	401 158 4108	MT-GLAZE	4.7 JA	1/16W			
R626	401 105 4007	MT-GLAZE	330 JA	1/16W			
R627	401 158 4108	MT-GLAZE	4.7 JA	1/16W			
R628	401 105 0405	MT-GLAZE	100 JA	1/16W			
R631	401 105 0603	MT-GLAZE	10K JA	1/16W			
R632	401 105 1501	MT-GLAZE	1.5K JA	1/16W			
R633	401 105 5509	MT-GLAZE	470K JA	1/16W			
R634	401 113 8707	MT-GLAZE	130K JA	1/16W			
R635	401 105 0405	MT-GLAZE	100 JA	1/16W			
R636	401 105 0504	MT-GLAZE	1K JA	1/16W			
R637	401 218 4406	MT-GLAZE	1.2K FA	1/16W			
R638	401 259 9002	MT-GLAZE	150K FA	1/2W			
R639	401 259 9002	MT-GLAZE	150K FA	1/2W			
R641	401 259 9002	MT-GLAZE	150K FA	1/2W			
R642	401 259 9002	MT-GLAZE	150K FA	1/2W			
R643	401 105 2805	MT-GLAZE	2.2K JA	1/16W			
R644	401 105 3307	MT-GLAZE	2.7K JA	1/16W			
R646	401 105 1600	MT-GLAZE	15K JA	1/16W			
R647	401 111 6309	MT-GLAZE	470 JA	1/2W			
R648	401 111 6309	MT-GLAZE	470 JA	1/2W			
R650	401 105 5301	MT-GLAZE	4.7K JA	1/16W			
R651	401 237 0007	MT-GLAZE	47K JA	1W			
R652	401 237 0007	MT-GLAZE	47K JA	1W			
R653	401 237 0007	MT-GLAZE	47K JA	1W			
R654	401 237 0007	MT-GLAZE	47K JA	1W			
R655	401 105 5301	MT-GLAZE	4.7K JA	1/16W			
R656	401 237 0007	MT-GLAZE	47K JA	1W			
R657	401 237 0007	MT-GLAZE	47K JA	1W			
△ R658	402 081 2902	FUSIBLE RES	22 JH	1/2W			
R659	401 238 4509	MT-GLAZE	47 JA	1/3W			
R671	401 105 0504	MT-GLAZE	1K JA	1/16W			
R672	401 257 7406	MT-GLAZE	120 JA	1/3W			
R673	401 105 5301	MT-GLAZE	4.7K JA	1/16W			
R674	401 105 0603	MT-GLAZE	10K JA	1/16W			
R680	401 212 0206	MT-GLAZE	33K FA	1/16W			
R681	401 105 0603	MT-GLAZE	10K JA	1/16W			
R682	401 105 3208	MT-GLAZE	270 JA	1/16W			
R683	401 105 0504	MT-GLAZE	1K JA	1/16W			
R685	401 105 4601	MT-GLAZE	3.9K JA	1/16W			
R686	401 105 0504	MT-GLAZE	1K JA	1/16W			
R687	401 212 0503	MT-GLAZE	6.8K FA	1/16W			
R689	401 105 0504	MT-GLAZE	1K JA	1/16W			
R690	401 105 0306	MT-GLAZE	10 JA	1/16W			
R691	401 105 3307	MT-GLAZE	2.7K JA	1/16W			
R692	401 105 0504	MT-GLAZE	1K JA	1/16W			
R693	401 105 0603	MT-GLAZE	10K JA	1/16W			
R694	401 105 5301	MT-GLAZE	4.7K JA	1/16W			
R695	401 105 0504	MT-GLAZE	1K JA	1/16W			
R697	401 299 1608	MT-GLAZE	1 JE	1/2W			
R698	401 299 1608	MT-GLAZE	1 JE	1/2W			
R699	401 238 4202	MT-GLAZE	1.5K JA	1/3W			
<b>VARIABLE RESISTOR</b>							
VR601	645 025 7414	VR, SEMI, 1K S	VR681	645 025 7414	VR, SEMI, 1K S		
<b>TRANSFORMER</b>							
△ TSW601	645 027 4145	SWITCH, THERMAL	645 031 0256	THERMOSTATS			
T601	645 051 9369	INDUCTOR, 625U					
△ T651	645 028 0641	TRANS, POWER, PULSE					
<b>COIL</b>							
△ L603	645 052 6213	LINE FILTER					
L651	645 020 1776	INDUCTOR, 3.3U M					
L681	645 048 5381	INDUCTOR, 100U K					
<b>DIODE</b>							
DB601	408 045 4906	DIODE RBV-1506 LF-B					
	407 143 6003	DIODE RBV-1506					
DS601	407 219 0805	THYRISTOR TF861S					
DS602	407 219 0805	THYRISTOR TF861S					
D601	407 190 4106	DIODE SFPL-52V					
D602	407 190 4106	DIODE SFPL-52V					
D603	407 149 6304	DIODE SFPB-54V					
D604	407 225 4408	DIODE FMX-G26S					
D605	407 223 0808	ZENER DIODE 02DZ22Y (TPH3)					
D606	407 149 0807	DIODE 1SS355-TE-17					
D607	407 149 0807	DIODE 1SS355-TE-17					
D608	407 149 0807	DIODE 1SS355-TE-17					
D609	407 149 0807	DIODE 1SS355-TE-17					
D610	407 149 6304	DIODE SFPB-54V					
D611	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)					
D612	407 149 0807	DIODE 1SS355-TE-17					
D614	407 149 0807	DIODE 1SS355-TE-17					
D651	407 190 4106	DIODE SFPL-52V					
D652	407 124 6800	DIODE AG01A					
D653	407 223 0501	ZENER DIODE 02DZ12Y (TPH3)					
D681	407 202 9808	DIODE FMB-26L					
D682	407 202 9808	DIODE FMB-26L					
D683	407 190 4106	DIODE SFPL-52V					
D684	407 190 4106	DIODE SFPL-52V					
D686	407 223 1102	ZENER DIODE 02DZ6.2Y (TPH3)					
<b>MISCELLANEOUS</b>							
FB601	610 229 3531	CORE					
FB602	610 229 3531	CORE					
△ PC601	407 223 7302	PC TLP421F (D4-GB-TP4)					
	407 223 8309	PC TLP421F (D4-GR-TP4)					
△ PC602	407 223 7302	PC TLP421F (D4-GB-TP4)					
	407 223 8309	PC TLP421F (D4-GR-TP4)					
△ PC603	407 223 7302	PC TLP421F (D4-GB-TP4)					
	407 223 8309	PC TLP421F (D4-GR-TP4)					
PTH601	408 037 4600	THERMISTOR NTH11D8ROLA					
<b>SUB POWER BOARD</b>							
<b>610 297 3648 ASSY,PWB,SUB POWER MA8AA 1AA0B10C3630B</b>							
<b>TRANSISTOR</b>							
Q6603	405 047 9007	TR 2SB1204-S-TL					
	405 047 9106	TR 2SB1204-T-TL					
Q6604	405 014 4509	TR 2SC2412K T146 R					
Q6607	405 014 4509	TR 2SC2412K T146 R					
Q6608	405 047 9007	TR 2SB1204-S-TL					
	405 047 9106	TR 2SB1204-T-TL					
Q6609	405 014 4509	TR 2SC2412K T146 R					
Q6611	405 047 9007	TR 2SB1204-S-TL					
	405 047 9106	TR 2SB1204-T-TL					

**Electrical Parts List**

<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>			<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>		
Q6612	405 014 4509	TR 2SC2412K	T146	R	C6647	403 354 8409	ELECT	2200U	M 6.3V
Q6613	405 014 4509	TR 2SC2412K	T146	R	C6653	403 347 5507	POS-SOLID	470U	M 4V
Q6614	405 014 4509	TR 2SC2412K	T146	R	C6654	403 164 0204	CERAMIC	0.1U	Z 25V
Q6616	405 014 4509	TR 2SC2412K	T146	R	C6655	403 162 5300	ELECT	4.7U	M 25V
Q6617	405 014 4509	TR 2SC2412K	T146	R	C6661	403 164 0204	CERAMIC	0.1U	Z 25V
Q6618	405 164 2707	TR SI9803DY			C6662	403 325 8605	ELECT	220U	M 16V
Q6622	405 156 0209	TR 2SK2376			C6663	403 325 8605	ELECT	220U	M 16V
Q6623	405 014 4509	TR 2SC2412K	T146	R	C6664	403 325 8605	ELECT	220U	M 16V
Q6624	405 014 4509	TR 2SC2412K	T146	R	C6666	403 325 8605	ELECT	220U	M 16V
Q6626	405 047 9007	TR 2SB1204-S-TL			C6667	403 331 0303	ELECT	470U	M 16V
	405 047 9106	TR 2SB1204-T-TL			C6668	403 331 0303	ELECT	470U	M 16V
Q6627	405 047 9007	TR 2SB1204-S-TL			C6669	403 348 3700	ELECT	470U	M 25V
	405 047 9106	TR 2SB1204-T-TL			C6671	403 113 3805	CERAMIC	1000P	K 50V
Q6628	405 014 4509	TR 2SC2412K	T146	R	C6672	403 155 2309	CERAMIC	4700P	K 50V
Q6629	405 156 0209	TR 2SK2376			C6673	403 162 5300	ELECT	4.7U	M 25V
Q6661	405 014 4509	TR 2SC2412K	T146	R	C6674	403 325 8506	ELECT	1000U	M 16V
					C6678	403 354 8409	ELECT	2200U	M 6.3V
					C6778	403 205 7803	TA-SOLID	2.2U	M 16V
<b>INTEGRATED CIRCUIT</b>									
IC6601	409 461 7809	IC PQ20WZ11							
IC6602	409 459 5404	IC FA7612CN							
IC6603	409 459 5404	IC FA7612CN							
IC6604	409 481 8503	IC AD8400AR1							
IC6606	409 481 8503	IC AD8400AR1							
IC6607	409 461 7809	IC PQ20WZ11							
IC6608	409 501 9206	IC LTC1622CS8							
IC6609	409 461 7809	IC PQ20WZ11							
IC6611	409 344 6509	IC UPC1093T-E1							
IC6612	409 344 6509	IC UPC1093T-E1							
IC6616	409 459 5404	IC FA7612CN							
<b>CAPACITOR</b>									
C6601	403 164 0204	CERAMIC	0.1U	Z	25V				
C6602	403 164 0204	CERAMIC	0.1U	Z	25V				
C6603	403 229 3508	ELECT	100U	M	16V				
C6605	403 348 3700	ELECT	470U	M	25V				
C6606	403 333 0806	ELECT	1000U	M	10V				
C6608	403 348 3700	ELECT	470U	M	25V				
C6609	403 113 3805	CERAMIC	1000P	K	50V				
C6611	403 155 2309	CERAMIC	4700P	K	50V				
C6612	403 164 0204	CERAMIC	0.1U	Z	25V				
C6613	403 325 8506	ELECT	1000U	M	16V				
C6614	403 304 3102	ELECT	22U	M	16V				
C6617	403 304 3102	ELECT	22U	M	16V				
C6618	403 113 3805	CERAMIC	1000P	K	50V				
C6619	403 325 8506	ELECT	1000U	M	16V				
C6620	403 164 0204	CERAMIC	0.1U	Z	25V				
C6621	403 164 0204	CERAMIC	0.1U	Z	25V				
C6622	403 229 3508	ELECT	100U	M	16V				
C6623	403 164 0204	CERAMIC	0.1U	Z	25V				
C6624	403 348 3700	ELECT	470U	M	25V				
C6625	403 164 0204	CERAMIC	0.1U	Z	25V				
C6626	403 164 0204	CERAMIC	0.1U	Z	25V				
C6627	403 325 8506	ELECT	1000U	M	16V				
C6628	403 333 0806	ELECT	1000U	M	10V				
C6629	403 325 8605	ELECT	220U	M	16V				
C6632	403 325 8506	ELECT	1000U	M	16V				
C6633	403 334 6906	ELECT	1000U	M	6.3V				
C6634	403 334 6906	ELECT	1000U	M	6.3V				
C6636	403 333 0806	ELECT	1000U	M	10V				
C6637	403 333 0806	ELECT	1000U	M	10V				
C6639	403 157 6602	CERAMIC	470P	K	50V				
C6640	403 164 0204	CERAMIC	0.1U	Z	25V				
C6641	403 157 3601	CERAMIC	100P	J	50V				
C6642	403 157 3601	CERAMIC	100P	J	50V				
C6643	403 333 0806	ELECT	1000U	M	10V				
C6644	403 164 0204	CERAMIC	0.1U	Z	25V				
C6645	403 164 0204	CERAMIC	0.1U	Z	25V				
C6646	403 164 0204	CERAMIC	0.1U	Z	25V				
<b>RESISTOR</b>									
R6601	401 105 7909	MT-GLAZE	0.000	ZA	1/16W				
R6602	401 219 1107	MT-GLAZE	1.8K	FA	1/16W				
R6604	401 203 9904	MT-GLAZE	4.7K	FA	1/16W				
R6606	401 105 0405	MT-GLAZE	100	JA	1/16W				
R6610	401 238 4202	MT-GLAZE	1.5K	JA	1/3W				
R6611	401 299 1608	MT-GLAZE	1	JE	1/2W				
R6620	401 162 6303	MT-GLAZE	330	JA	1W				
R6621	401 105 8203	MT-GLAZE	68K	JA	1/16W				
R6622	401 105 4304	MT-GLAZE	330K	JA	1/16W				
R6623	401 105 5103	MT-GLAZE	47	JA	1/16W				
R6624	401 290 1508	MT-GLAZE	0.1	JE	1/2W				
R6625	401 105 2201	MT-GLAZE	180K	JA	1/16W				
R6626	401 105 0603	MT-GLAZE	10K	JA	1/16W				
R6627	401 105 2904	MT-GLAZE	22K	JA	1/16W				
R6628	401 202 4009	MT-GLAZE	10K	FA	1/16W				
R6629	401 219 1107	MT-GLAZE	1.8K	FA	1/16W				
R6630	401 212 0206	MT-GLAZE	33K	FA	1/16W				
R6631	401 105 4007	MT-GLAZE	330	JA	1/16W				
R6632	401 105 5301	MT-GLAZE	4.7K	JA	1/16W				
R6633	401 105 0603	MT-GLAZE	10K	JA	1/16W				
R6634	401 234 5500	MT-GLAZE	18K	FA	1/16W				
R6636	401 260 1903	MT-GLAZE	4.3K	FA	1/16W				
R6637	401 257 7000	MT-GLAZE	820	FA	1/16W				
R6638	401 105 5103	MT-GLAZE	47	JA	1/16W				
R6640	401 105 5301	MT-GLAZE	4.7K	JA	1/16W				
R6641	401 105 0603	MT-GLAZE	10K	JA	1/16W				
R6642	401 212 0503	MT-GLAZE	6.8K	FA	1/16W				
R6643	401 105 0603	MT-GLAZE	10K	JA	1/16W				
R6644	401 105 5301	MT-GLAZE	4.7K	JA	1/16W				
R6645	401 290 1508	MT-GLAZE	0.1	JE	1/2W				
R6646	401 105 2201	MT-GLAZE	180K	JA	1/16W				
R6647	401 105 5103	MT-GLAZE	47	JA	1/16W				
R6648	401 162 6303	MT-GLAZE	330	JA	1W				
R6649	401 234 5500	MT-GLAZE	18K	FA	1/16W				
R6650	401 105 0603	MT-GLAZE	10K	JA	1/16W				
R6651	401 260 1903	MT-GLAZE	4.3K	FA	1/16W				
R6652	401 212 0206	MT-GLAZE	33K	FA	1/16W				
R6653	401 105 4304	MT-GLAZE	330K	JA	1/16W				
R6654	401 105 8203	MT-GLAZE	68K	JA	1/16W				
R6655	401 299 1608	MT-GLAZE	1	JE	1/2W				
R6656	401 240 6409	MT-GLAZE	2.2	JE	1/2W				
R6657	401 257 7000	MT-GLAZE	820	FA	1/16W				
R6658	401 105 5103	MT-GLAZE	47	JA	1/16W				
R6659	401 105 5301	MT-GLAZE	4.7K	JA	1/16W				
R6660	401 105 0603	MT-GLAZE	10K	JA	1/16W				
R6661	401 105 0603	MT-GLAZE	10K	JA	1/16W				
R6662	401 105 0504	MT-GLAZE	1K	JA	1/16W				

## Electrical Parts List

Key No.	Part No.	Description			Key No.	Part No.	Description								
R6663	401 238 4202	MT-GLAZE	1.5K JA	1/3W	R6785	401 219 1107	MT-GLAZE	1.8K FA	1/16W						
R6664	401 105 0603	MT-GLAZE	10K JA	1/16W	R6786	401 105 0603	MT-GLAZE	10K JA	1/16W						
R6665	401 299 1608	MT-GLAZE	1 JE	1/2W	R6787	401 230 2503	MT-GLAZE	1K FA	1/16W						
R6666	401 105 5301	MT-GLAZE	4.7K JA	1/16W	R6788	401 203 9805	MT-GLAZE	2.7K FA	1/16W						
R6667	401 105 0603	MT-GLAZE	10K JA	1/16W	R6795	401 105 7909	MT-GLAZE	0.000 ZA	1/16W						
R6668	401 105 0504	MT-GLAZE	1K JA	1/16W	<b>COIL</b>										
R6669	401 105 0603	MT-GLAZE	10K JA	1/16W	L6604	645 048 5381	INDUCTOR, 100U K								
R6670	401 105 5301	MT-GLAZE	4.7K JA	1/16W	L6606	645 048 5688	INDUCTOR, 47U K								
R6671	401 203 9904	MT-GLAZE	4.7K FA	1/16W	L6607	645 037 4791	INDUCTOR, 100U M								
R6672	401 105 5202	MT-GLAZE	470 JA	1/16W	L6608	645 048 5688	INDUCTOR, 47U K								
R6673	401 105 8203	MT-GLAZE	68K JA	1/16W	L6609	645 046 1996	INDUCTOR, 5.6U N								
R6674	401 105 4304	MT-GLAZE	330K JA	1/16W	L6611	645 007 8125	INDUCTOR, 47U K								
R6675	401 247 0202	MT-GLAZE	3.9K FA	1/16W	L6612	645 048 5688	INDUCTOR, 47U K								
R6676	401 212 0206	MT-GLAZE	33K FA	1/16W	L6613	645 007 7975	INDUCTOR, 100U K								
R6677	401 230 2503	MT-GLAZE	1K FA	1/16W	L6614	645 048 5688	INDUCTOR, 47U K								
R6678	401 105 2607	MT-GLAZE	22 JA	1/16W	L6616	645 048 5381	INDUCTOR, 100U K								
R6679	401 247 0202	MT-GLAZE	3.9K FA	1/16W	L6617	645 048 5688	INDUCTOR, 47U K								
R6681	401 212 0008	MT-GLAZE	15K FA	1/16W	L6619	645 007 7975	INDUCTOR, 100U K								
R6682	401 162 6303	MT-GLAZE	330 JA	1W	<b>DIODE</b>										
R6683	401 105 5103	MT-GLAZE	47 JA	1/16W	D6601	407 004 1000	DIODE DCC010-TB								
R6684	401 290 1508	MT-GLAZE	0.1 JE	1/2W	D6602	407 223 0907	ZENER DIODE 02DZ4.7Y(TPH3)								
R6686	401 105 2201	MT-GLAZE	180K JA	1/16W	D6603	407 223 0907	ZENER DIODE 02DZ4.7Y(TPH3)								
R6687	401 105 5301	MT-GLAZE	4.7K JA	1/16W	D6604	407 149 0807	DIODE 1SS355-TE-17								
R6689	401 105 0603	MT-GLAZE	10K JA	1/16W	D6605	407 004 1000	DIODE DCC010-TB								
R6690	401 105 3307	MT-GLAZE	2.7K JA	1/16W	D6606	407 223 5001	DIODE D1FM3								
R6691	401 105 0603	MT-GLAZE	10K JA	1/16W	D6607	407 222 1301	DIODE CMS04								
R6692	401 235 4403	MT-GLAZE	560 FA	1/16W	D6608	407 149 0807	DIODE 1SS355-TE-17								
R6694	401 225 5601	MT-GLAZE	2.2 JA	1W	D6609	407 223 5001	DIODE D1FM3								
R6695	401 290 1508	MT-GLAZE	0.1 JE	1/2W	D6610	407 149 0807	DIODE 1SS355-TE-17								
R6708	401 219 1107	MT-GLAZE	1.8K FA	1/16W	D6611	407 223 5001	DIODE D1FM3								
R6709	401 219 1107	MT-GLAZE	1.8K FA	1/16W	D6612	407 149 0807	DIODE 1SS355-TE-17								
R6710	401 105 1402	MT-GLAZE	150 JA	1/16W	D6613	407 149 0807	DIODE 1SS355-TE-17								
R6711	401 105 0504	MT-GLAZE	1K JA	1/16W	D6614	407 149 0807	DIODE 1SS355-TE-17								
R6712	401 105 0504	MT-GLAZE	1K JA	1/16W	D6616	407 149 0807	DIODE 1SS355-TE-17								
R6713	401 105 0504	MT-GLAZE	1K JA	1/16W	D6617	407 149 0807	DIODE 1SS355-TE-17								
R6714	401 105 0504	MT-GLAZE	1K JA	1/16W	D6618	407 149 0807	DIODE 1SS355-TE-17								
R6717	401 105 0306	MT-GLAZE	10 JA	1/16W	D6619	407 201 2701	DIODE RB051L-40-TE25								
R6718	401 105 0306	MT-GLAZE	10 JA	1/16W	D6621	407 201 2701	DIODE RB051L-40-TE25								
R6719	401 105 0504	MT-GLAZE	1K JA	1/16W	D6624	407 223 0907	ZENER DIODE 02DZ4.7Y(TPH3)								
R6720	401 105 7909	MT-GLAZE	0.000 ZA	1/16W	D6626	407 223 0907	ZENER DIODE 02DZ4.7Y(TPH3)								
R6722	401 105 0603	MT-GLAZE	10K JA	1/16W	D6627	407 149 0807	DIODE 1SS355-TE-17								
R6725	401 290 1508	MT-GLAZE	0.1 JE	1/2W	D6631	407 223 0907	ZENER DIODE 02DZ4.7Y(TPH3)								
R6726	401 276 4707	MT-GLAZE	0.000 ZA	1/3W	D6632	407 223 0907	ZENER DIODE 02DZ4.7Y(TPH3)								
R6727	401 105 0603	MT-GLAZE	10K JA	1/16W	D6633	407 223 0907	ZENER DIODE 02DZ4.7Y(TPH3)								
R6728	401 276 4707	MT-GLAZE	0.000 ZA	1/3W	D6634	407 223 0907	ZENER DIODE 02DZ4.7Y(TPH3)								
R6729	401 105 0603	MT-GLAZE	10K JA	1/16W	D6652	407 190 4106	DIODE SFPL-52V								
R6730	401 290 1508	MT-GLAZE	0.1 JE	1/2W	D6653	407 190 4106	DIODE SFPL-52V								
R6731	401 105 0603	MT-GLAZE	10K JA	1/16W	D6661	407 223 0501	ZENER DIODE 02DZ12Y(TPH3)								
R6732	401 105 0603	MT-GLAZE	10K JA	1/16W	D6662	407 149 0807	DIODE 1SS355-TE-17								
R6736	401 203 9904	MT-GLAZE	4.7K FA	1/16W	D6663	407 223 0907	ZENER DIODE 02DZ4.7Y(TPH3)								
R6737	401 105 5202	MT-GLAZE	470 JA	1/16W	D6664	407 149 0807	DIODE 1SS355-TE-17								
R6738	401 247 0202	MT-GLAZE	3.9K FA	1/16W	<b>DRIVE BOARD</b>										
R6739	401 105 5301	MT-GLAZE	4.7K JA	1/16W	<b>610 297 3655 ASSY,PWB,DRIVE MA8AA 1AA0B10C3630C</b>										
R6742	401 105 5301	MT-GLAZE	4.7K JA	1/16W	<b>TRANSISTOR</b>										
R6751	401 036 3605	MT-GLAZE	3.3 JA	1/8W	Q1681	405 134 5905	TR 2SA1037AK-T146-R								
R6752	401 035 4108	MT-GLAZE	0.000 ZA	1/8W	Q1682	405 134 5905	TR 2SA1037AK-T146-R								
R6753	401 263 1306	MT-GLAZE	1.8 JA	1/3W	<b>INTEGRATED CIRCUIT</b>										
R6756	401 105 0504	MT-GLAZE	1K JA	1/16W	IC1601	409 085 1900	IC LB1645N								
R6757	401 105 0603	MT-GLAZE	10K JA	1/16W											
R6758	401 105 5301	MT-GLAZE	4.7K JA	1/16W											
R6759	401 230 8010	MT-GLAZE	1K JA	1/3W											
R6777	401 294 5502	MT-GLAZE	0.03 JX	1/4W											
R6779	401 294 5502	MT-GLAZE	0.03 JX	1/4W											
R6781	401 105 0603	MT-GLAZE	10K JA	1/16W											
R6782	401 105 5301	MT-GLAZE	4.7K JA	1/16W											
R6783	401 105 0603	MT-GLAZE	10K JA	1/16W											
R6784	401 105 5301	MT-GLAZE	4.7K JA	1/16W											

## Electrical Parts List

<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>			<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>								
IC1602	409 114 4803	IC LB1641			R1642	401 105 0405	MT-GLAZE	100 JA	1/16W						
IC1611	409 114 4803	IC LB1641			R1643	401 105 6100	MT-GLAZE	560K JA	1/16W						
IC1621	409 124 5906	IC L78M12T-TL			R1644	401 105 6100	MT-GLAZE	560K JA	1/16W						
IC1631	410 405 9308	IC TDA7056AT/N2			R1651	401 105 7909	MT-GLAZE	0.000 ZA	1/16W						
IC1632	410 405 9308	IC TDA7056AT/N2			R1652	401 105 7909	MT-GLAZE	0.000 ZA	1/16W						
IC1641	409 404 6302	IC M62320FP			R1657	401 105 7909	MT-GLAZE	0.000 ZA	1/16W						
IC1652	409 367 1604	IC BH3540AFS-E2			R1658	401 105 7909	MT-GLAZE	0.000 ZA	1/16W						
<b>CAPACITOR</b>															
CN16C	645 008 3365	PLUG, 12P			R1661	401 189 8304	MT-GLAZE	180 JA	1/3W						
C1601	403 325 8506	ELECT	1000U M	16V	R1671	401 105 1501	MT-GLAZE	1.5K JA	1/16W						
C1602	403 149 9208	CERAMIC	0.01U Z	50V	R1674	401 105 6506	MT-GLAZE	680 JA	1/16W						
C1603	403 149 9208	CERAMIC	0.01U Z	50V	R1680	401 105 8104	MT-GLAZE	56K JA	1/16W						
C1604	403 325 8605	ELECT	220U M	16V	R1681	401 105 0603	MT-GLAZE	10K JA	1/16W						
C1606	403 149 9208	CERAMIC	0.01U Z	50V	R1682	401 105 4106	MT-GLAZE	3.3K JA	1/16W						
C1607	403 149 9208	CERAMIC	0.01U Z	50V	R1683	401 113 6406	MT-GLAZE	5.1K JA	1/16W						
C1608	403 325 8605	ELECT	220U M	16V	R1684	401 105 4106	MT-GLAZE	3.3K JA	1/16W						
C1612	403 149 9208	CERAMIC	0.01U Z	50V	R1685	401 105 8104	MT-GLAZE	56K JA	1/16W						
C1613	403 149 9208	CERAMIC	0.01U Z	50V	R1686	401 105 0603	MT-GLAZE	10K JA	1/16W						
C1614	403 325 8605	ELECT	220U M	16V	R1687	401 105 4106	MT-GLAZE	3.3K JA	1/16W						
C1621	403 331 0303	ELECT	470U M	16V	R1688	401 113 6406	MT-GLAZE	5.1K JA	1/16W						
C1622	403 331 0303	ELECT	470U M	16V	R1689	401 105 4106	MT-GLAZE	3.3K JA	1/16W						
C1623	403 164 0204	CERAMIC	0.1U Z	25V	<b>DIODE</b>										
C1624	403 164 0204	CERAMIC	0.1U Z	25V	D1601	407 223 0501	ZENER DIODE	02DZ12Y(TPH3)							
C1626	403 331 0303	ELECT	470U M	16V	D1602	407 208 9703	ZD UDZS-TE-175.6B								
C1631	403 325 8605	ELECT	220U M	16V	D1604	407 149 0807	DIODE	1SS355-TE-17							
C1632	403 323 8805	CERAMIC	2.2U Z	16V	D1611	407 223 1003	ZENER DIODE	02DZ5.1Y(TPH3)							
C1633	403 164 0204	CERAMIC	0.1U Z	25V	D1653	407 149 0807	DIODE	1SS355-TE-17							
C1634	403 323 8805	CERAMIC	2.2U Z	16V	D1675	407 223 1003	ZENER DIODE	02DZ5.1Y(TPH3)							
C1636	403 325 8605	ELECT	220U M	16V	<b>FILTER BOARD</b>										
C1637	403 164 0204	CERAMIC	0.1U Z	25V	<b>610 297 3662 ASSY,PWB,FILTER MA8AA</b>										
C1641	403 164 0204	CERAMIC	0.1U Z	25V	<b>1AA0B10C3630D</b>										
C1642	403 304 1801	ELECT	100U M	6.3V	<b>CAPACITOR</b>										
C1643	403 164 0204	CERAMIC	0.1U Z	25V	△ C601	404 081 4702	MT-POLYEST	0.22U M	275V						
C1661	403 323 8805	CERAMIC	2.2U Z	16V	△ C602	404 081 4702	MT-POLYEST	0.22U M	275V						
C1671	403 323 8805	CERAMIC	2.2U Z	16V	△ C603	404 073 5106	CERAMIC	470P K	250V						
C1672	403 323 8805	CERAMIC	2.2U Z	16V	△ C604	404 073 5106	CERAMIC	470P K	250V						
C1673	403 304 3102	ELECT	22U M	16V	<b>RESISTOR</b>										
C1674	403 229 3508	ELECT	100U M	16V	△ R600	401 238 1003	MT-GLAZE	120K JA	1/2W						
C1675	403 229 3508	ELECT	100U M	16V	△ R601	401 238 1003	MT-GLAZE	120K JA	1/2W						
C1676	403 304 3102	ELECT	22U M	16V	<b>VARIABLE RESISTOR</b>										
C1677	401 105 7909	MT-GLAZE	0.000 ZA	1/16W	△ VA601	407 130 2902	VARISTOR	ENC471D-14A							
C1678	401 105 7909	MT-GLAZE	0.000 ZA	1/16W	<b>COIL</b>										
C1679	403 164 0204	CERAMIC	0.1U Z	25V	△ L601	645 050 2231	LINE FILTER								
<b>RESISTOR</b>										<b>MISCELLANEOUS</b>					
R1601	401 105 4106	MT-GLAZE	3.3K JA	1/16W	△ F601	423 025 1201	FUSE	250V	8A						
R1602	401 105 4106	MT-GLAZE	3.3K JA	1/16W	<b>A/V BOARD</b>										
R1603	401 105 0504	MT-GLAZE	1K JA	1/16W	<b>610 296 9351 ASSY,PWB,A/V MA8AA</b>										
R1604	401 105 4106	MT-GLAZE	3.3K JA	1/16W	<b>1AA0B10C3670A</b>										
R1606	401 105 4106	MT-GLAZE	3.3K JA	1/16W	<b>TRANSISTOR</b>										
R1607	401 105 0504	MT-GLAZE	1K JA	1/16W	Q2001	405 134 5905	TR	2SA1037AK-T146-R							
R1612	401 105 4106	MT-GLAZE	3.3K JA	1/16W	Q2002	405 134 5905	TR	2SA1037AK-T146-R							
R1613	401 105 4106	MT-GLAZE	3.3K JA	1/16W	Q2003	405 134 5905	TR	2SA1037AK-T146-R							
R1614	401 105 0504	MT-GLAZE	1K JA	1/16W											
R1621	401 184 2000	MT-GLAZE	2.2 JA	1/2W											
R1622	401 184 2000	MT-GLAZE	2.2 JA	1/2W											
R1623	401 184 2000	MT-GLAZE	2.2 JA	1/2W											
R1624	401 190 1400	MT-GLAZE	0.000 ZA	1/2W											
R1630	401 276 4707	MT-GLAZE	0.000 ZA	1/3W											
R1631	401 276 4707	MT-GLAZE	0.000 ZA	1/3W											
R1632	401 105 7909	MT-GLAZE	0.000 ZA	1/16W											
R1633	401 105 5301	MT-GLAZE	4.7K JA	1/16W											
R1635	401 105 5301	MT-GLAZE	4.7K JA	1/16W											
R1636	401 105 7909	MT-GLAZE	0.000 ZA	1/16W											
R1638	401 105 7909	MT-GLAZE	0.000 ZA	1/16W											
R1639	401 105 7909	MT-GLAZE	0.000 ZA	1/16W											
R1641	401 105 0405	MT-GLAZE	100 JA	1/16W											

## Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description
Q2004	405 014 4509	TR 2SC2412K T146 R	C2016	403 321 2607	ELECT 10U M 16V
Q2006	405 014 4509	TR 2SC2412K T146 R	C2061	403 164 0204	CERAMIC 0.1U Z 25V
Q5007	405 014 4509	TR 2SC2412K T146 R	C2081	403 304 1801	ELECT 100U M 6.3V
Q5008	405 014 4509	TR 2SC2412K T146 R	C2082	403 304 1801	ELECT 100U M 6.3V
Q5201	405 014 4509	TR 2SC2412K T146 R	C2083	403 304 1801	ELECT 100U M 6.3V
Q5202	405 014 4509	TR 2SC2412K T146 R	C2086	403 283 6309	CERAMIC 1U Z 10V
Q5203	405 014 4509	TR 2SC2412K T146 R	C2087	403 283 6309	CERAMIC 1U Z 10V
Q5204	405 014 4509	TR 2SC2412K T146 R	C2088	403 229 3508	ELECT 100U M 16V
Q7262	405 014 4509	TR 2SC2412K T146 R	C2091	403 304 1801	ELECT 100U M 6.3V
<b>INTEGRATED CIRCUIT</b>					
IC101	409 470 2604	IC AD8183ARU	C3801	403 283 6309	CERAMIC 1U Z 10V
IC1031	409 461 7304	IC AD8057ART	C3802	403 162 6208	ELECT 1U M 50V
IC1041	409 461 7304	IC AD8057ART	C3803	403 162 6208	ELECT 1U M 50V
IC1051	409 461 7304	IC AD8057ART	C3804	403 162 6208	ELECT 1U M 50V
IC3801	409 380 6303	IC HIN232CB	C3807	403 283 6309	CERAMIC 1U Z 10V
	409 273 3501	IC SP232ACT	C3808	403 283 6309	CERAMIC 1U Z 10V
IC3802	409 395 5902	IC TC7SH00FU-(TE85L)	C3809	403 283 6309	CERAMIC 1U Z 10V
IC3803	410 296 5700	IC TWM7000-151020	C3811	403 283 6309	CERAMIC 1U Z 10V
IC3804	410 275 5707	IC TWM7000-162020	C3812	403 162 6208	ELECT 1U M 50V
	410 275 5806	IC TWM7000-162020	C3881	403 162 6208	ELECT 1U M 50V
IC5001	409 051 2702	IC TC4052BF (EL)	C5003	403 323 8805	CERAMIC 2.2U Z 16V
IC5201	409 462 0304	IC 24LC21AT/SN	C5004	403 323 8805	CERAMIC 2.2U Z 16V
IC5202	409 051 2900	IC TC4053BF (EL)	C5006	403 323 8805	CERAMIC 2.2U Z 16V
IC5203	409 462 6009	IC AD8185ARU	C5007	403 323 8805	CERAMIC 2.2U Z 16V
IC5204	409 407 7900	IC EL4332CS	C5008	403 323 8805	CERAMIC 2.2U Z 16V
IC7141	409 484 2003	IC BA7078AF-E2	C5009	403 323 8805	CERAMIC 2.2U Z 16V
IC7221	410 343 7008	IC SN74AHCT1G14DBVR	C5011	403 323 1301	CERAMIC 0.47U Z 10V
IC7222	410 343 7008	IC SN74AHCT1G14DBVR	C5012	403 323 1301	CERAMIC 0.47U Z 10V
			C5013	403 304 3102	ELECT 22U M 16V
			C5014	403 321 2607	ELECT 10U M 16V
<b>CAPACITOR</b>					
C1004	403 164 0204	CERAMIC 0.1U Z 25V	C5016	403 323 1301	CERAMIC 0.47U Z 10V
C1006	403 164 0204	CERAMIC 0.1U Z 25V	C5204	403 164 0204	CERAMIC 0.1U Z 25V
C1007	403 304 2105	ELECT 47U M 6.3V	C5207	403 283 6309	CERAMIC 1U Z 10V
C1008	403 164 0204	CERAMIC 0.1U Z 25V	C5208	403 283 6309	CERAMIC 1U Z 10V
C1009	403 155 1609	CERAMIC 33P J 50V	C5209	403 304 2105	ELECT 47U M 6.3V
C101	403 321 2607	ELECT 10U M 16V	C5211	403 283 6309	CERAMIC 1U Z 10V
C1011	403 164 0204	CERAMIC 0.1U Z 25V	C5212	403 164 0204	CERAMIC 0.1U Z 25V
C1012	403 155 1609	CERAMIC 33P J 50V	C5213	403 304 2105	ELECT 47U M 6.3V
C1013	403 164 0204	CERAMIC 0.1U Z 25V	C5214	403 149 9208	CERAMIC 0.01U Z 50V
C1014	403 155 1609	CERAMIC 33P J 50V	C5216	403 283 6309	CERAMIC 1U Z 10V
C1016	403 164 0204	CERAMIC 0.1U Z 25V	C5217	403 164 0204	CERAMIC 0.1U Z 25V
C1017	403 304 2105	ELECT 47U M 6.3V	C5218	403 304 2105	ELECT 47U M 6.3V
C1018	403 164 0204	CERAMIC 0.1U Z 25V	C5219	403 283 6309	CERAMIC 1U Z 10V
C102	403 321 2607	ELECT 10U M 16V	C5221	403 304 2105	ELECT 47U M 6.3V
C1021	403 157 4202	CERAMIC 220P J 50V	C5226	403 157 3106	CERAMIC 56P J 50V
C1022	403 283 6309	CERAMIC 1U Z 10V	C5227	403 157 3106	CERAMIC 56P J 50V
C1023	403 304 2105	ELECT 47U M 6.3V	C5228	403 157 3106	CERAMIC 56P J 50V
C1024	403 113 3805	CERAMIC 1000P K 50V	C5251	403 283 6309	CERAMIC 1U Z 10V
C1026	403 113 3805	CERAMIC 1000P K 50V	C5252	403 283 6309	CERAMIC 1U Z 10V
C1027	403 113 3805	CERAMIC 1000P K 50V	C5261	403 267 0606	NP-ELECT 4.7U M 16V
C1028	403 113 3805	CERAMIC 1000P K 50V	C5262	403 267 0606	NP-ELECT 4.7U M 16V
C103	403 321 2607	ELECT 10U M 16V	C5263	403 267 0606	NP-ELECT 4.7U M 16V
C104	403 164 0204	CERAMIC 0.1U Z 25V	C5264	403 267 0606	NP-ELECT 4.7U M 16V
C106	403 164 0204	CERAMIC 0.1U Z 25V	C5271	403 155 1500	CERAMIC 180P J 50V
C107	403 164 0204	CERAMIC 0.1U Z 25V	C5272	403 155 1500	CERAMIC 180P J 50V
C108	403 164 0204	CERAMIC 0.1U Z 25V	C5273	403 157 3809	CERAMIC 120P J 50V
C109	403 149 9208	CERAMIC 0.01U Z 50V	C5274	403 157 3809	CERAMIC 120P J 50V
C111	403 164 0204	CERAMIC 0.1U Z 25V	C5291	403 149 9208	CERAMIC 0.01U Z 50V
C112	403 280 1604	ELECT 220U M 16V	C7143	403 314 5905	CERAMIC 0.47U K 16V
C113	403 164 0204	CERAMIC 0.1U Z 25V	C7144	403 314 5905	CERAMIC 0.47U K 16V
C114	403 280 1604	ELECT 220U M 16V	C7145	403 162 6208	ELECT 1U M 50V
C2007	403 149 9208	CERAMIC 0.01U Z 50V	C7146	403 314 5905	CERAMIC 0.47U K 16V
C2008	403 304 3300	ELECT 47U M 16V	C7148	403 162 6604	ELECT 2.2U M 50V
C2011	403 321 2607	ELECT 10U M 16V	C7149	403 162 6208	ELECT 1U M 50V
C2012	403 321 2607	ELECT 10U M 16V	C7151	403 157 3601	CERAMIC 100P J 50V
C2013	403 321 2607	ELECT 10U M 16V	C7152	403 164 0204	CERAMIC 0.1U Z 25V
C2014	403 164 0204	CERAMIC 0.1U Z 25V	C7153	403 304 1801	ELECT 100U M 6.3V

## Electrical Parts List

<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>			<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>		
C7221	403 164 0204	CERAMIC	0.1U Z	25V	R2004	401 260 4102	MT-GLAZE	75 JA	1/3W
C7222	403 164 0204	CERAMIC	0.1U Z	25V	R2005	401 260 4102	MT-GLAZE	75 JA	1/3W
C7271	403 304 2105	ELECT	47U M	6.3V	R2006	401 037 5202	MT-GLAZE	100 JA	1/10W
C7272	403 283 6309	CERAMIC	1U Z	10V	R2008	401 105 0603	MT-GLAZE	10K JA	1/16W
<b>RESISTOR</b>									
RB3801	645 025 5380	R-NETWORK	10KX4	1/16W	R2009	401 105 5400	MT-GLAZE	47K JA	1/16W
	645 026 8014	R-NETWORK	10KX4	1/16W	R2011	401 105 0504	MT-GLAZE	1K JA	1/16W
RB5001	645 026 8021	R-NETWORK	100KX4	1/16W	R2012	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
RB5002	645 026 8021	R-NETWORK	100KX4	1/16W	R2013	401 105 2904	MT-GLAZE	22K JA	1/16W
R1001	401 260 4102	MT-GLAZE	75 JA	1/3W	R2014	401 105 5400	MT-GLAZE	47K JA	1/16W
R1002	401 260 4102	MT-GLAZE	75 JA	1/3W	R2016	401 105 0504	MT-GLAZE	1K JA	1/16W
R1003	401 260 4102	MT-GLAZE	75 JA	1/3W	R2017	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R1004	401 105 0405	MT-GLAZE	100 JA	1/16W	R2018	401 105 2904	MT-GLAZE	22K JA	1/16W
R1008	401 105 0405	MT-GLAZE	100 JA	1/16W	R2019	401 105 5400	MT-GLAZE	47K JA	1/16W
R1009	401 037 5004	MT-GLAZE	0.000 ZA	1/10W	R2021	401 105 0504	MT-GLAZE	1K JA	1/16W
R101	401 105 2904	MT-GLAZE	22K JA	1/16W	R2022	401 105 2904	MT-GLAZE	22K JA	1/16W
R1012	401 037 5004	MT-GLAZE	0.000 ZA	1/10W	R2023	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R1014	401 037 5608	MT-GLAZE	10K JA	1/10W	R2024	401 105 5400	MT-GLAZE	47K JA	1/16W
R1016	401 037 5608	MT-GLAZE	10K JA	1/10W	R2026	401 105 5400	MT-GLAZE	47K JA	1/16W
R1017	401 105 0405	MT-GLAZE	100 JA	1/16W	R2027	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R1018	401 105 0405	MT-GLAZE	100 JA	1/16W	R2028	401 105 5400	MT-GLAZE	47K JA	1/16W
R1019	401 260 4102	MT-GLAZE	75 JA	1/3W	R2029	401 105 0504	MT-GLAZE	1K JA	1/16W
R102	401 105 8104	MT-GLAZE	56K JA	1/16W	R2031	401 105 5400	MT-GLAZE	47K JA	1/16W
R1021	401 260 4102	MT-GLAZE	75 JA	1/3W	R2032	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R1022	401 260 4102	MT-GLAZE	75 JA	1/3W	R2033	401 105 0504	MT-GLAZE	1K JA	1/16W
R1024	401 037 5004	MT-GLAZE	0.000 ZA	1/10W	R2034	401 038 6604	MT-GLAZE	470K JA	1/10W
R1027	401 037 5004	MT-GLAZE	0.000 ZA	1/10W	R2036	401 038 6604	MT-GLAZE	470K JA	1/10W
R1028	401 105 0405	MT-GLAZE	100 JA	1/16W	R2039	401 037 5202	MT-GLAZE	100 JA	1/10W
R1029	401 105 0405	MT-GLAZE	100 JA	1/16W	R2041	401 037 5202	MT-GLAZE	100 JA	1/10W
R103	401 105 2904	MT-GLAZE	22K JA	1/16W	R2044	401 037 5202	MT-GLAZE	100 JA	1/10W
R1031	401 105 0405	MT-GLAZE	100 JA	1/16W	R2046	401 105 0603	MT-GLAZE	10K JA	1/16W
R1032	401 105 0405	MT-GLAZE	100 JA	1/16W	R2047	401 105 4007	MT-GLAZE	330 JA	1/16W
R1033	401 105 0405	MT-GLAZE	100 JA	1/16W	R2062	401 105 2805	MT-GLAZE	2.2K JA	1/16W
R1038	401 105 0504	MT-GLAZE	1K JA	1/16W	R2070	401 037 5400	MT-GLAZE	1K JA	1/10W
R104	401 105 8104	MT-GLAZE	56K JA	1/16W	R2074	401 037 5004	MT-GLAZE	0.000 ZA	1/10W
R1041	401 105 0504	MT-GLAZE	1K JA	1/16W	R3801	401 105 0405	MT-GLAZE	100 JA	1/16W
R1043	401 105 0504	MT-GLAZE	1K JA	1/16W	R3802	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R1046	401 038 6604	MT-GLAZE	470K JA	1/10W	R3803	401 105 5509	MT-GLAZE	470K JA	1/16W
R1047	401 038 6604	MT-GLAZE	470K JA	1/10W	R3804	401 105 0405	MT-GLAZE	100 JA	1/16W
R1048	401 038 6604	MT-GLAZE	470K JA	1/10W	R3806	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R1049	401 038 6604	MT-GLAZE	470K JA	1/10W	R3807	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R1051	401 037 5004	MT-GLAZE	0.000 ZA	1/10W	R3814	401 105 0603	MT-GLAZE	10K JA	1/16W
R1052	401 037 5004	MT-GLAZE	0.000 ZA	1/10W	R3816	401 105 0405	MT-GLAZE	100 JA	1/16W
R1053	401 037 5004	MT-GLAZE	0.000 ZA	1/10W	R3817	401 105 0405	MT-GLAZE	100 JA	1/16W
R1054	401 037 5004	MT-GLAZE	0.000 ZA	1/10W	R3818	401 105 0603	MT-GLAZE	10K JA	1/16W
R1056	401 105 7909	MT-GLAZE	0.000 ZA	1/16W	R3819	401 105 4205	MT-GLAZE	33K JA	1/16W
R1057	401 105 7909	MT-GLAZE	0.000 ZA	1/16W	R3821	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R1058	401 105 0405	MT-GLAZE	100 JA	1/16W	R3822	401 105 0603	MT-GLAZE	10K JA	1/16W
R106	401 105 2904	MT-GLAZE	22K JA	1/16W	R3823	401 105 0603	MT-GLAZE	10K JA	1/16W
R1061	401 105 0405	MT-GLAZE	100 JA	1/16W	R3824	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R1062	401 105 7909	MT-GLAZE	0.000 ZA	1/16W	R3826	401 105 0603	MT-GLAZE	10K JA	1/16W
R1063	401 105 0405	MT-GLAZE	100 JA	1/16W	R3827	401 105 0405	MT-GLAZE	100 JA	1/16W
R107	401 105 8104	MT-GLAZE	56K JA	1/16W	R3828	401 105 0603	MT-GLAZE	10K JA	1/16W
R108	401 105 0405	MT-GLAZE	100 JA	1/16W	R3829	401 105 0603	MT-GLAZE	10K JA	1/16W
R109	401 105 0405	MT-GLAZE	100 JA	1/16W	R3831	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R111	401 105 0405	MT-GLAZE	100 JA	1/16W	R3832	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R112	401 105 0405	MT-GLAZE	100 JA	1/16W	R5009	401 105 4106	MT-GLAZE	3.3K JA	1/16W
R113	401 105 0405	MT-GLAZE	100 JA	1/16W	R5011	401 105 4106	MT-GLAZE	3.3K JA	1/16W
R114	401 105 0405	MT-GLAZE	100 JA	1/16W	R5012	401 105 0405	MT-GLAZE	100 JA	1/16W
R122	401 105 0504	MT-GLAZE	1K JA	1/16W	R5013	401 105 0405	MT-GLAZE	100 JA	1/16W
R123	401 105 3901	MT-GLAZE	33 JA	1/16W	R5014	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R124	401 105 3901	MT-GLAZE	33 JA	1/16W	R5016	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R126	401 105 3901	MT-GLAZE	33 JA	1/16W	R5017	401 105 2003	MT-GLAZE	1.8K JA	1/16W
R2001	401 260 4102	MT-GLAZE	75 JA	1/3W	R5018	401 105 2003	MT-GLAZE	1.8K JA	1/16W
R2002	401 260 4102	MT-GLAZE	75 JA	1/3W	R5019	401 105 0405	MT-GLAZE	100 JA	1/16W
R2003	401 260 4102	MT-GLAZE	75 JA	1/3W	R5021	401 105 0405	MT-GLAZE	100 JA	1/16W
					R5201	401 105 0405	MT-GLAZE	100 JA	1/16W
					R5202	401 105 0405	MT-GLAZE	100 JA	1/16W

## Electrical Parts List

<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>
R5203	401 105 0405	MT-GLAZE	100 JA 1/16W	L2009	645 044 8836 FILTER, EMI 100MHZ
R5204	401 037 5608	MT-GLAZE	10K JA 1/10W	L2011	645 044 8836 FILTER, EMI 100MHZ
R5206	401 105 0405	MT-GLAZE	100 JA 1/16W	L2012	645 044 8836 FILTER, EMI 100MHZ
R5207	401 105 0405	MT-GLAZE	100 JA 1/16W	L2013	645 045 6183 FILTER, EMI 25MHZ
R5208	401 105 0801	MT-GLAZE	12 JA 1/16W	L2014	645 045 6183 FILTER, EMI 25MHZ
R5209	401 105 0801	MT-GLAZE	12 JA 1/16W	L2015	645 045 6183 FILTER, EMI 25MHZ
R5211	401 105 0801	MT-GLAZE	12 JA 1/16W	L2018	645 045 6183 FILTER, EMI 25MHZ
R5212	401 105 2607	MT-GLAZE	22 JA 1/16W	L2019	645 045 6183 FILTER, EMI 25MHZ
R5213	401 105 2607	MT-GLAZE	22 JA 1/16W	L5201	401 035 4108 MT-GLAZE 0.000 ZA 1/8W
R5215	401 105 2607	MT-GLAZE	22 JA 1/16W	L5202	401 035 4108 MT-GLAZE 0.000 ZA 1/8W
R5216	401 105 0702	MT-GLAZE	100K JA 1/16W		
R5217	401 105 0702	MT-GLAZE	100K JA 1/16W		
R5218	401 105 0702	MT-GLAZE	100K JA 1/16W		
R5219	401 105 1402	MT-GLAZE	150 JA 1/16W	D1001	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
R5221	401 258 9904	MT-GLAZE	10 JA 1/3W	D1002	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
R5223	401 105 1402	MT-GLAZE	150 JA 1/16W	D1003	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
R5224	401 105 1402	MT-GLAZE	150 JA 1/16W	D1004	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
R5226	401 105 0405	MT-GLAZE	100 JA 1/16W	D1006	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
R5227	401 105 0603	MT-GLAZE	10K JA 1/16W	D1007	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
R5228	401 105 0603	MT-GLAZE	10K JA 1/16W	D1008	407 223 0501 ZENER DIODE 02DZ12Y(TPH3)
R5229	401 105 0603	MT-GLAZE	10K JA 1/16W	D1009	407 223 0501 ZENER DIODE 02DZ12Y(TPH3)
R5231	401 105 0504	MT-GLAZE	1K JA 1/16W	D1011	407 201 2701 DIODE RB051L-40-TE25
R5233	401 105 0603	MT-GLAZE	10K JA 1/16W	D1012	407 223 0501 ZENER DIODE 02DZ12Y(TPH3)
R5271	401 105 0702	MT-GLAZE	100K JA 1/16W	D1013	407 223 0501 ZENER DIODE 02DZ12Y(TPH3)
R7147	401 105 8005	MT-GLAZE	1M JA 1/16W	D1014	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
R7148	401 105 4601	MT-GLAZE	3.9K JA 1/16W	D1016	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
R7221	401 105 1303	MT-GLAZE	15 JA 1/16W	D1017	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
R7222	401 105 1303	MT-GLAZE	15 JA 1/16W	D1018	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
R7223	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	D1019	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
R7224	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	D1021	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
R7227	401 105 0405	MT-GLAZE	100 JA 1/16W	D1022	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
R7229	401 105 0405	MT-GLAZE	100 JA 1/16W	D1023	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
R7266	401 105 0603	MT-GLAZE	10K JA 1/16W	D1024	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
R7267	401 105 0603	MT-GLAZE	10K JA 1/16W	D1026	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
R7273	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	D1027	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
R7293	401 105 0405	MT-GLAZE	100 JA 1/16W	D1028	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)
			D1029	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)	
			D1031	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)	
			D1032	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)	
			D1033	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)	
			D1034	407 223 0501 ZENER DIODE 02DZ12Y(TPH3)	
			D1036	407 223 0501 ZENER DIODE 02DZ12Y(TPH3)	
			D1037	407 223 0501 ZENER DIODE 02DZ12Y(TPH3)	
			D1038	407 223 0501 ZENER DIODE 02DZ12Y(TPH3)	
			D1039	407 223 0709 ZENER DIODE 02DZ20Y(TPH3)	
			D1041	407 223 0709 ZENER DIODE 02DZ20Y(TPH3)	
			D1042	407 223 0709 ZENER DIODE 02DZ20Y(TPH3)	
			D1043	407 223 0709 ZENER DIODE 02DZ20Y(TPH3)	
			D1044	407 223 0709 ZENER DIODE 02DZ20Y(TPH3)	
			D1046	407 223 0709 ZENER DIODE 02DZ20Y(TPH3)	
			D1047	407 223 0709 ZENER DIODE 02DZ20Y(TPH3)	
			D1048	407 223 0709 ZENER DIODE 02DZ20Y(TPH3)	
			D1049	407 223 0709 ZENER DIODE 02DZ20Y(TPH3)	
			D2001	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)	
			D2002	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)	
			D2003	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)	
			D2004	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)	
			D2006	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)	
			D2007	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)	
			D2008	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)	
			D2009	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)	
			D2011	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)	
			D2012	407 223 1102 ZENER DIODE 02DZ6.2Y(TPH3)	
			D2013	407 223 0501 ZENER DIODE 02DZ12Y(TPH3)	
			D2014	407 223 0501 ZENER DIODE 02DZ12Y(TPH3)	
			D2015	407 223 0501 ZENER DIODE 02DZ12Y(TPH3)	
			D2016	407 223 0501 ZENER DIODE 02DZ12Y(TPH3)	
			D2017	407 223 0501 ZENER DIODE 02DZ12Y(TPH3)	

## Electrical Parts List

Key No.	Part No.	Description			Key No.	Part No.	Description			
D2023	407 223 1102	ZENER DIODE	02DZ6.2Y	(TPH3)	C7024	403 164 0204	CERAMIC	0.1U Z	25V	
D2024	407 223 1102	ZENER DIODE	02DZ6.2Y	(TPH3)	C7026	403 280 1604	ELECT	220U M	16V	
D2026	407 223 1102	ZENER DIODE	02DZ6.2Y	(TPH3)	C7041	403 280 1604	ELECT	220U M	16V	
D3801	407 149 0807	DIODE	1SS355-TE-17		C7042	403 280 1604	ELECT	220U M	16V	
D3802	407 149 0807	DIODE	1SS355-TE-17		C7043	403 164 0204	CERAMIC	0.1U Z	25V	
D3803	407 223 1003	ZENER DIODE	02DZ5.1Y	(TPH3)	C7044	403 164 0204	CERAMIC	0.1U Z	25V	
D5006	407 223 0600	ZENER DIODE	02DZ15Y	(TPH3)	C7046	403 280 1604	ELECT	220U M	16V	
D5007	407 223 0600	ZENER DIODE	02DZ15Y	(TPH3)	<b>RESISTOR</b>					
D5008	407 223 0600	ZENER DIODE	02DZ15Y	(TPH3)	R7007	401 105 0405	MT-GLAZE	100 JA	1/16W	
D5009	407 223 0600	ZENER DIODE	02DZ15Y	(TPH3)	R7008	401 105 0405	MT-GLAZE	100 JA	1/16W	
D5011	407 223 0600	ZENER DIODE	02DZ15Y	(TPH3)	R7009	401 105 0405	MT-GLAZE	100 JA	1/16W	
D5012	407 223 0600	ZENER DIODE	02DZ15Y	(TPH3)	R7011	401 290 1508	MT-GLAZE	0.1 JE	1/2W	
D5013	407 223 0600	ZENER DIODE	02DZ15Y	(TPH3)	R7012	401 105 0405	MT-GLAZE	100 JA	1/16W	
D5201	407 201 2701	DIODE	RB051L-40-TE25		R7013	401 212 0503	MT-GLAZE	6.8K FA	1/16W	
D5202	407 149 0807	DIODE	1SS355-TE-17		R7014	401 202 4108	MT-GLAZE	2K FA	1/16W	
D5203	407 149 0807	DIODE	1SS355-TE-17		R7016	401 113 4907	MT-GLAZE	200 JA	1/16W	
D5204	407 149 0807	DIODE	1SS355-TE-17		R7021	401 302 8006	MT-GLAZE	5.6 JE	1/2W	
D5206	407 149 0807	DIODE	1SS355-TE-17		R7022	401 105 0603	MT-GLAZE	10K JA	1/16W	
D7221	407 223 0907	ZENER DIODE	02DZ4.7Y	(TPH3)	R7023	401 302 8105	MT-GLAZE	6.8 JE	1/2W	
D7222	407 223 0907	ZENER DIODE	02DZ4.7Y	(TPH3)	R7024	401 105 0603	MT-GLAZE	10K JA	1/16W	
<b>MISCELLANEOUS</b>			R7026	401 105 5400	MT-GLAZE	47K JA	1/16W			
AU1001	645 034 8501	UNIT, REMOCON	RECEIVER		R7031	401 105 0405	MT-GLAZE	100 JA	1/16W	
IC2001	407 105 8700	PHOTO COUPLE	PC113B		R7032	401 230 2503	MT-GLAZE	1K FA	1/16W	
K10A	645 009 8093	SOCKET, D-SUB	15P		R7033	401 229 2804	MT-GLAZE	910 FA	1/16W	
K10B	645 036 5201	SOCKET, BNC	5P		R7034	401 202 8205	MT-GLAZE	3K FA	1/16W	
K10D	645 028 0382	SOCKET, USB	4P		R7036	401 105 7909	MT-GLAZE	0.000 ZA	1/16W	
K10E	645 000 2595	SOCKET, DIN	8P		R7037	401 105 5400	MT-GLAZE	47K JA	1/16W	
K10F	645 048 4650	SOCKET, DVI	24P		R7038	401 105 0603	MT-GLAZE	10K JA	1/16W	
K10G	645 000 2571	JACK, PHONE	D8.0		R7041	401 105 0405	MT-GLAZE	100 JA	1/16W	
K10H	645 000 2571	JACK, PHONE	D8.0		R7042	401 230 2503	MT-GLAZE	1K FA	1/16W	
K20A	645 041 3506	JACK, RCA	-2		R7043	401 202 4405	MT-GLAZE	750 FA	1/16W	
K20B	645 041 3537	JACK, RCA	-3		R7044	401 202 8205	MT-GLAZE	3K FA	1/16W	
K20D	610 010 8295	SOCKET, DIN	4P		R7046	401 105 7909	MT-GLAZE	0.000 ZA	1/16W	
K20H	645 000 2571	JACK, PHONE	D8.0		R7047	401 105 5400	MT-GLAZE	47K JA	1/16W	
SW1001	645 042 8197	SWITCH, PUSH	1P-1TX1		R7048	401 105 0603	MT-GLAZE	10K JA	1/16W	
X3802	645 021 1218	OSC, CERAMIC	8.00MHZ		R7051	401 162 6501	MT-GLAZE	82 JA	1W	
	645 037 5187	OSC, CERAMIC	8.00MHZ		R7052	401 162 6501	MT-GLAZE	82 JA	1W	
X3803	645 021 1218	OSC, CERAMIC	8.00MHZ		R7053	401 198 8005	MT-GLAZE	56 JA	1W	
	645 037 5187	OSC, CERAMIC	8.00MHZ		R7054	401 198 8005	MT-GLAZE	56 JA	1W	
<b>I/F BOARD</b>			R7056	401 105 0603	MT-GLAZE	10K JA	1/16W			
<b>610 296 9368 ASSY,PWB,I/F MA8AA</b>			R7057	401 105 0603	MT-GLAZE	10K JA	1/16W			
<b>1AA0B10C3670B</b>			R7058	401 105 5400	MT-GLAZE	47K JA	1/16W			
<b>TRANSISTOR</b>			<b>DIODE</b>							
Q7021	405 014 4509	TR	2SC2412K	T146 R	D7001	407 223 1102	ZENER DIODE	02DZ6.2Y	(TPH3)	
Q7022	405 014 4509	TR	2SC2412K	T146 R	D7002	407 223 1102	ZENER DIODE	02DZ6.2Y	(TPH3)	
Q7023	405 014 4509	TR	2SC2412K	T146 R	D7003	407 223 1102	ZENER DIODE	02DZ6.2Y	(TPH3)	
Q7024	405 014 4509	TR	2SC2412K	T146 R	D7004	407 223 1102	ZENER DIODE	02DZ6.2Y	(TPH3)	
<b>INTEGRATED CIRCUIT</b>			D7006	407 223 1102	ZENER DIODE	02DZ6.2Y	(TPH3)			
IC7001	409 523 7006	IC	PQ05VY3H3ZP		D7007	407 223 1102	ZENER DIODE	02DZ6.2Y	(TPH3)	
IC7021	409 461 7809	IC	PQ20WZ11		D7021	407 149 0807	DIODE	1SS355-TE-17		
IC7041	409 461 7809	IC	PQ20WZ11		D7022	407 149 0807	DIODE	1SS355-TE-17		
<b>CAPACITOR</b>			<b>MISCELLANEOUS</b>							
C7011	403 304 2402	ELECT		100U M	10V	K70C	645 051 9611	PLUG, D-SUB	25P	
C7012	403 164 0204	CERAMIC		0.1U Z	25V					
C7013	403 164 0204	CERAMIC		0.1U Z	25V					
C7014	403 304 1801	ELECT		100U M	6.3V					
C7021	403 280 1604	ELECT		220U M	16V					
C7022	403 280 1604	ELECT		220U M	16V					
C7023	403 164 0204	CERAMIC		0.1U Z	25V					
<b>ACCESSORIES</b>										
			645 015 3976	CABLE, FXAF						
			610 234 0969	CABLE						
			645 052 0853	ASSY, REMOCON	CXLE					
			610 283 3867	RC-BATTERY	LID-CXFJ					
			645 031 8207	ADAPTOR, MAC/IBM						
			610 294 3351	COVER, DUST-MA8A						
			645 030 6624	CABLE, INTERFACE	VGA					
			645 039 7196	CABLE, MOUSE	MAC					

**Electrical Parts List**

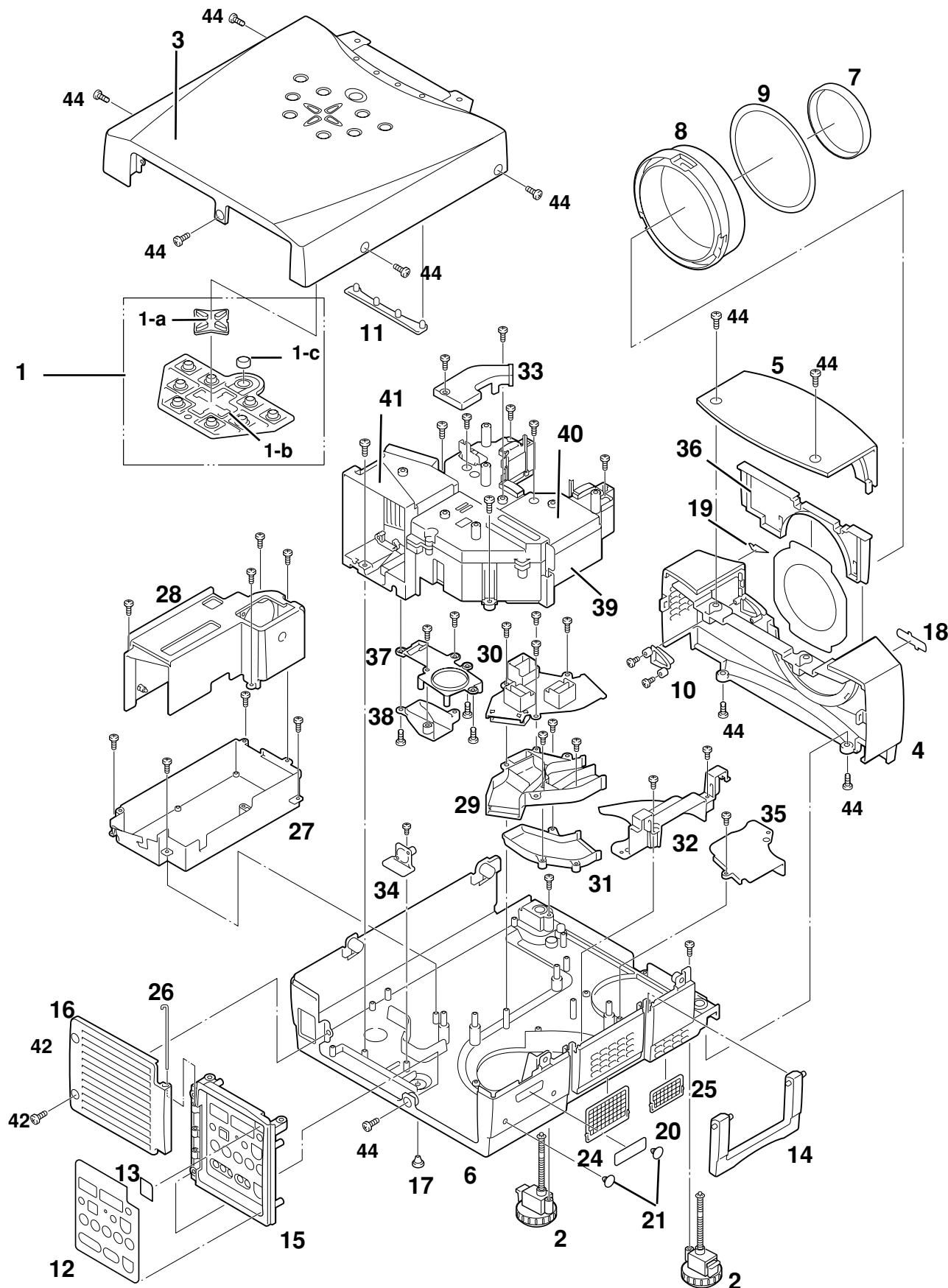
<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>
	645 039 7202	CABLE, MOUSE PS/2			
	645 039 7219	CABLE, MOUSE SRAL			
△ AC CORD					
(US)	645 054 1162	CORD, POWER-3.0MK			
(EU)	645 054 1155	CORD, POWER-3.0MK			
(UK)	645 054 1148	CORD, POWER-3.138MK			
<b>(PLC-XP46/XP46L)</b>					
OWNER'S MANUAL					
(English)	610 297 8247	OWNER'S MANUAL-MA8AA			
(Germany)	610 297 8254	OWNER'S MANUAL-MA8AA-D			
(French)	610 297 8261	OWNER'S MANUAL-MA8AA-F			
(Italy)	610 297 8278	OWNER'S MANUAL-MA8AA-I			
(Spanish)	610 297 8285	OWNER'S MANUAL-MA8AA-E			
<b>(PLC-XP41/XP41L)</b>					
OWNER'S MANUAL					
(English)	610 297 8445	OWNER'S MANUAL-MB8AA			
(Germany)	610 297 8452	OWNER'S MANUAL-MB8AA-D			
(French)	610 297 8469	OWNER'S MANUAL-MB8AA-F			
(Italy)	610 297 8476	OWNER'S MANUAL-MB8AA-I			
(Spanish)	610 297 8483	OWNER'S MANUAL-MB8AA-E			

# ■ Mechanical Parts List

MA8-XP4600, MA8-XP46L00, MB8-XP4100, MB8-XP41L00

Note: Parts order must contain Chassis No., Part No., and Descriptions.

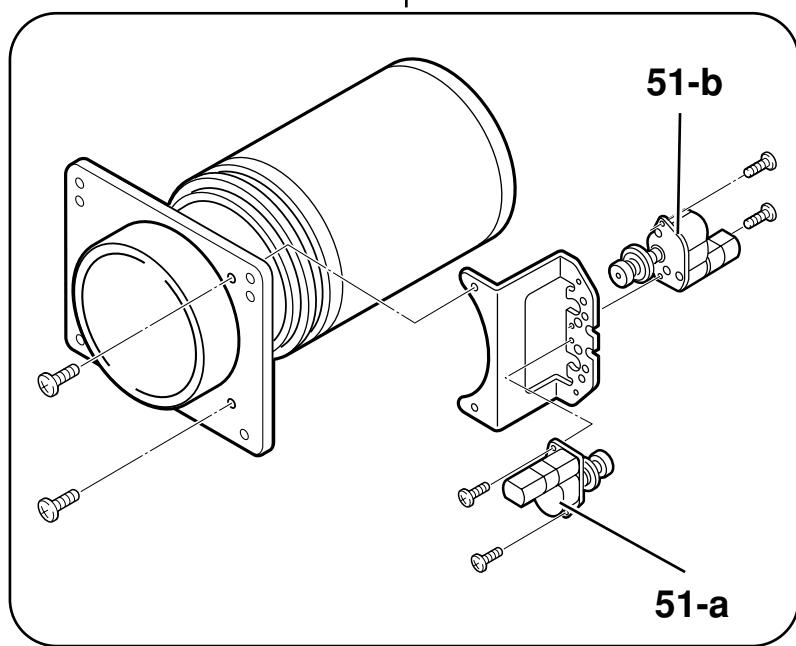
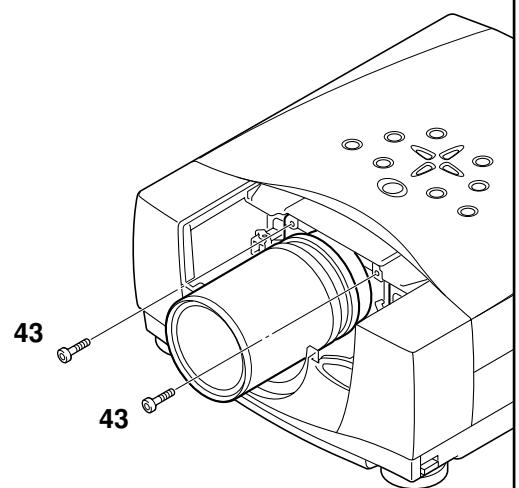
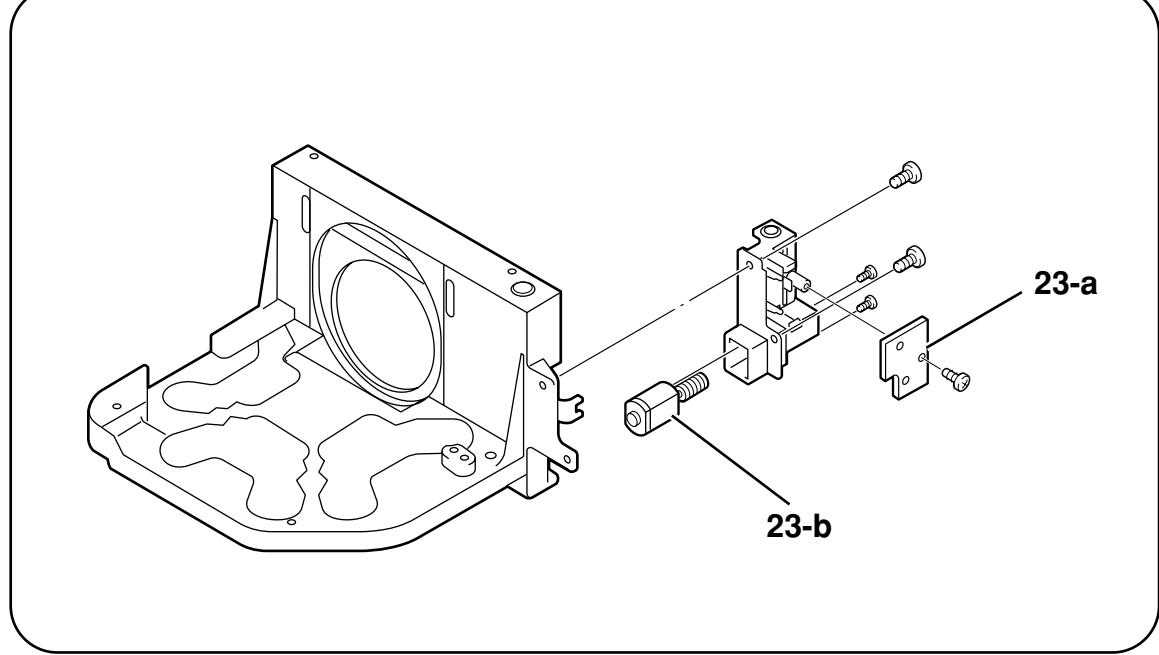
## ● CABINET PARTS



## Mechanical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description			
<b>CABINET PARTS</b>								
1	610 293 5493	ASSY, BUTTON-MA8A (Including Key No. 1-a, b, c)	42	412 063 7900	SPECIAL SCREW(SILVER)			
1-a	610 293 5554	BUTTON-MA8A	43	<b>(For Model PLC-XP46/XP46L)</b>				
1-b	610 294 2637	BUTTON U/D-MA8A		412 062 4009	SPECIAL SCREW			
1-c	610 293 5875	CAP BUTTON-MA8A		<b>(For Model PLC-XP41/XP41L)</b>				
2	610 293 5547	COMPL, STAND LEG-MA8A		412 062 3705	SPECIAL SCREW			
3	610 293 5561	CABINET TOP-MA8A	44	411 098 1402	SCR S-TPG BIN 4X10			
4	610 296 5667	CABINET FRONT SERVICE-MA8	<b>SCREWS-CABINET-</b>					
5	610 293 5585	CABINET FRONT A-MA8A	45	411 174 9308	BOLT HEX-SCT+SW+W 2.5X6			
6	610 297 3921	CABINET BOTTOM-MA8AA	46	411 174 9407	BOLT HEX-SCT 2.5X6			
7	<b>(For Model PLC-XP46 only)</b>		47	411 030 7301	SCR BIN 2X6			
	610 294 9360	CAP LENS-MA8A <b>(For Model PLC-XP41 only)</b>	<b>SCREWS-CHASSIS-</b>					
	610 277 2203	CAP LENS-M6SAA	45	<b>(For Model PLC-XP46 only)</b>				
8	610 296 5872	COVER CABINET FRONT SRV-M	645 047 2770	ASSY, LENS, PROJECTION (Including Key No. 51-a, b)				
9	610 294 5225	DEC RING-MA8A	51-a	645 020 7570	MOTOR, LENS DC 0.5W			
10	610 293 5899	DEC INLAY RC-MA8A	51-b	645 023 0202	MOTOR, LENS DC 0.2W			
11	610 293 5912	DEC INLAY LED-MA8A	51	<b>(For Model PLC-XP41 only)</b>				
12	610 293 5929	DEC AV SHEET-MA8A	645 043 7144	ASSY, LENS, PROJECTION				
13	610 293 5936	DEC SHEET RC-MA8A	51-a/b	645 032 8664	MOTOR, LENS(Z, F) DC 0.2W			
14	610 293 5608	HANDLE-MA8A	52	645 041 3711	ASSY, PRISM(PBS)			
15	610 293 5615	PANEL AV-MA8A	53	<b>(For Model PLC-XP46/XP46L)</b>				
16	610 293 5622	PANEL FAN-MA8A	610 299 2700	ASSY, LCD PNL/PRISM-MA8AA (Including Key No. 53-a, b, c, d)				
17	610 293 9972	SPACER LEG-MA8A	53	<b>(For Model PLC-XP41/XP41L)</b>				
18	645 048 6043	BADGE, SANYO*35.0X7.5L35.0	610 299 2717	ASSY, LCD PNL/PRISM-MB8AA				
19	610 289 1812	BADGE V MARK S-MK6A	53-a	645 052 6800	POLARIZED GLASS(OUT/R)			
20	610 297 7929	PACER COVER NWMG-MA8AA	53-c	645 054 8932	POLARIZED GLASS(OUT/G)			
21	610 297 7936	SPACER COVER SCREW NWMG-M	53-b	645 052 6824	POLARIZED GLASS(OUT/B)			
<b>CHASSIS PARTS</b>			53-d	645 055 0003	OPTICAL FILTER (WV-KC)			
23	610 300 0183	COMPL, HOLDER LNS-MA8AA (Including Key No. 21-a, b)	54	645 024 9037	LENS, CONDENSER			
23-a	610 294 6956	PWB, LNS SENSOR MA8A	55	645 047 2831	LENS, INTEGRATOR(IN)			
23-b	645 048 6128	ASSY, MOTOR (MA8A)	56	645 047 2848	LENS, INTEGRATOR(OUT)			
24	610 293 5844	ASSY, PANEL NET A-MA8A	57	645 047 2855	LENS, CONDENSER(IN)			
25	610 293 5851	ASSY, PANEL NET B-MA8A	58	645 047 2862	LENS, CONDENSER(OUT)			
26	610 293 6131	MOUNTING SHAFT-MA8A	59	645 047 2879	LENS, CONDENSER(R)			
27	610 293 6162	MOUNTING POW BTM-MA8A	60	645 047 2886	LENS, RELAY(IN)			
28	610 299 5381	MOUNTING POW TOP-MA8AA	61	645 047 2893	LENS, RELAY(OUT)			
29	610 293 6186	MOUNTING DUCT BTM-MA8A	62	645 050 7502	LENS, CONDENSER (G)			
30	610 293 6193	MOUNTING DUCT TOP-MA8A	63	645 044 2575	MIRROR(R)			
31	610 293 6209	MOUNTING DUCT B COVER-MA8	64	645 047 7508	MIRROR(W-COLD)			
32	610 293 6216	MOUNTING DUCT FAN A-MA8A	65	645 047 7515	MIRROR(B)			
33	610 293 6223	MOUNTING DUCT PBS-MA8A	66	645 053 8308	OPTICAL FILTER(UV CUT431)			
34	610 293 6230	MOUNTING TEMP SW-MA8A	67	645 052 6770	POLARIZED GLASS(IN/R)			
35	610 293 6650	MOUNTING DUCT FAN B-MA8A	68	645 054 8895	POLARIZED GLASS(IN/G)			
36	610 293 9934	MTG COVER LNS-MA8A	69	645 052 6794	POLARIZED GLASS(IN/B)			
37	610 297 4003	MOUNTING DUCT LMP TOP-MA8	70	645 050 7892	DICHROIC MIRROR (G)			
38	610 297 4010	MOUNTING DUCT LMP BTM-MA8	71	645 047 2923	DICHROIC MIRROR (B)			
39	610 299 2922	OPTICAL BASE BTM-MA8AA						
40	610 293 4847	OPTICAL BASE TOP-MA8A						
41	610 299 2939	OPTICAL LAMP-MA8AA						

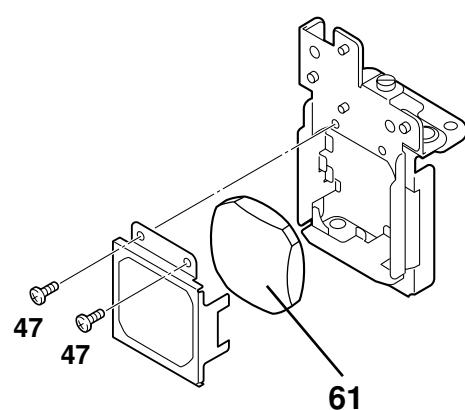
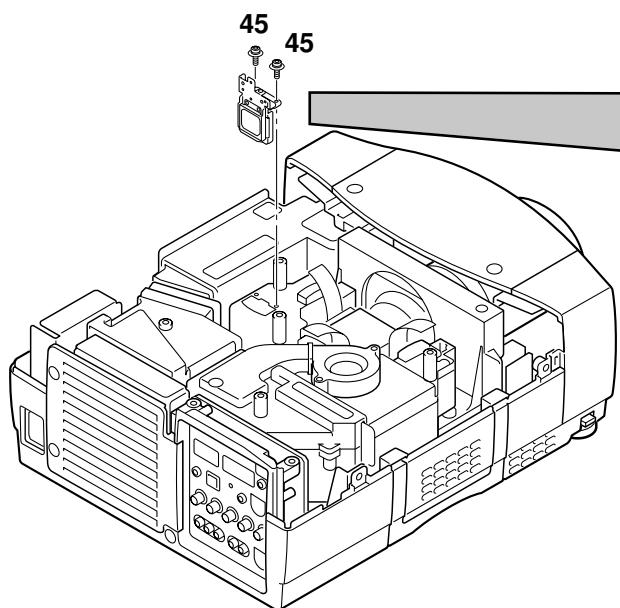
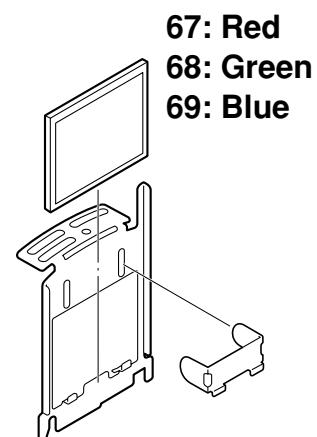
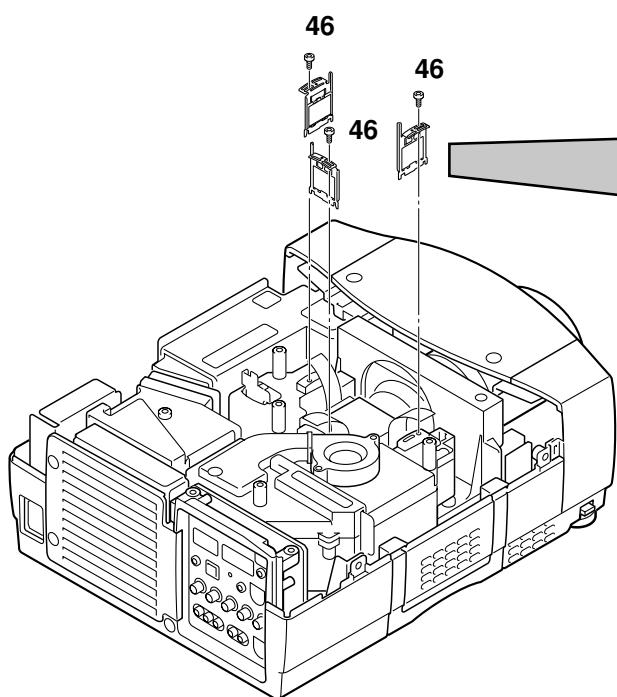
## Mechanical Parts List

**51****51-b****51-a****43****43****23****23-a****23-b**

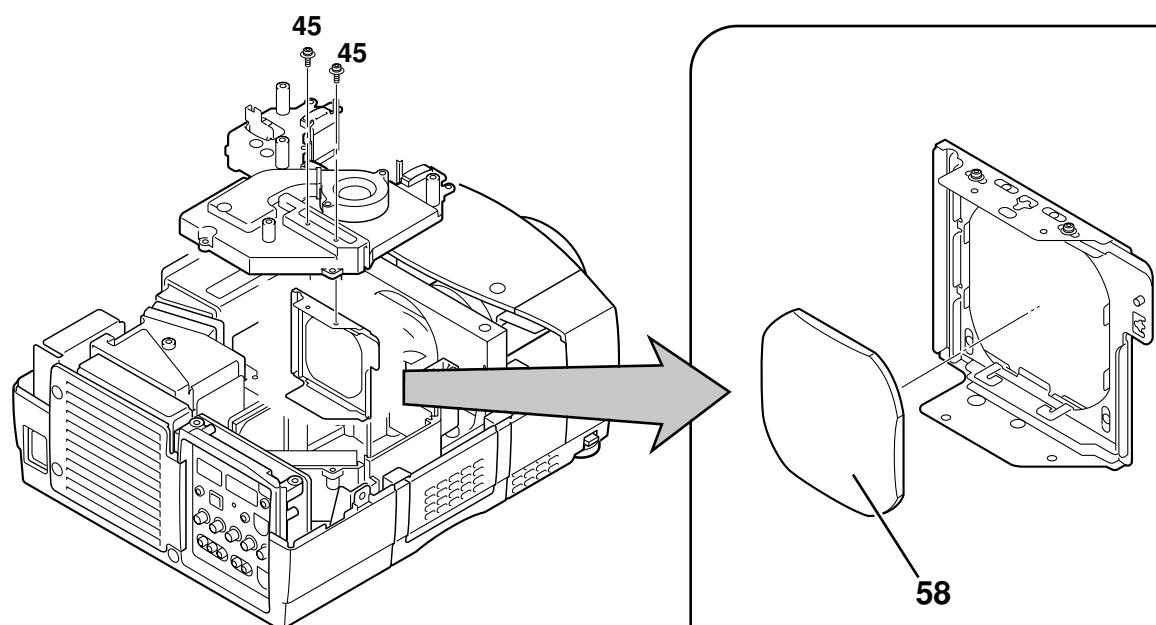
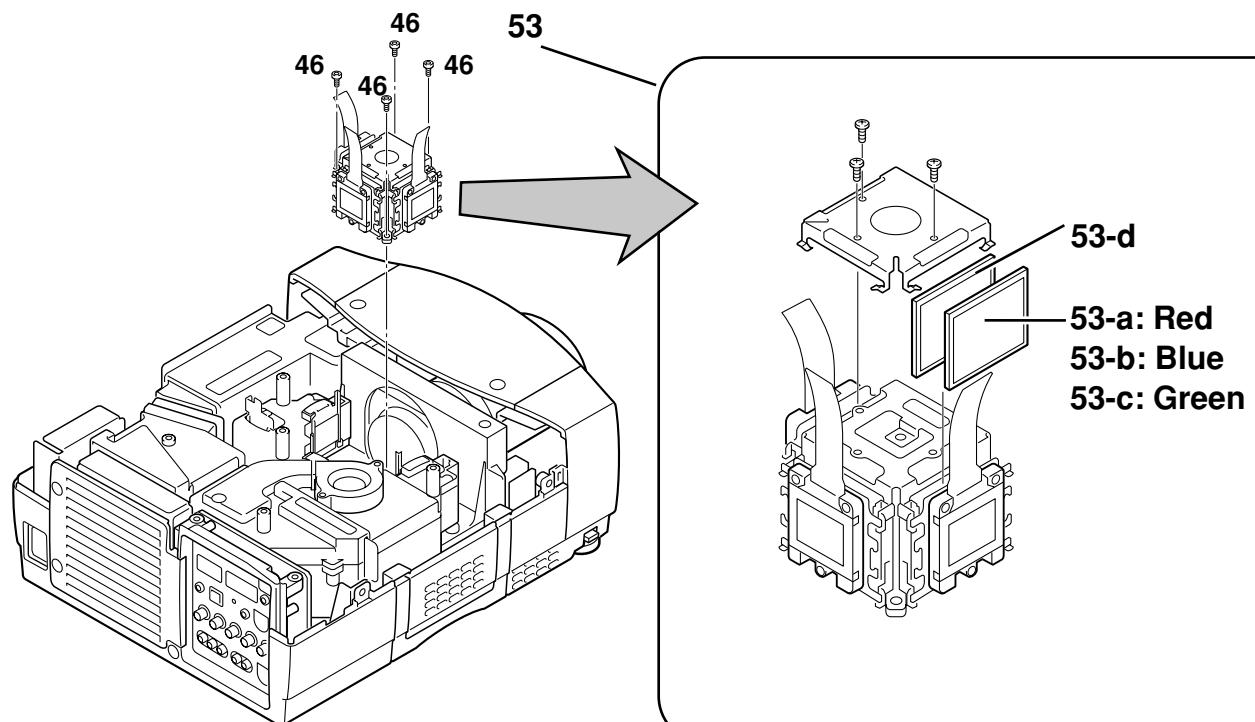
# ■ Optical Parts List

MA8-XP4600, MA8-XP46L00, MB8-XP4100, MB8-XP41L00

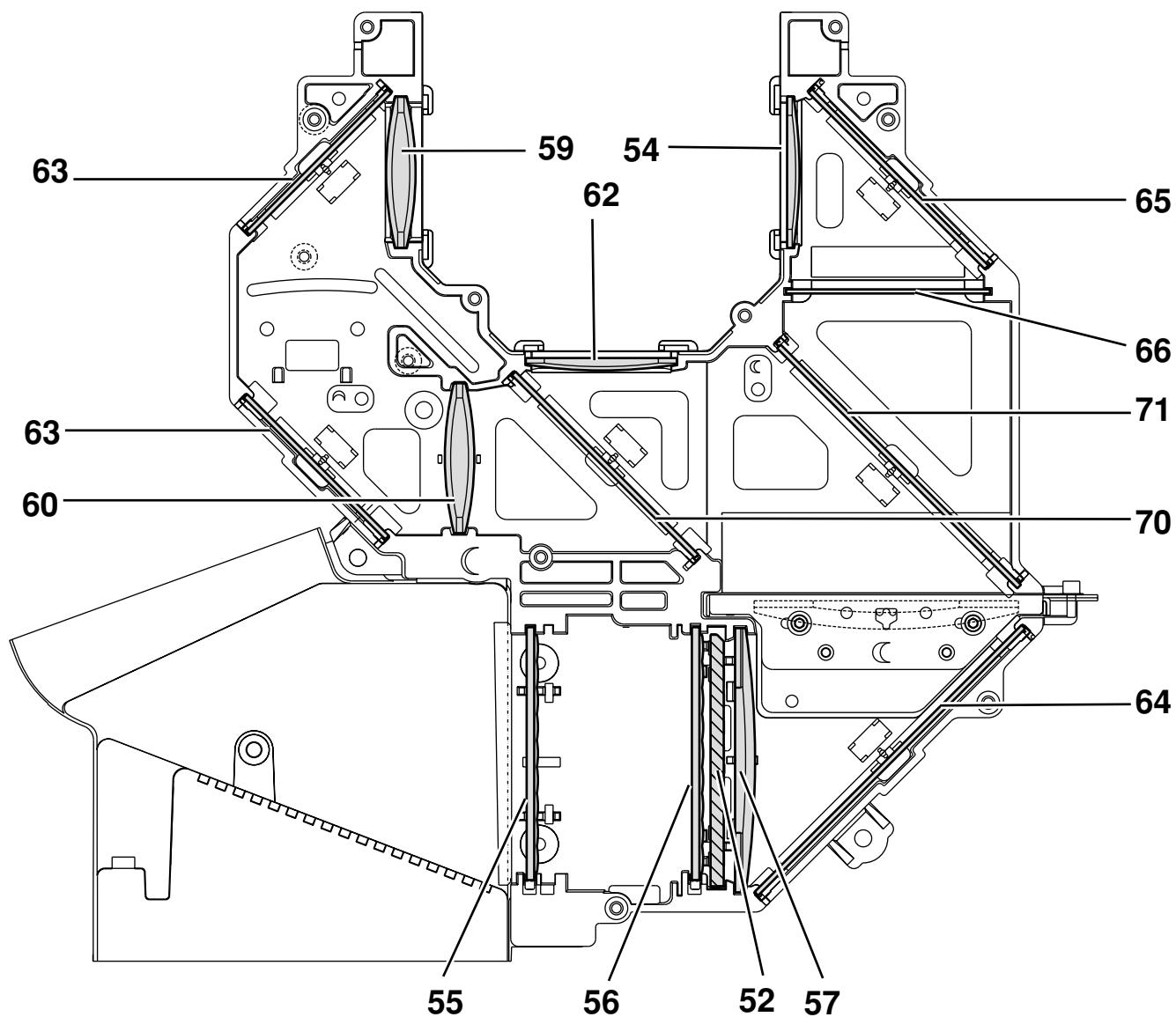
Note: Parts order must contain Chassis No., Part No., and Descriptions.



## Optical Parts List



## Optical Parts List

**CAUTION:**

Part must be placed in specified direction when replacing the optical parts. Please see "Optical Parts Disassemblies" for further instructions.



**SANYO**

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### Schematic Diagrams Printed Wiring Board Drawings

Model	Chassis No.
PLC-XP46	MA8-XP4600
PLC-XP46L	MA8-XP46L00
PLC-XP41	MB8-XP4100
PLC-XP41L	MB8-XP41L00

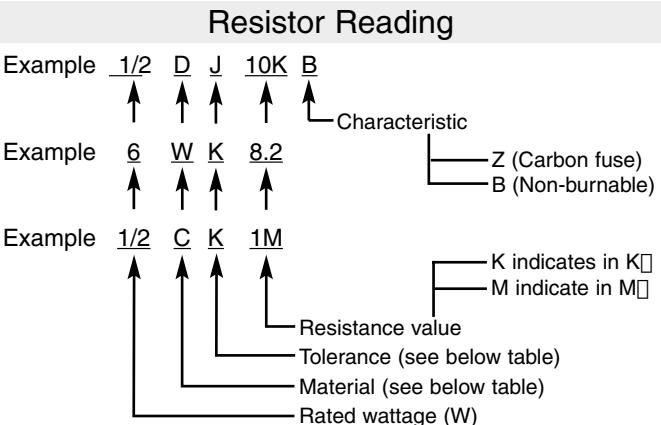
This model is constructed by following boards, and the information of part numbers and values indicated on these diagrams are at the beginning of production. To improve the performance, there may be some differences to the actual set. When you order the service parts, use service parts code mentioned on the parts list in this service manual.

Board Name	Board Number
CONTROL BOARD	1AA0B10C3390A
RC FRONT BOARD	1AA0B10C3390C
CONNECT BOARD	1AA0B10C3390D
SENSOR 1 BOARD	1AA0B10C3390E
MAIN BOARD	1AA0B10C36200
POWER BOARD	1AA0B10C3630A
SUB POWER BOARD	1AA0B10C3630B
DRIVE BOARD	1AA0B10C3630C
FILTER BOARD	1AA0B10C3630D
A/V BOARD	1AA0B10C3670A
I/F BOARD	1AA0B10C3670B

These schematic diagrams and printed wiring board drawings are a part of the service manual original for chassis No. MA8-XP4600, MA8-XP46L00, MB8-XP4100 and MB8-XP41L00, model PLC-XP46, PLC-XP46L, PLC-XP41 and PLC-XP41L. File with the service manual No. SM5110329.

## ■ Parts description and reading in schematic diagram

- The parts specification of resistors, capacitors and coils are expressed in designated code. Please check the parts description by the following code table.
- Some of transistors and diodes are indicated in mark for the substitution of parts name. Please check the parts name by the following code table.
- Voltages and waveforms were taken with a video color bar signal(1Vp-p at 75 ohms terminated) and controls to normal.
- Voltages were taken with a high-impedance digital voltmeter.



Note: Resistor which is indicated with resistance value only are 1/6W carbon resistor. Resistor which is indicated with material, tolerance and value are 1/4W rated wattage.

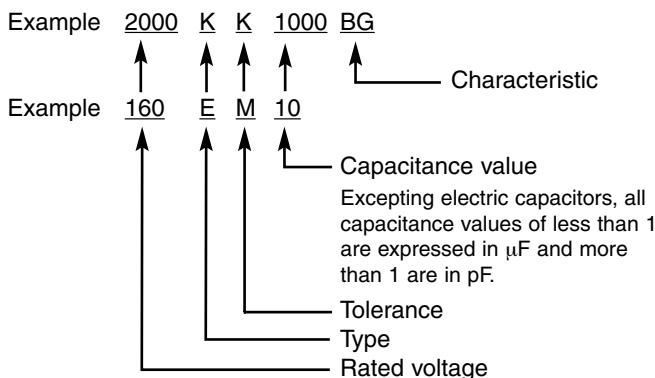
**Material table**

Mark	Material
D	Carbon
N	Metal film
S	Oxide metal film
C	Solid
G	Metal glaze
W	Wire wounding or cement
H	Ceramic
F	Fusible

**Tolerance table**

Mark	Tolerance
A	$\pm 0.05$
B	$\pm 0.1$
C	$\pm 0.25$
D	$\pm 0.5$
F	$\pm 1$
G	$\pm 2$
J	$\pm 5$
K	$\pm 10$
M	$\pm 20$
P	+5 -15
Z	used in 0 ohm

### Capacitor Reading



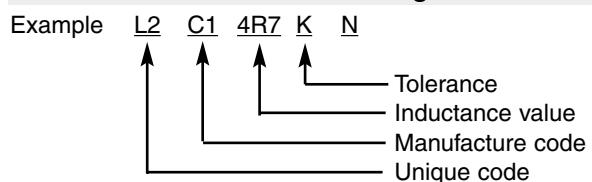
**Material table**

Mark	Material
E	Electrolytic
P	Electrolytic (non-polarized)
C	Ceramic (temperature compensation)
K	Ceramic
F	Polyester
N	Polypropylene
M	Metalized polypropylene
H	Metalized polypropylar
B	Ceramic (semiconductor)
G	Metalized polyestel
Y	Composite film
S	Styrol
T	Tantalum oxide solid electrolytic
U	Organic semiconductive electrolyte
D	Electric double layer electrolytic

**Tolerance table**

Mark	Tolerance
A	not specified
B	$\pm 0.1$
C	$\pm 0.25$
D	$\pm 0.5$
F	$\pm 1$
G	$\pm 2$
E	$\pm 2.5$
H	$\pm 3$
J	$\pm 5$
K	$\pm 0$
M	$\pm 20$
N	$\pm 30$
P	+100 -0
Q	+30 -10
T	+50 -10
U	+75 -10
V	+20 -10
W	+100 -10
X	+40 -20
Y	+150 -10
Z	+80 -20

### Coil Reading



Mark	Tolerance (nH)	Mark	Tolerance (%)
C	$\pm 0.25$	G	$\pm 2$
D	$\pm 0.5$	J	$\pm 5$
S	$\pm 0.3$	K	$\pm 10$
A	$\pm 0.2$	L	$\pm 15$
		M	$\pm 20$

### Diode/Transistor Type Reading

**Diode**

Mark	Type number
R	1S2076A, 1S2473, 1N4148
AA	1S2076A, 1S2473, 1SS133, 1N4148

**Transistor**

(1) NPN type

Mark	Type number			
--	2SC536	2SC945A	2SC1815	2SC1740S
AD	NF, NG	PA, QA	Y, GR	Q, R, S
AE	NF, NG	PA, QA, RA	O, Y, GR	Q, R, S

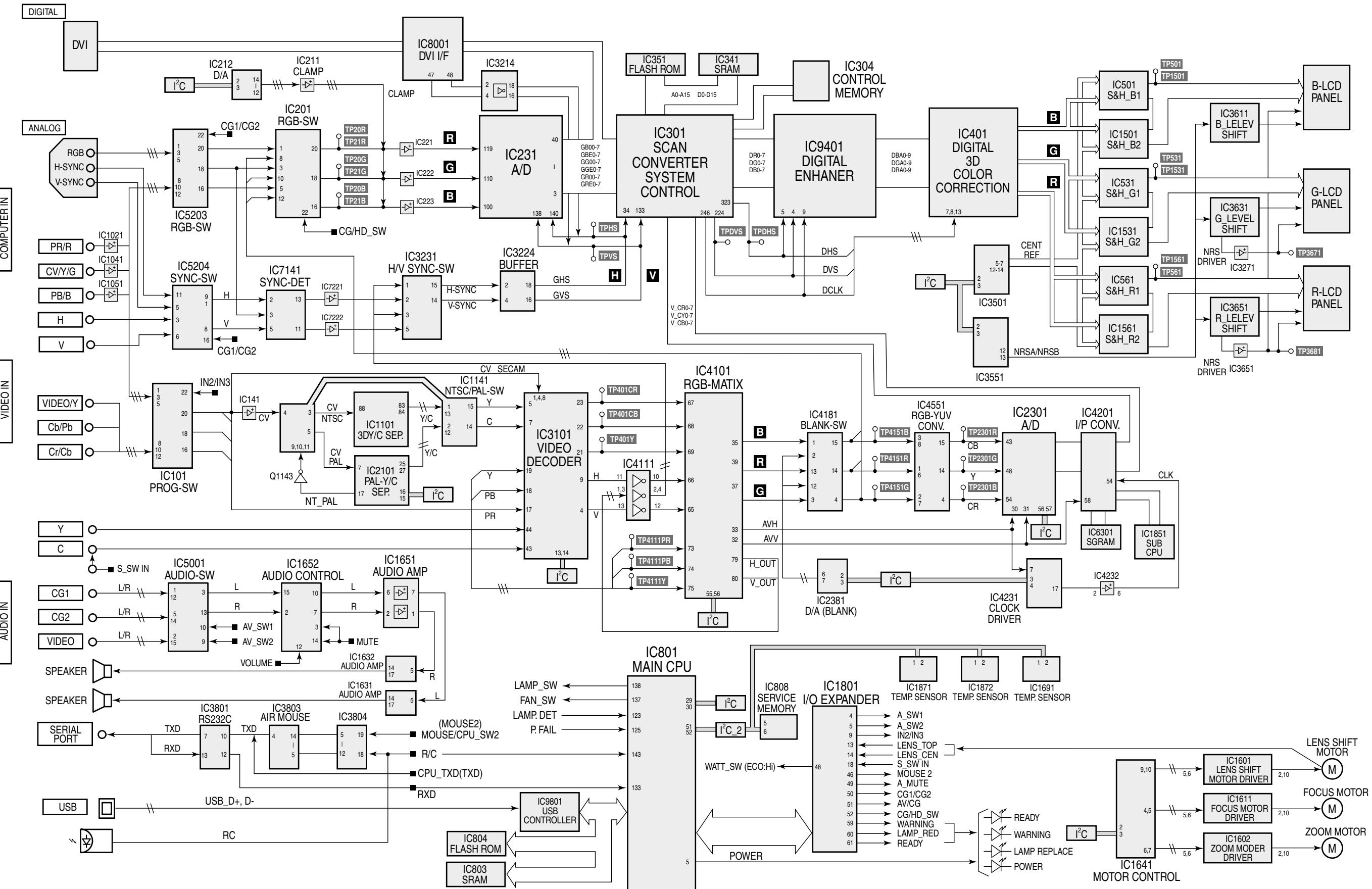
(2) PNP type

Mark	Type number			
--	2SA608	2SA564A	2SA1015	2SA933S
AB	NF	R	Y, GR	R
AC	NF	Q, R	O, Y, GR	Q, R

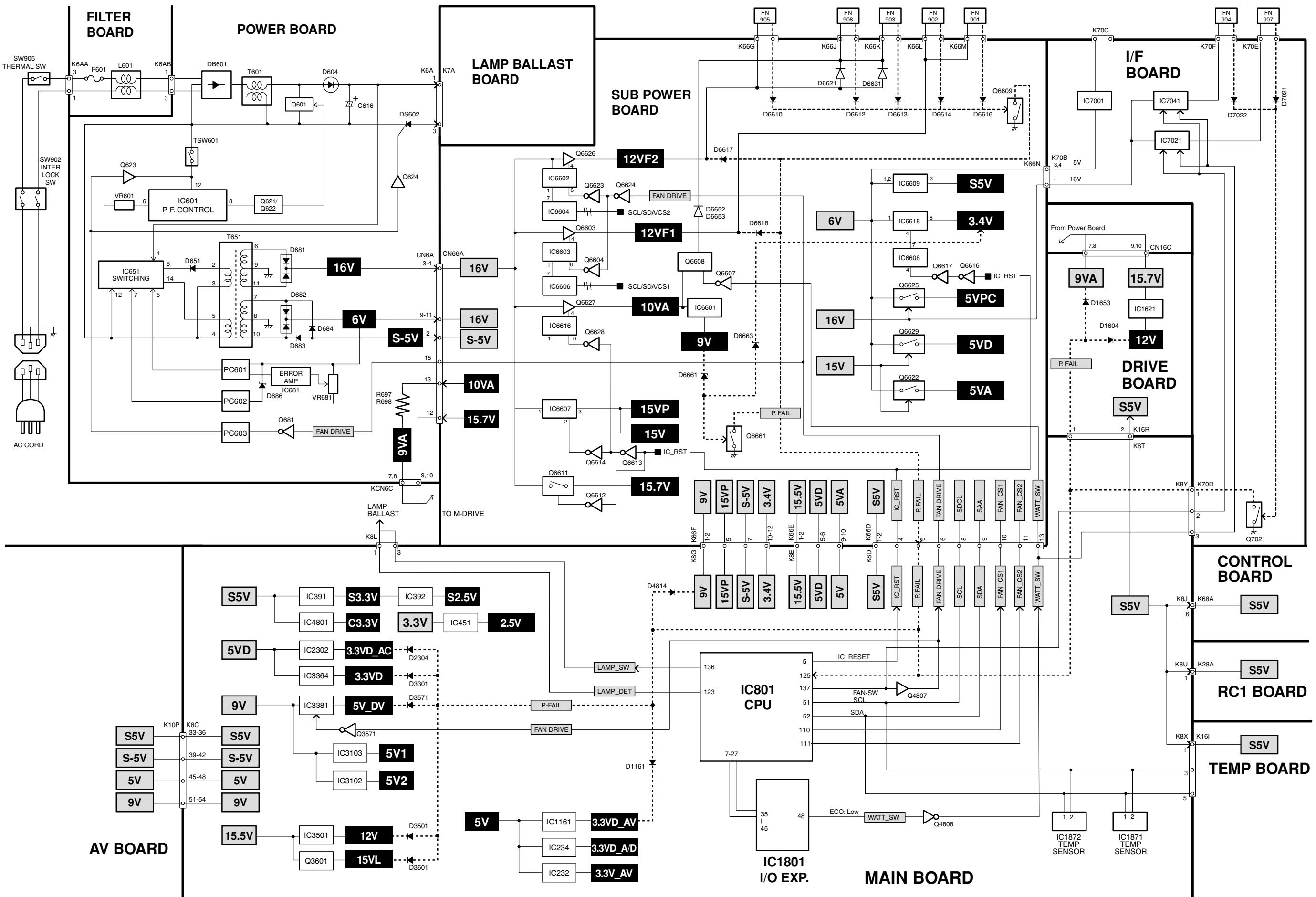
(3) Chip type

Mark	Type number				
--	2SA1179/N	2SA1037K	2SA1037AK	2SC2812/N	2SC2412K
AJ	M6, M7	R, S	R, S		
AH				L6, L7	R, S

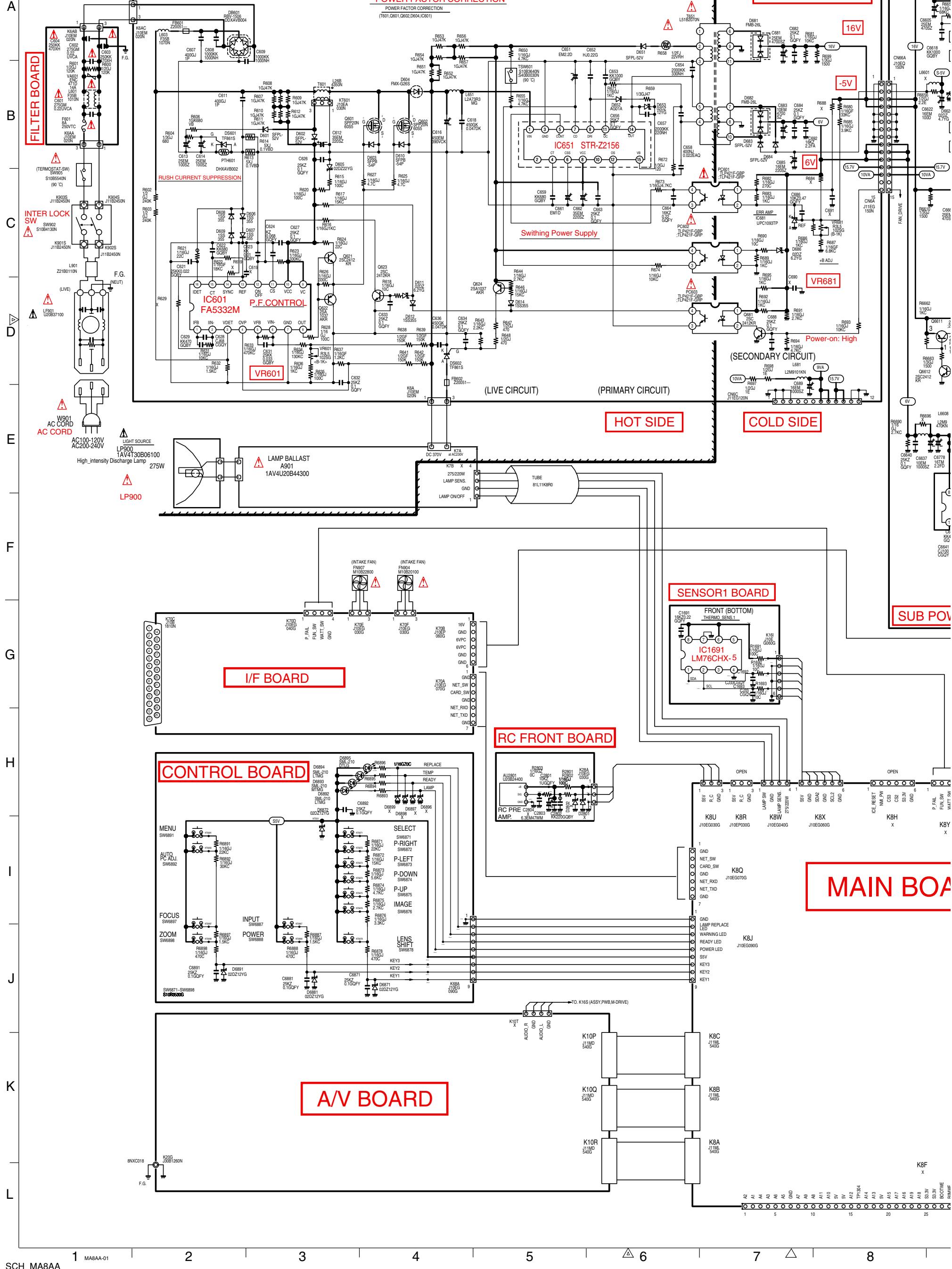
## ■ Circuit Block Diagram

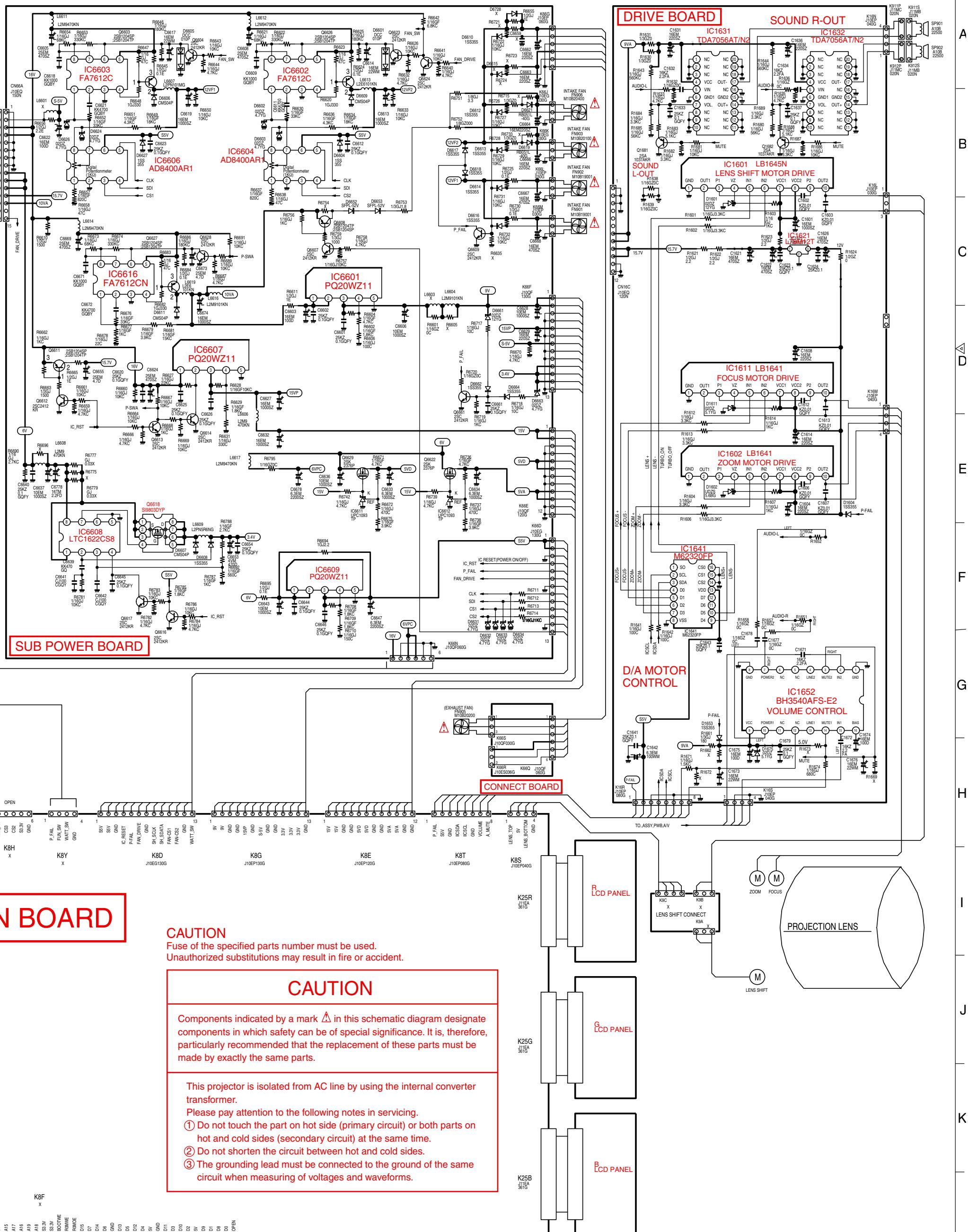


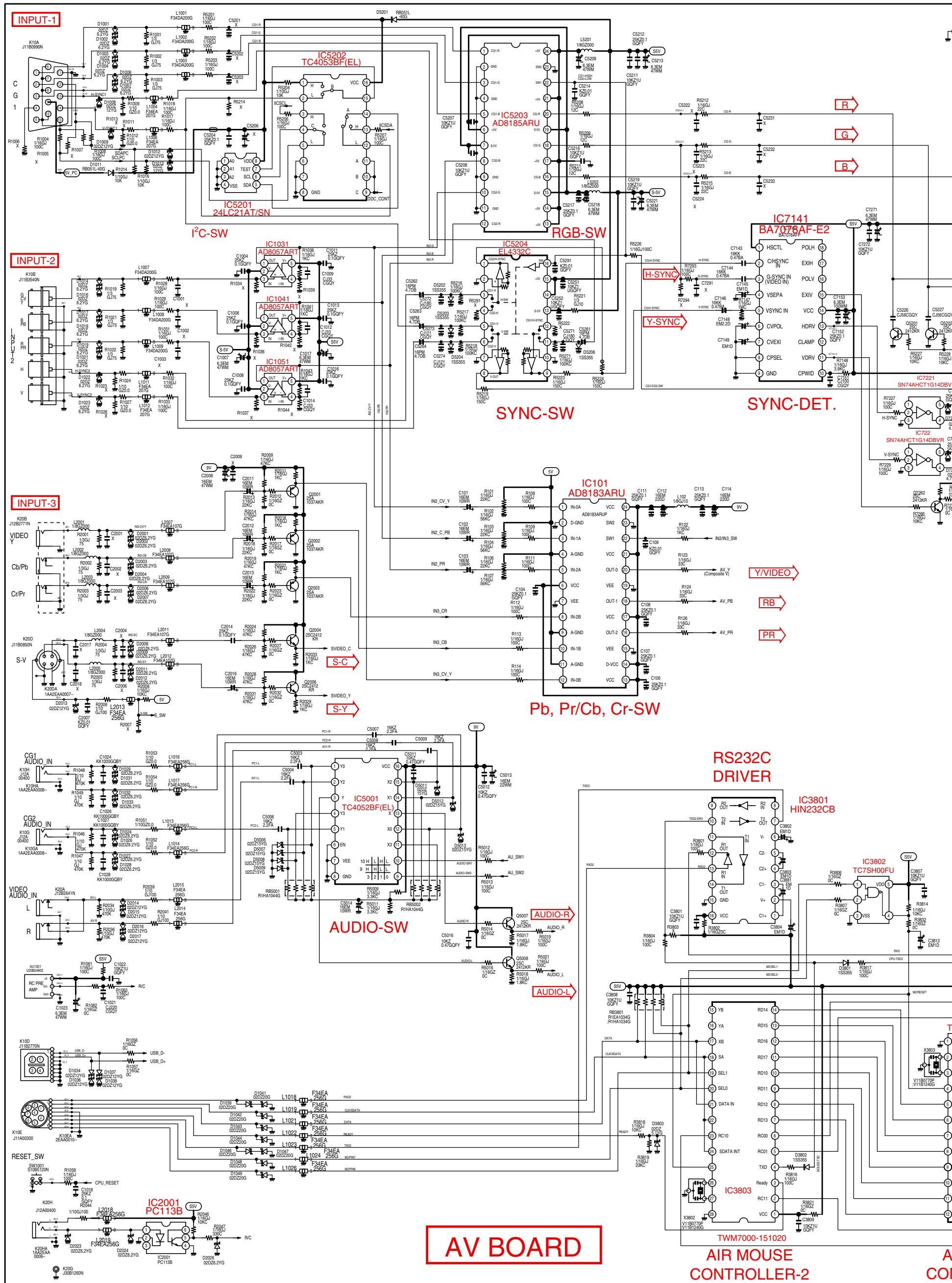
## ■ Power Supply Lines

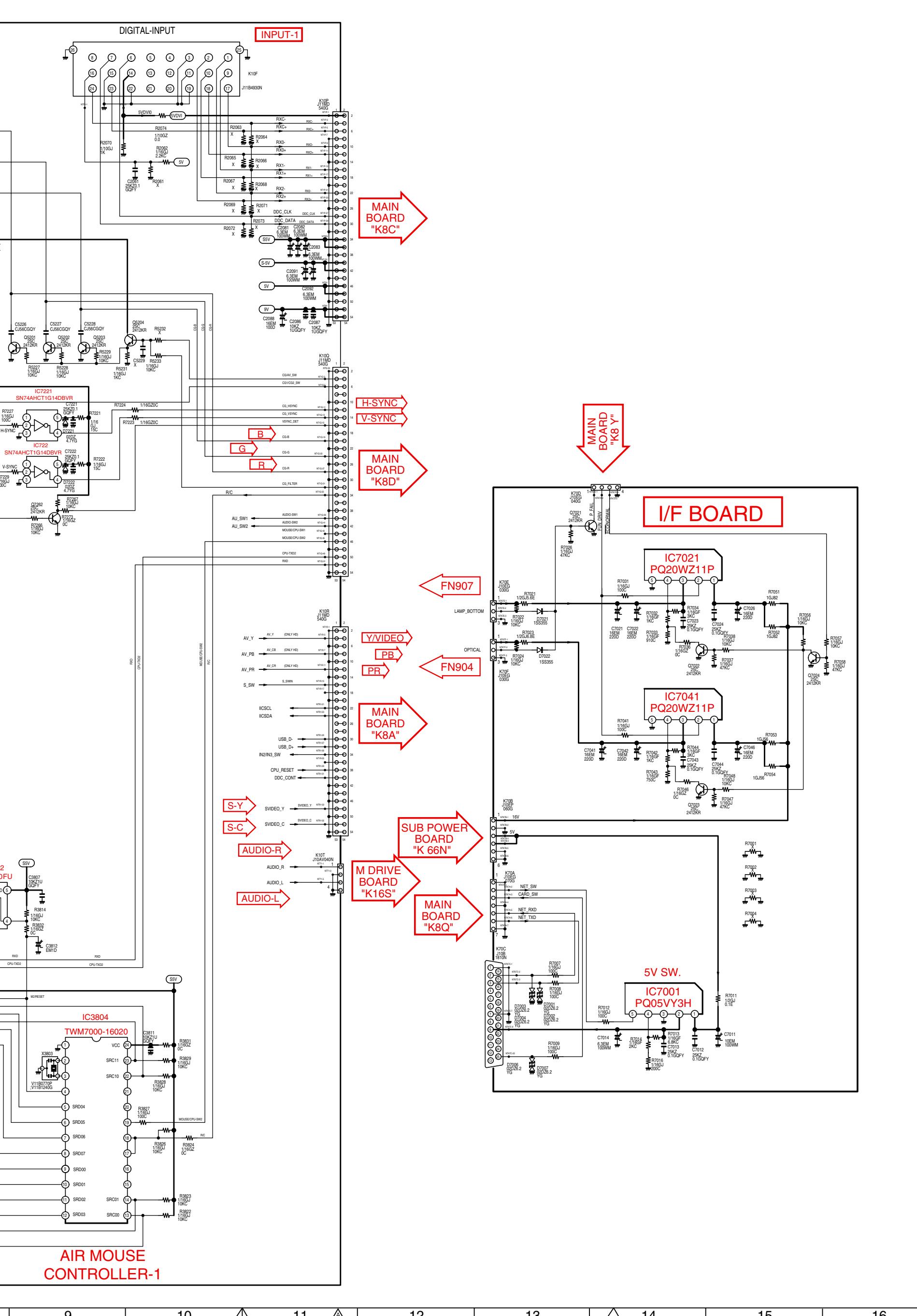


■ Schematic Diagrams

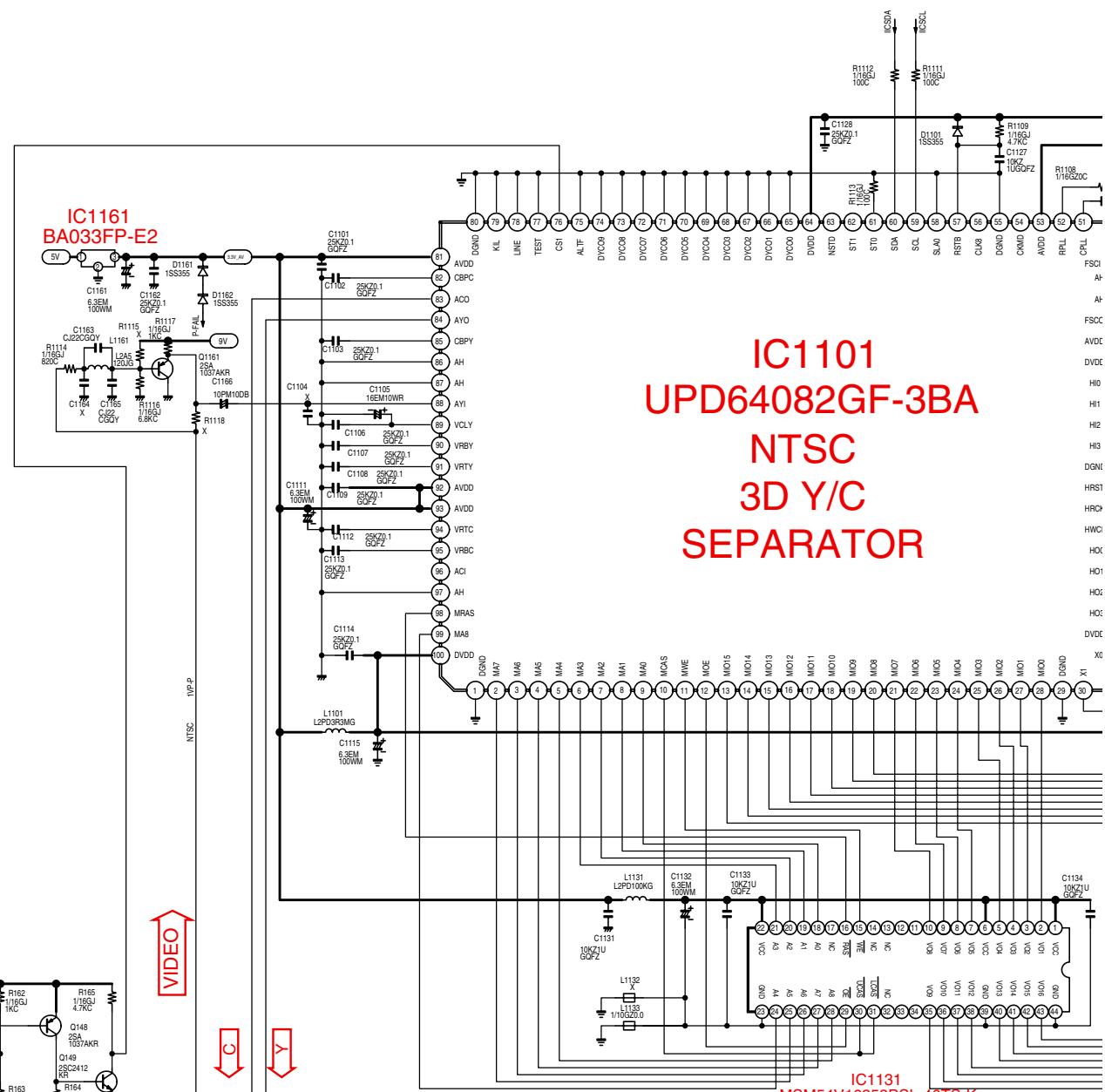




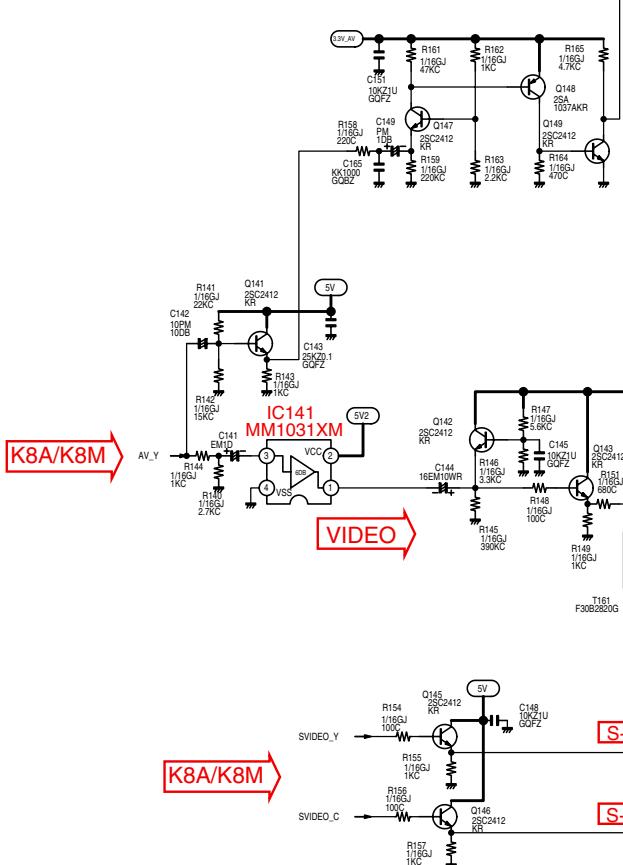




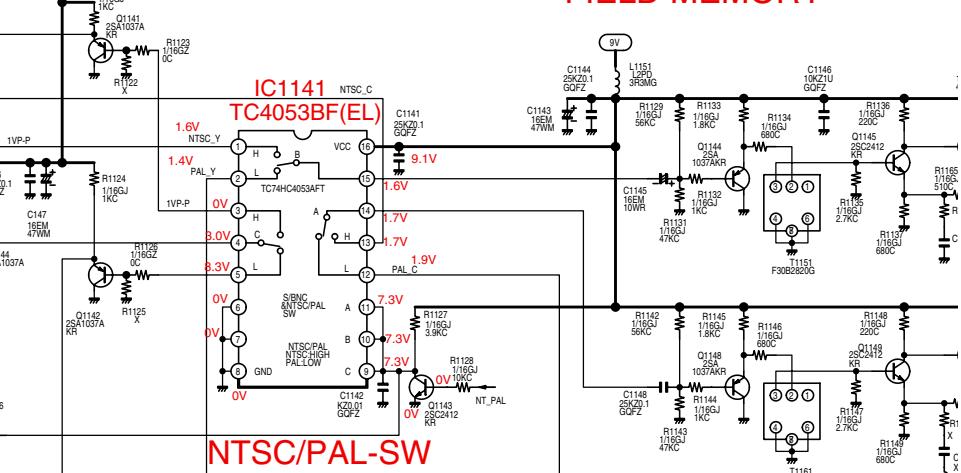
A



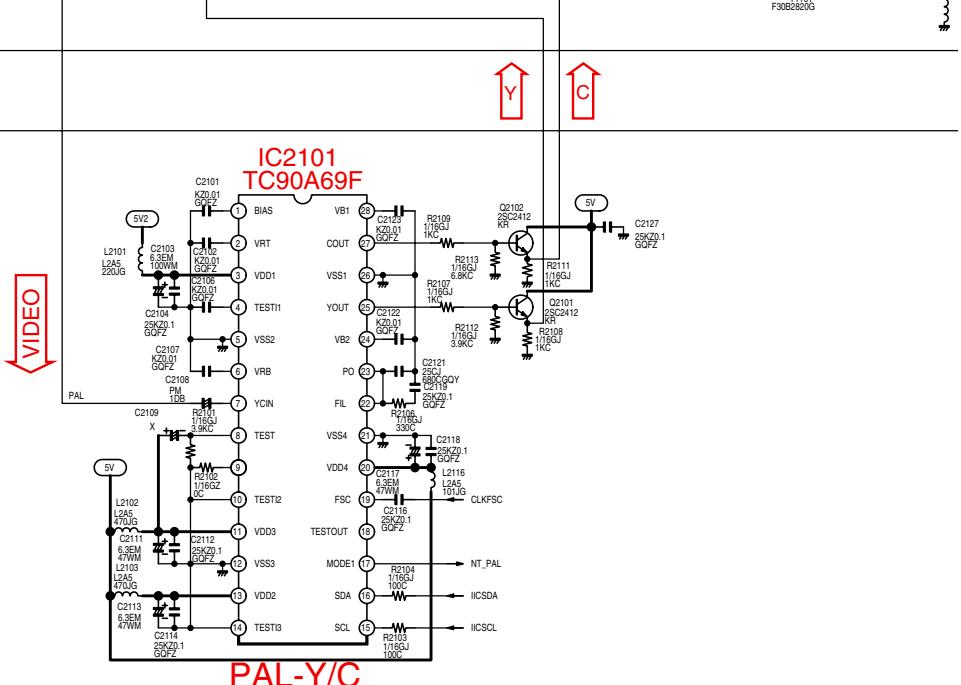
B



C



D



E

F

G

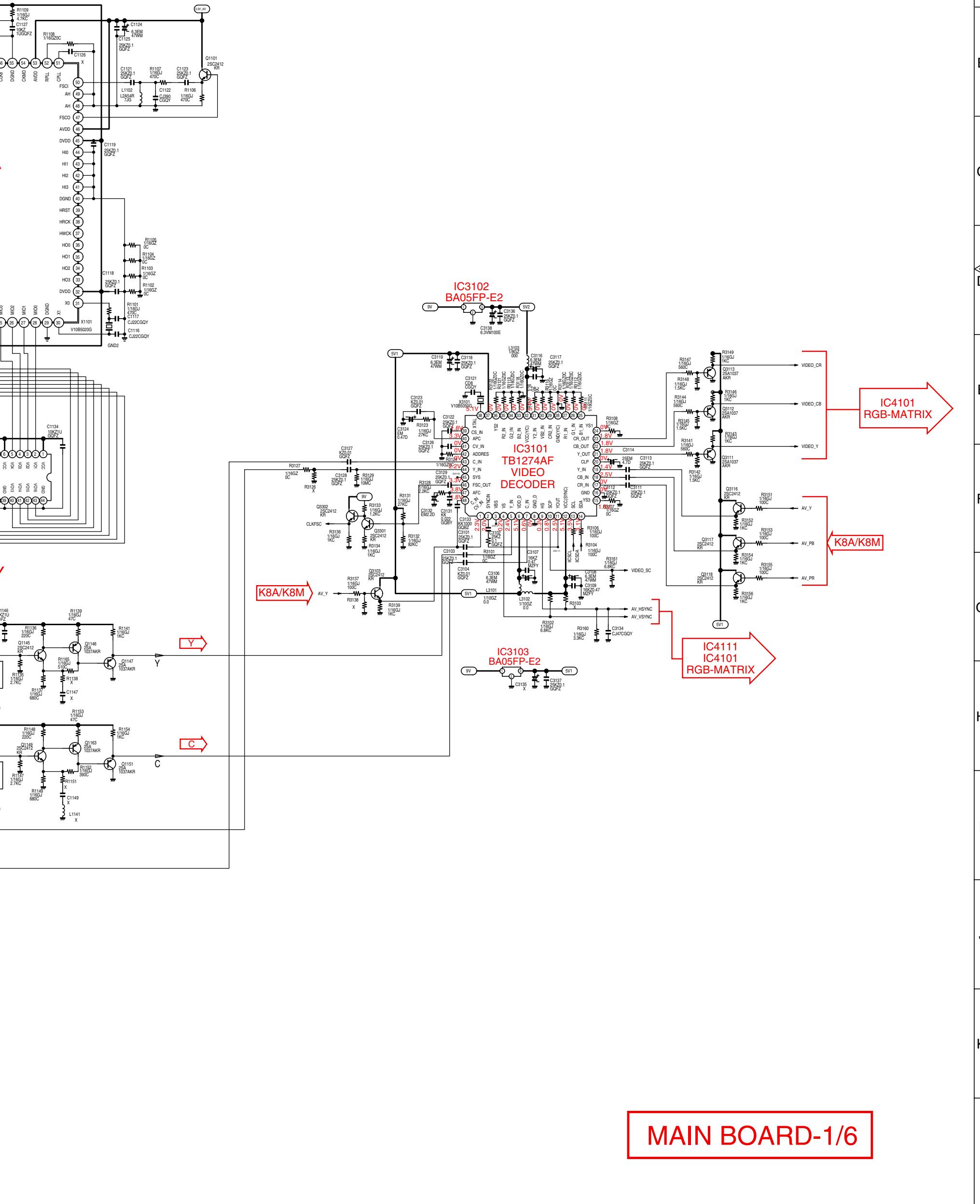
H

I

J

K

L



A

B

C

D

E

F

G

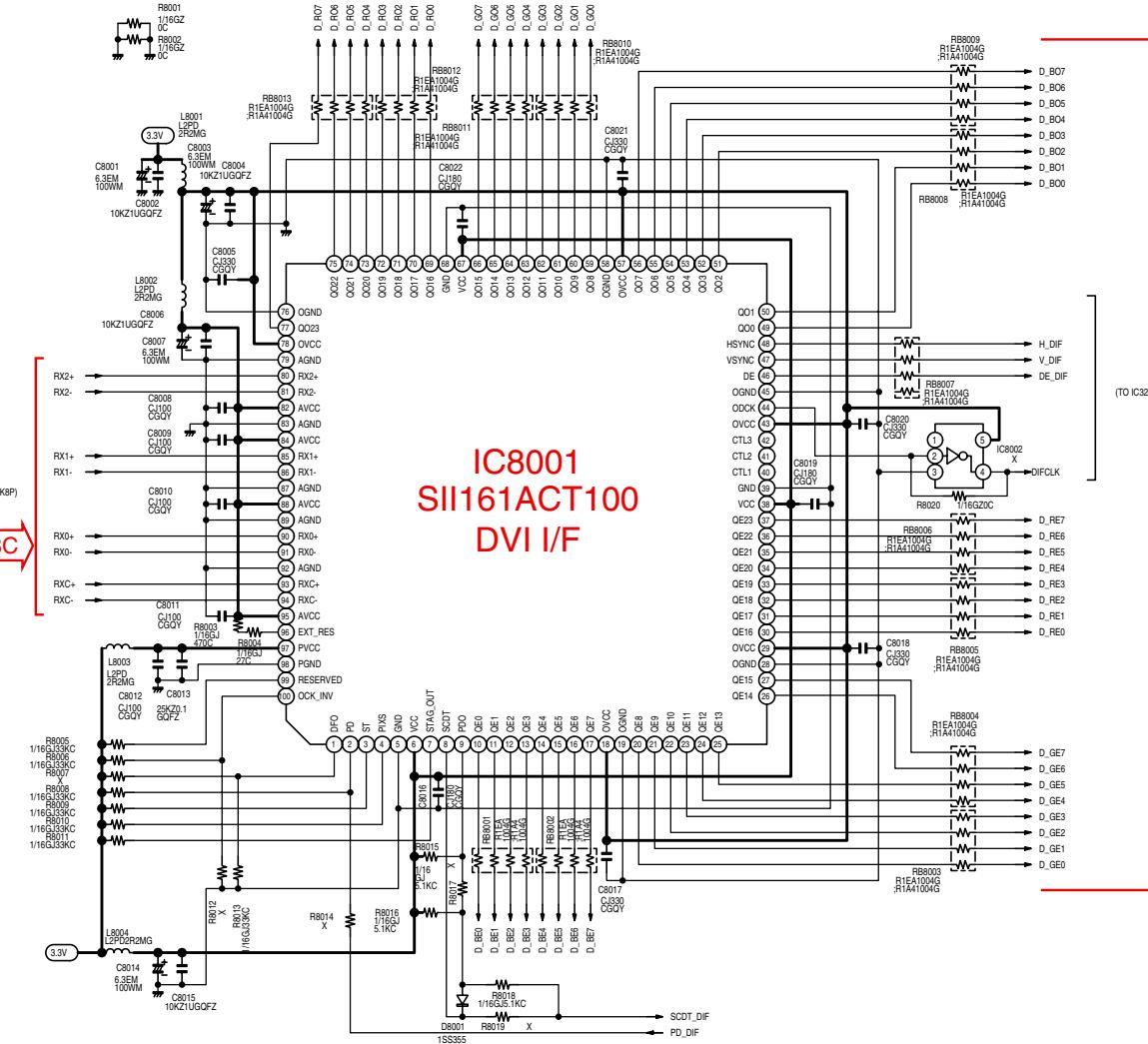
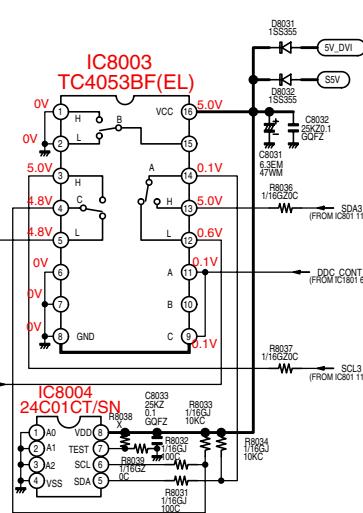
H

I

J

K

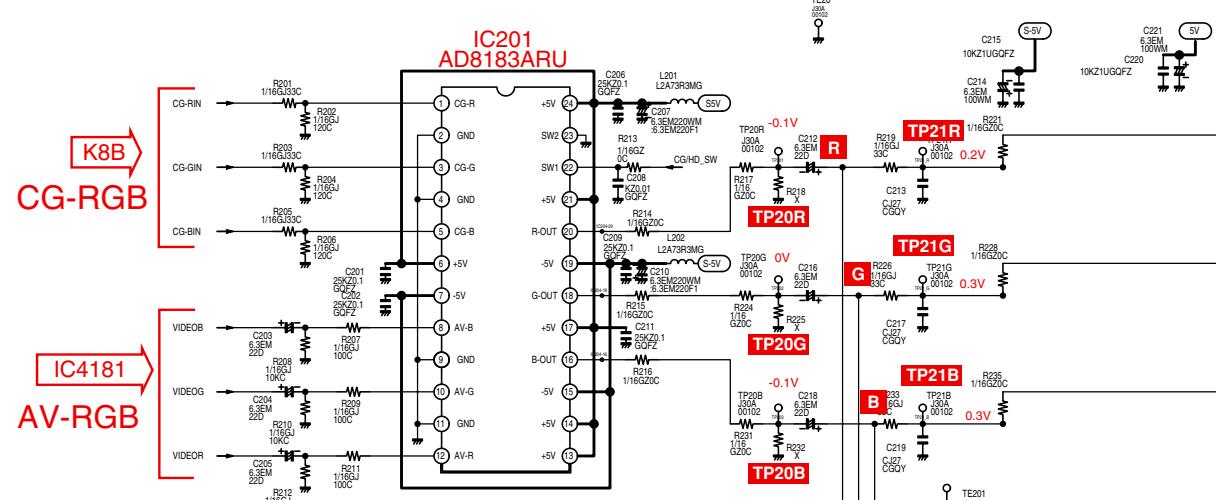
L

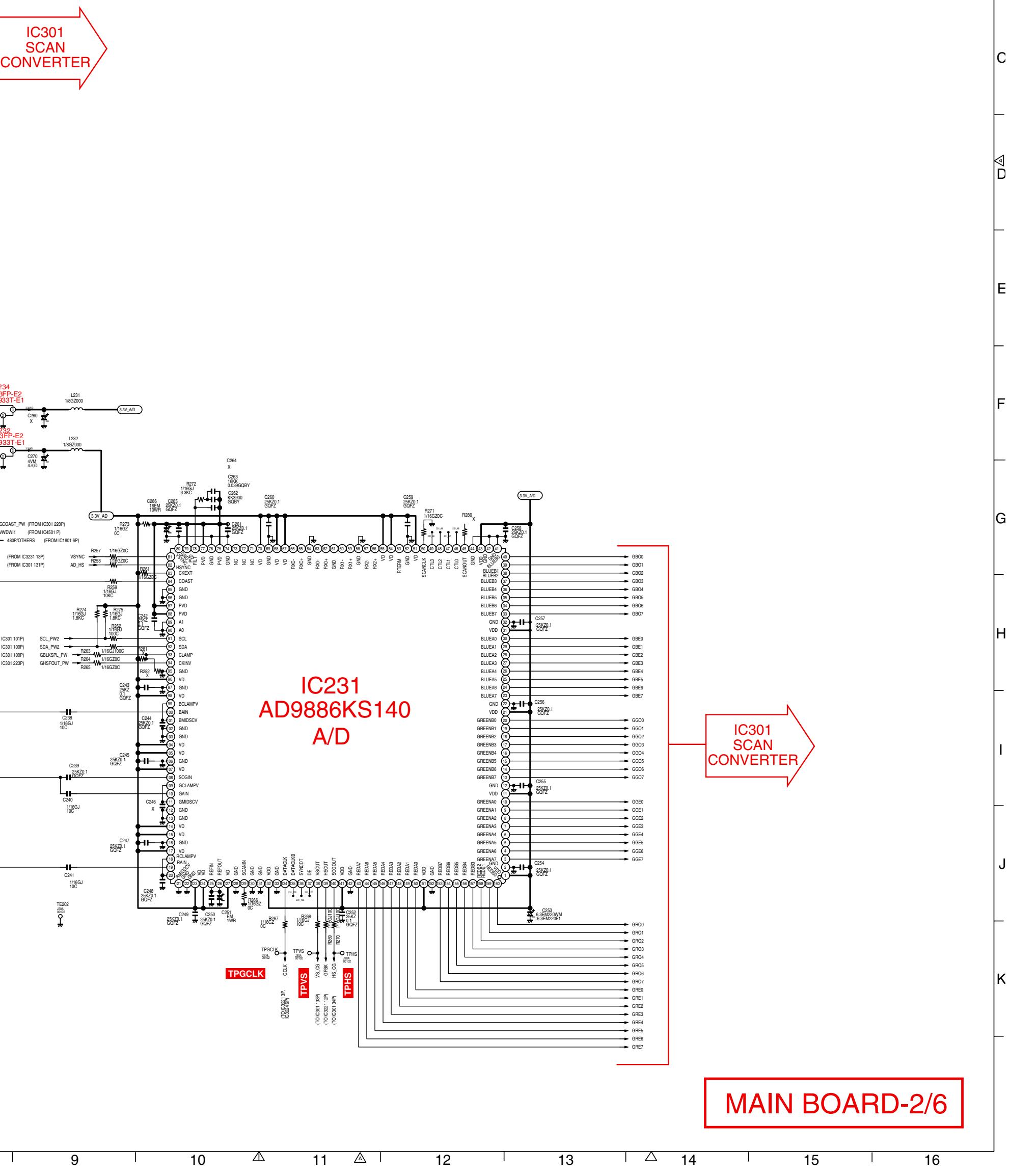


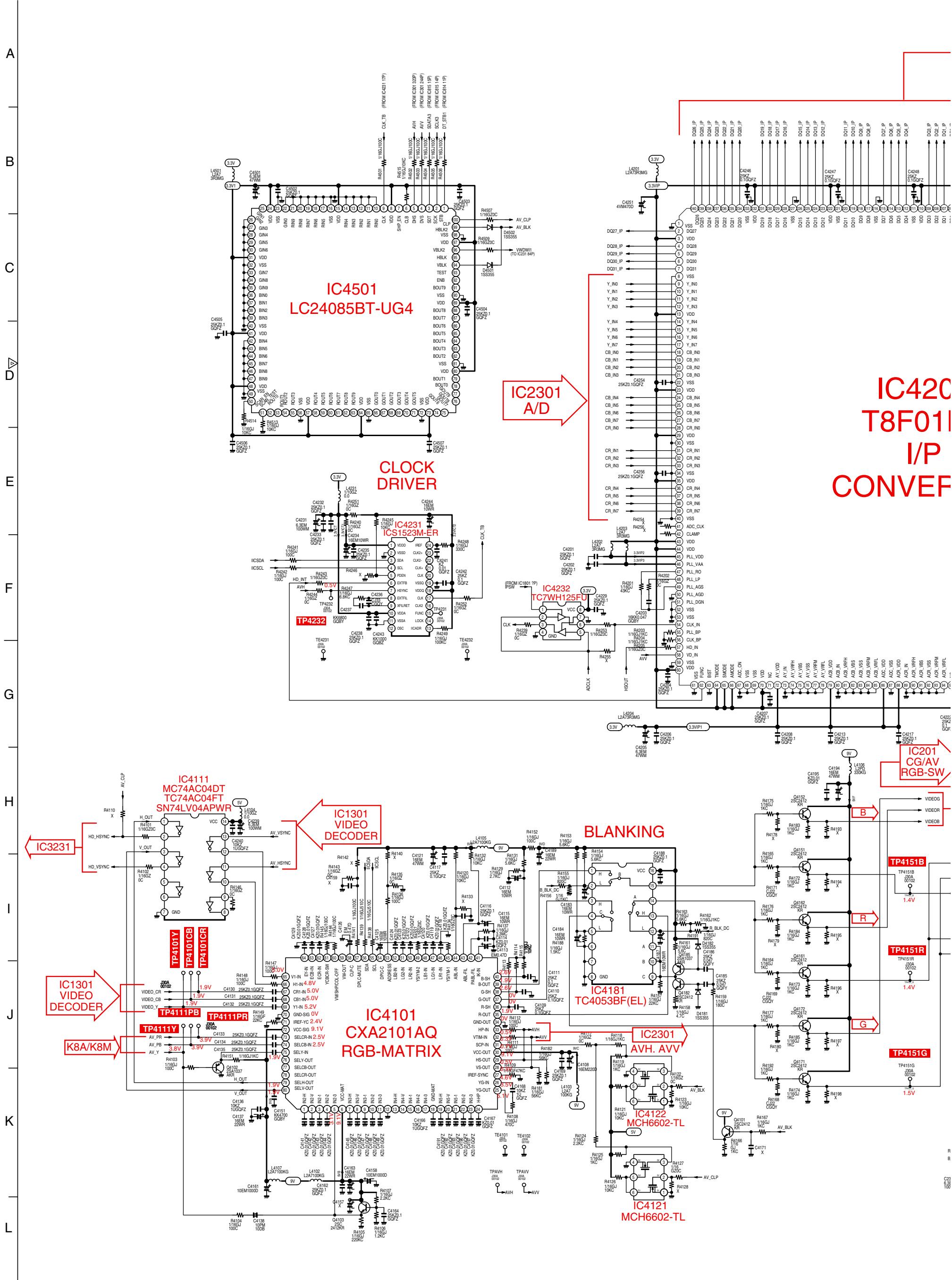
IC301  
SCAN  
CONVERTER

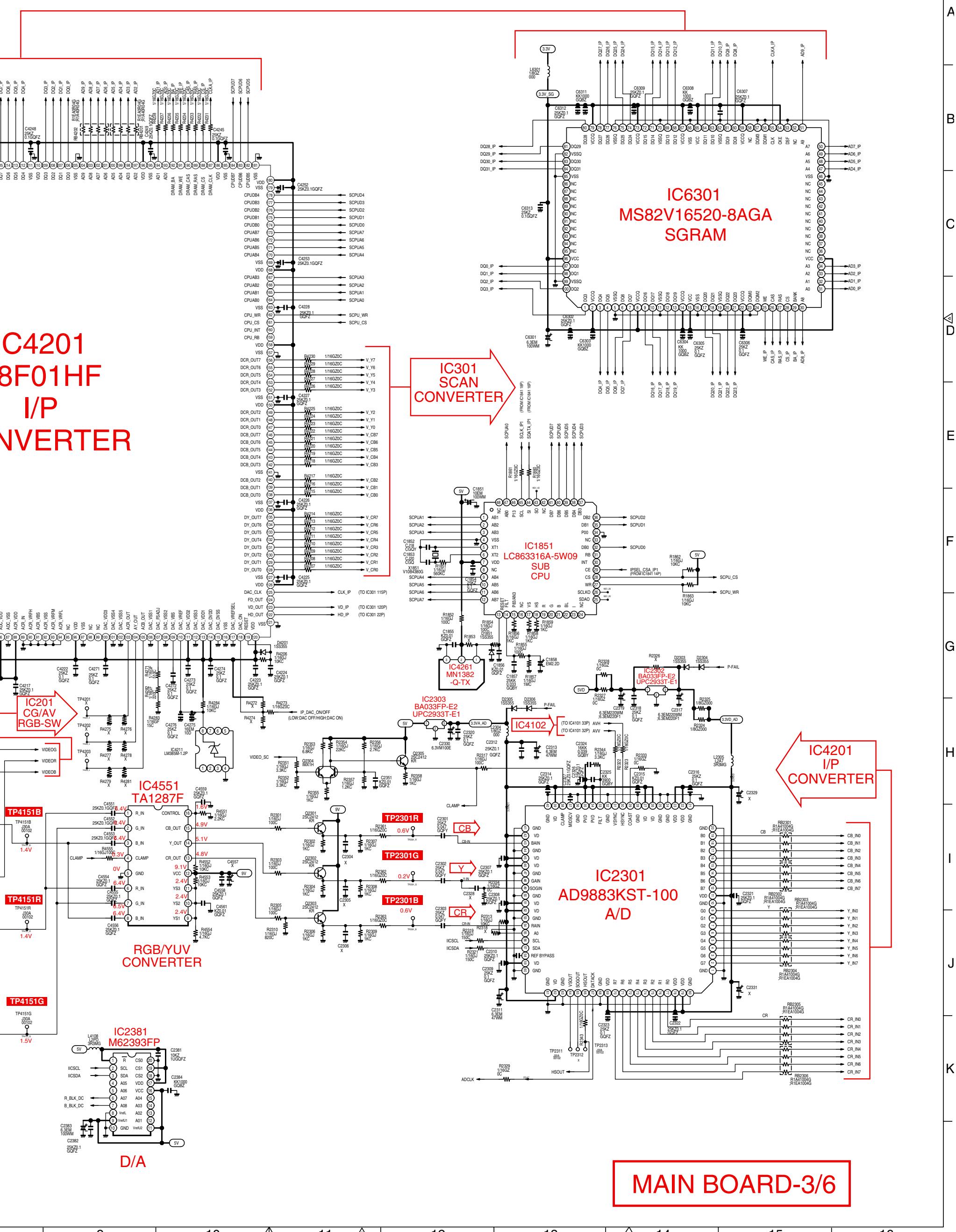


RGB-SW

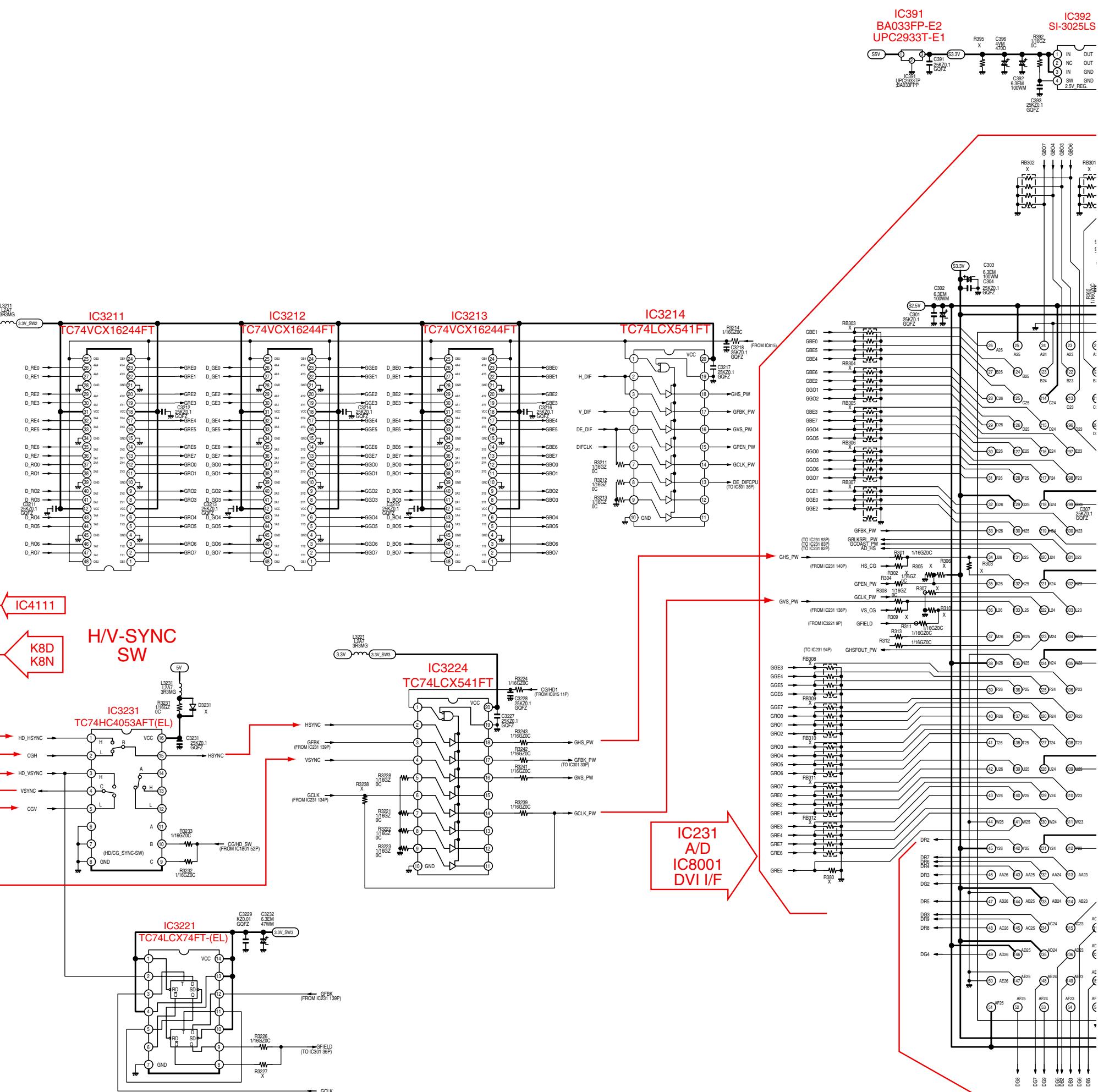


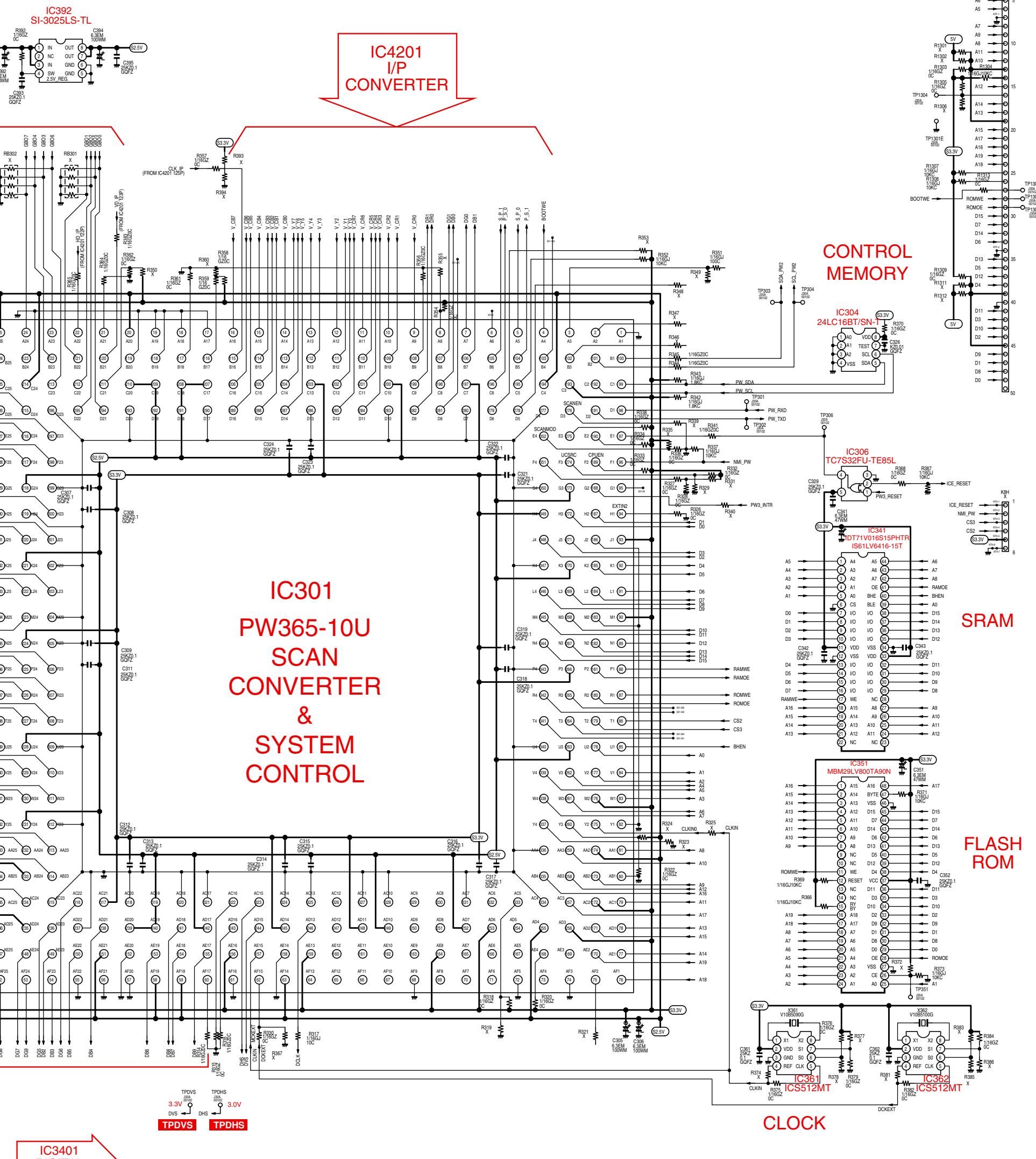




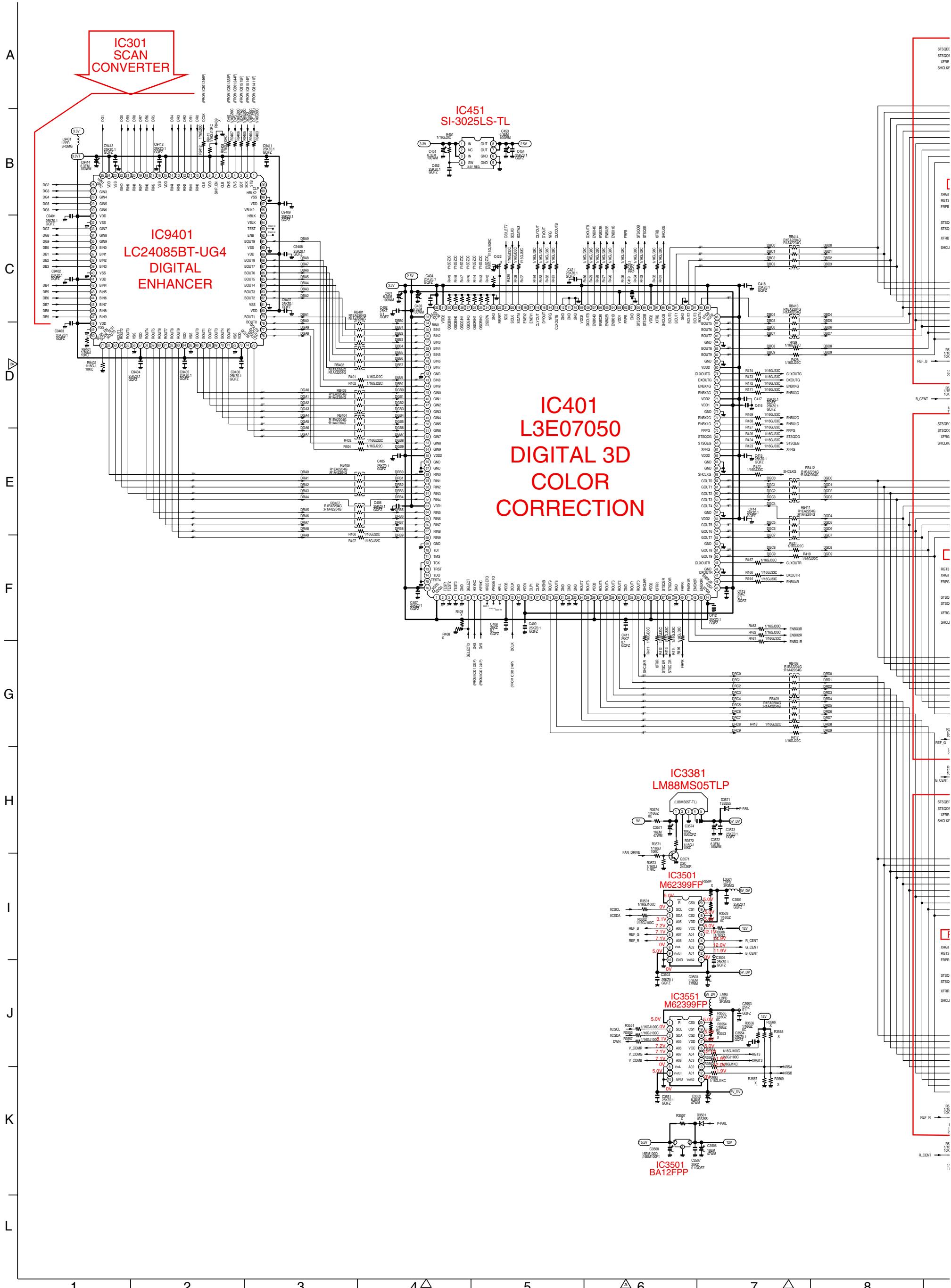


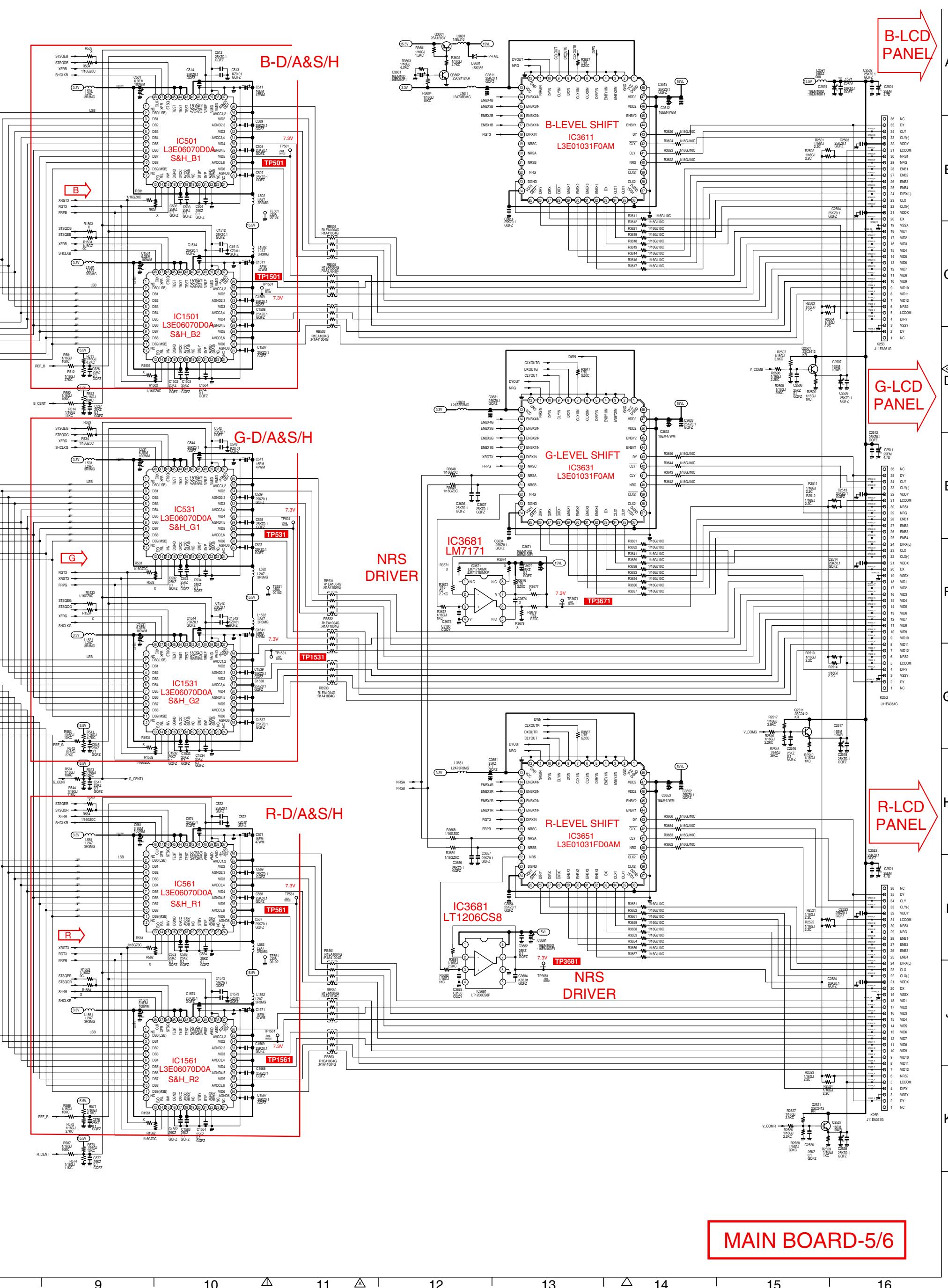
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L

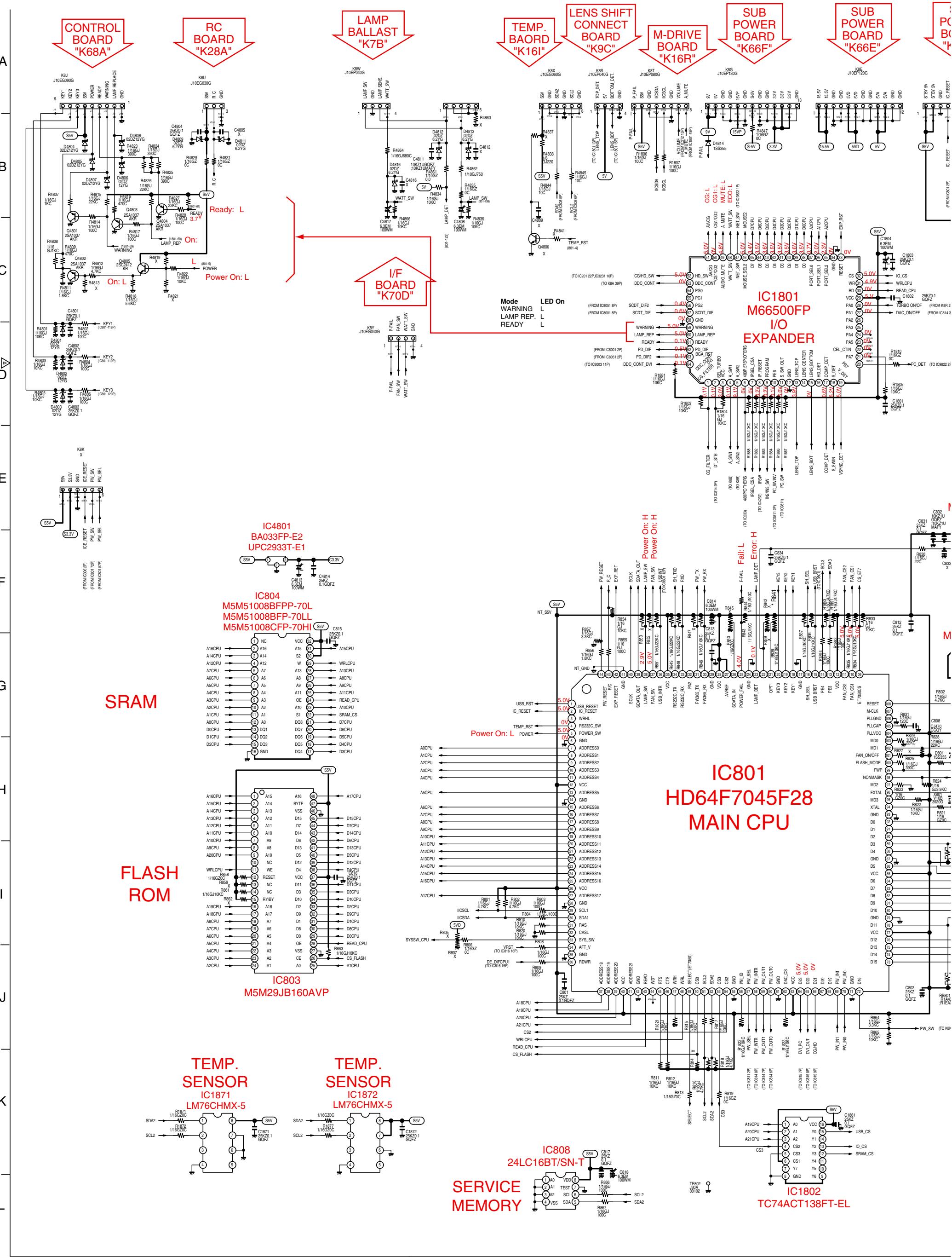




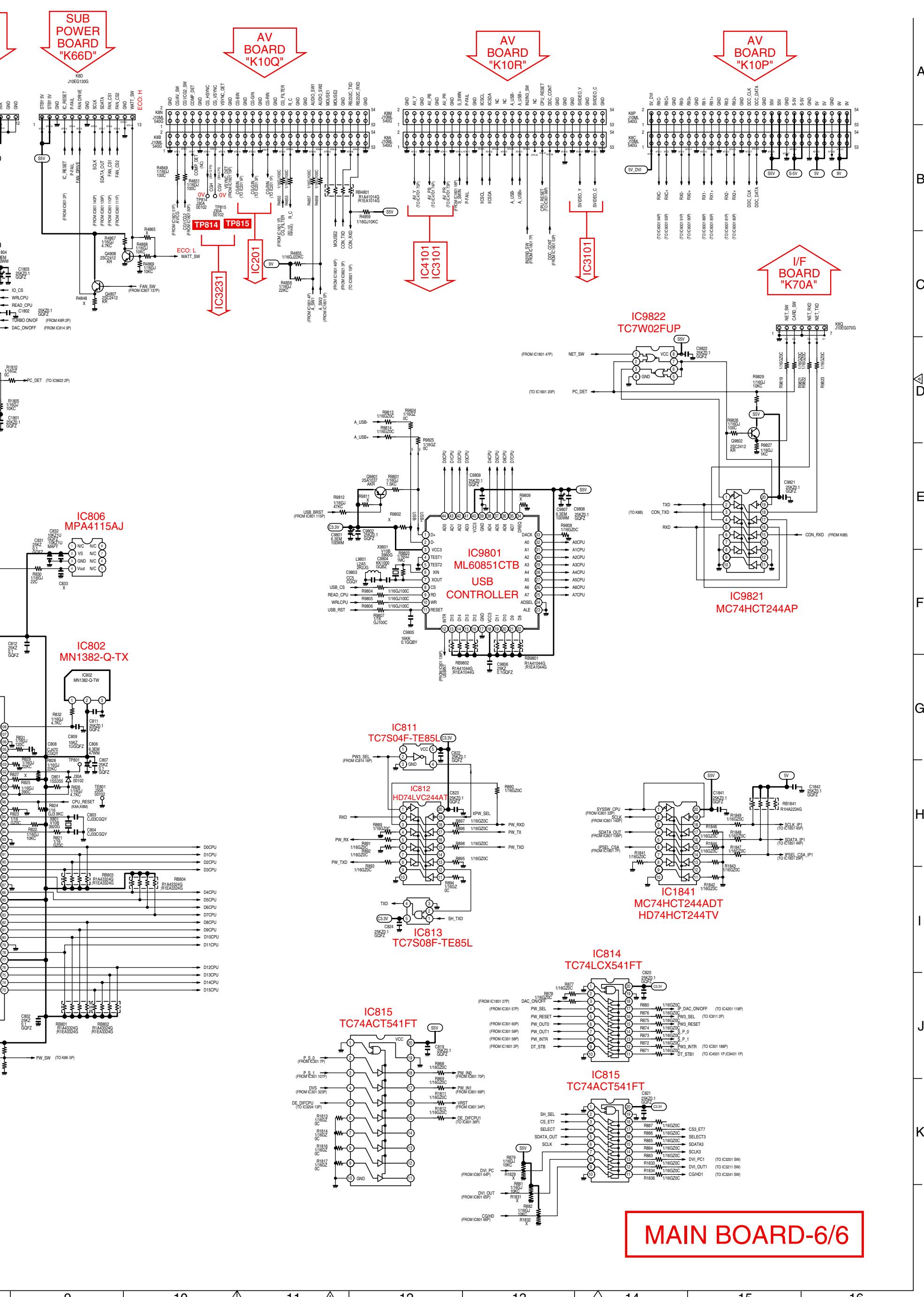
IC3401  
DIGITAL  
ENHANCER







# Schematic Diagrams PLC-XP46 (MA8AA) Page A12 [Right]



## ■ Printed Wiring Board Diagrams

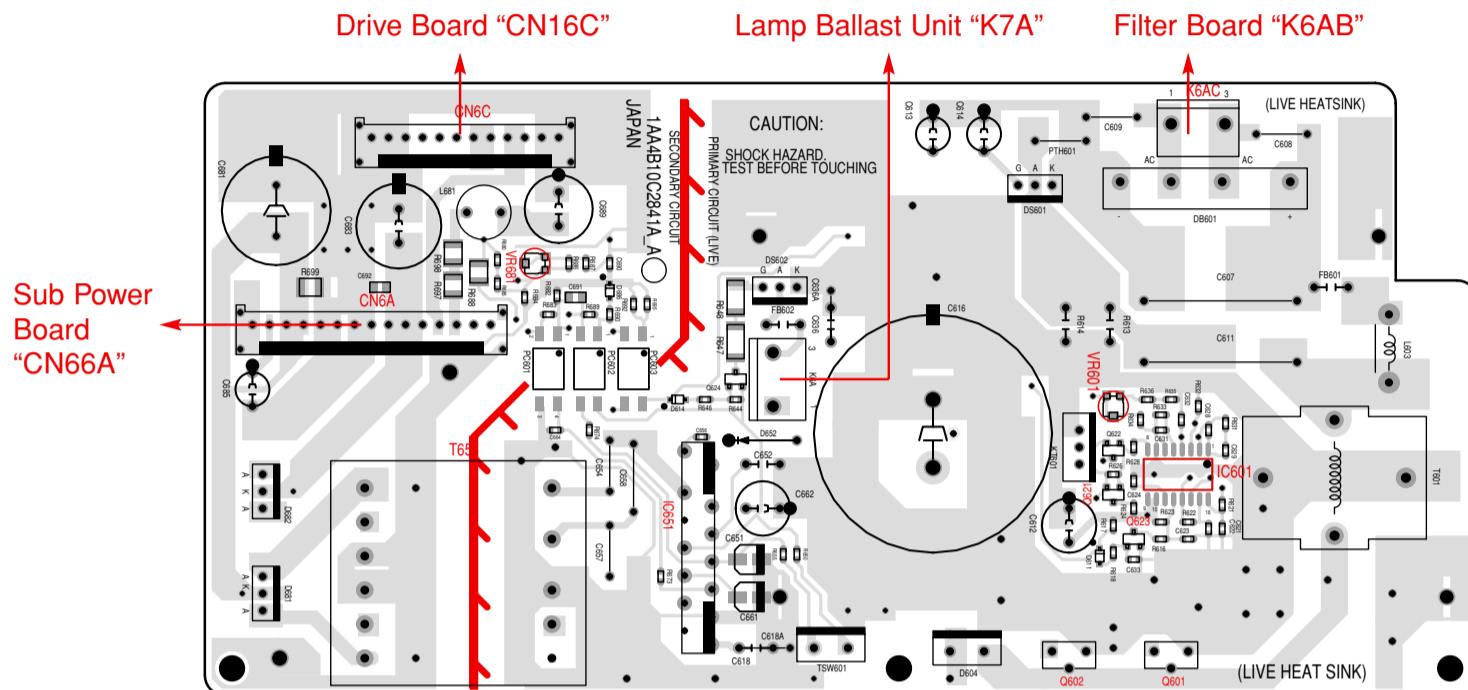
## CAUTION

This projector is isolated from AC line by using the internal converter transformer.

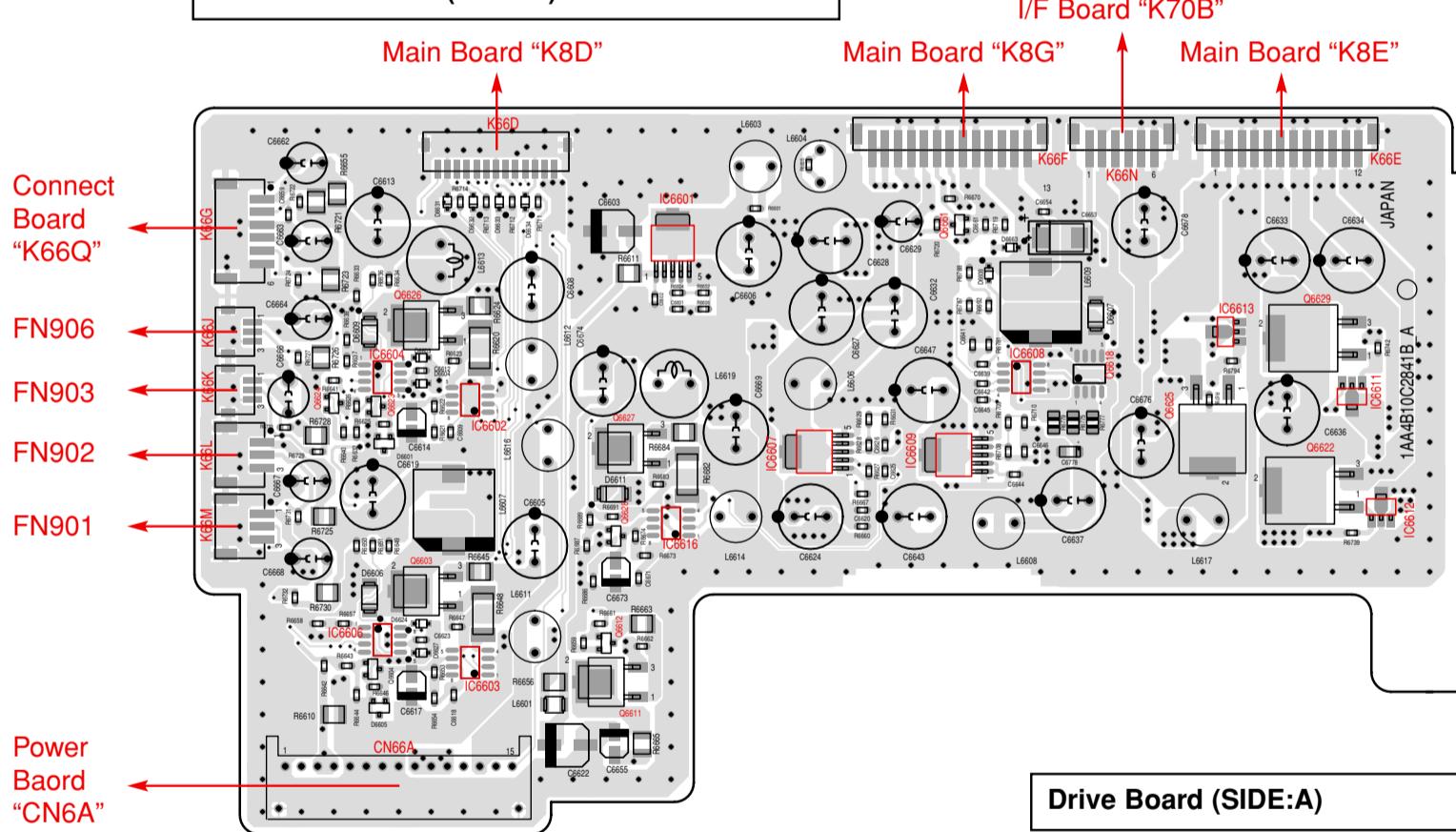
- Please pay attention to the following notes in servicing

  1. Do not touch the part on hot side (primary circuit) or both parts on hot and cold sides (secondary circuit) at the same time.
  2. Do not shorten the circuit between hot and cold sides.
  3. The grounding lead must be connected to the ground of the same circuit when measuring of voltages and waveforms.

Power Board (SIDE:A)

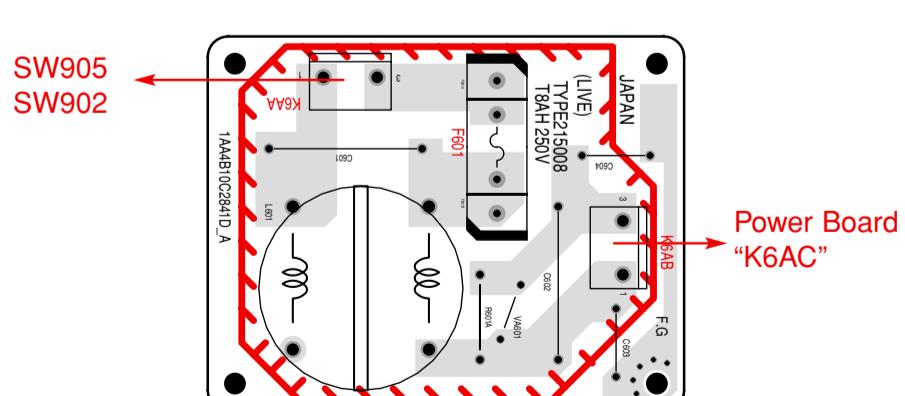


## **Sub Power Board (SIDE:A)**

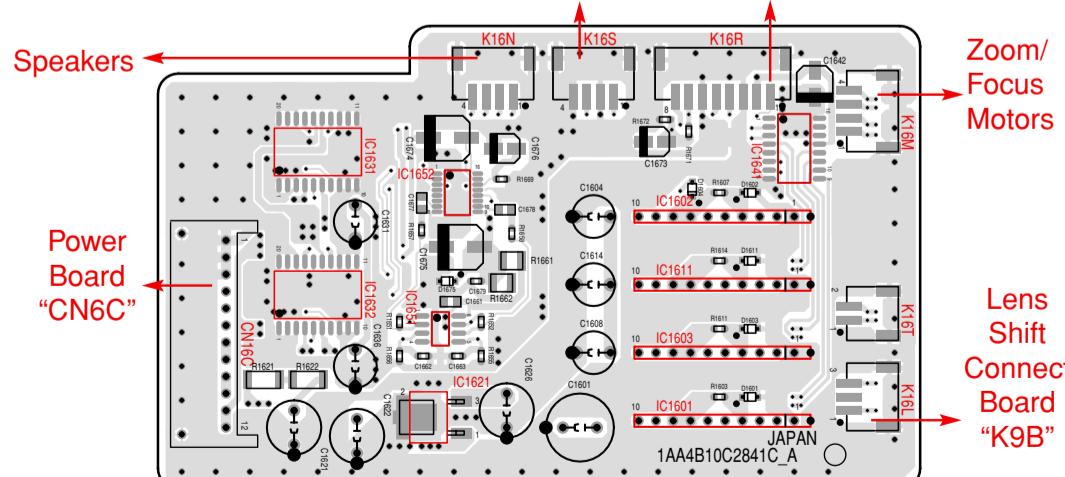


Drive Board (SIDE:A)

## **Filter Board (SIDE:A)**

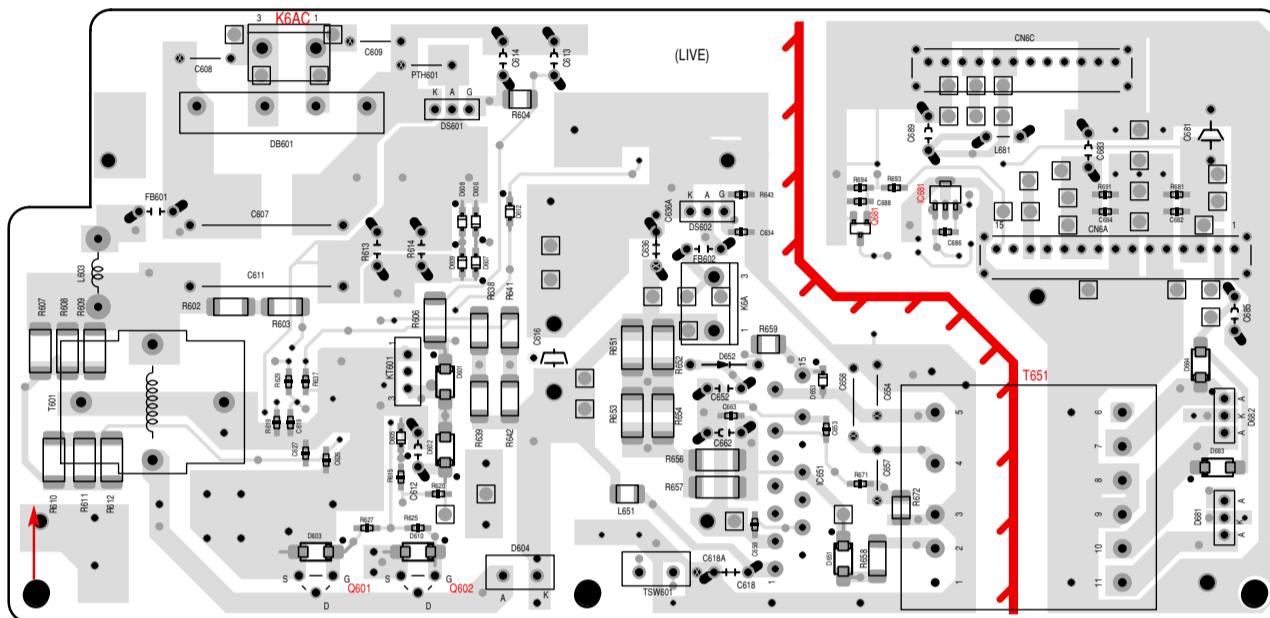


“K10T” “K8T”



sides (secondary  
measuring of volt-

Power Board (SIDE:B)

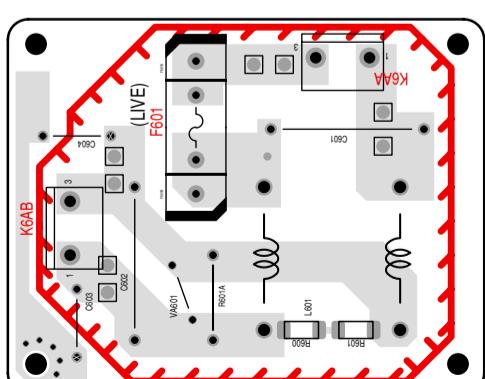


## **Sub Power Board (SIDE:B)**

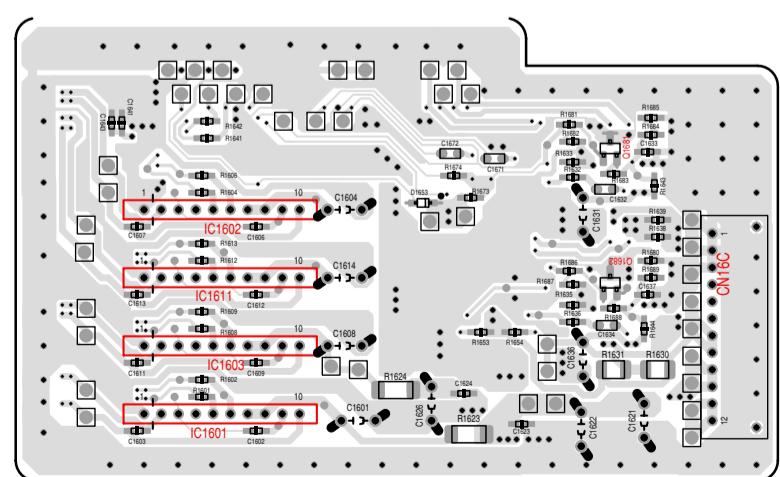


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Filter Board (SIDE:B)



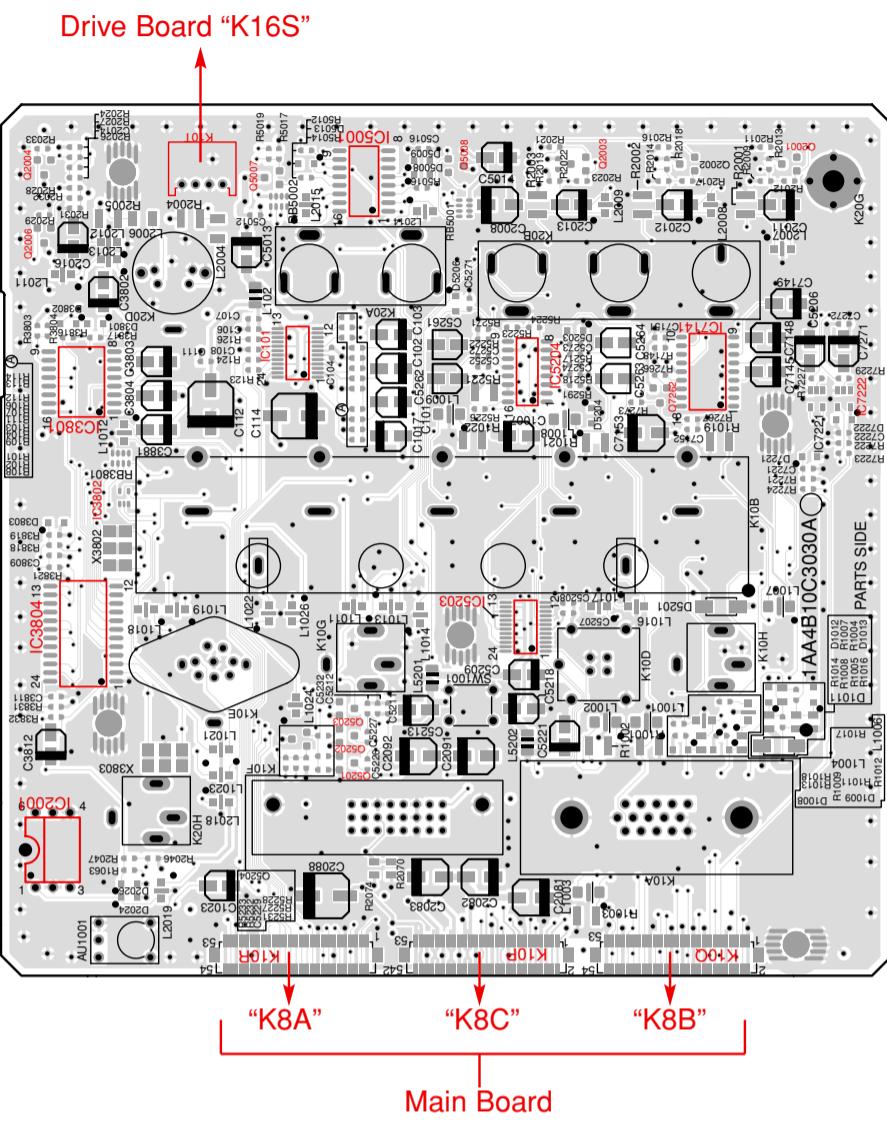
## **Drive Board (SIDE:B)**



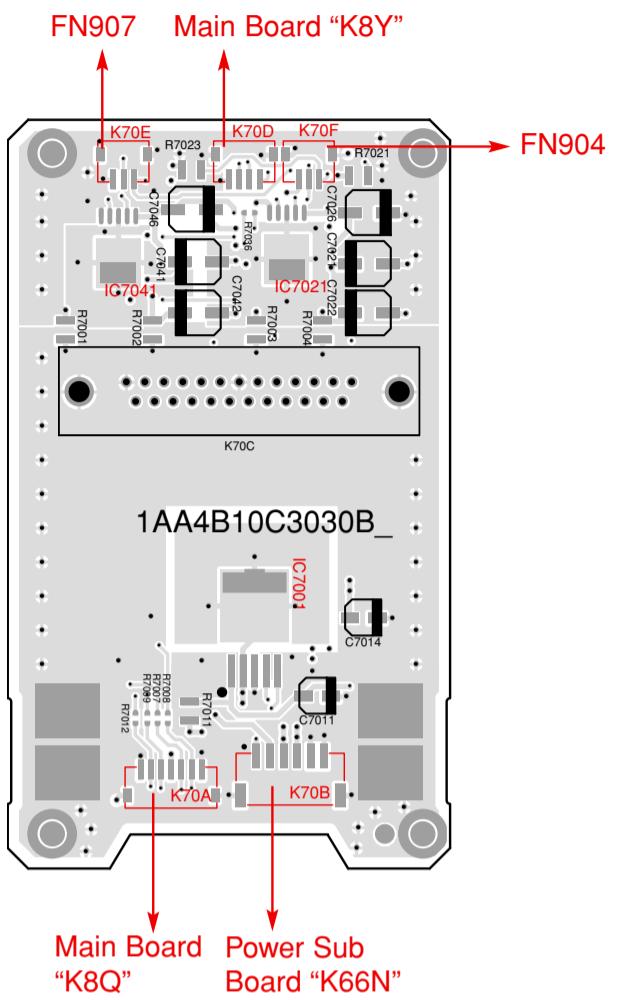
→ Zoom/  
Focus  
Motors

Lens  
Shift  
Connect  
Board  
“K9B”

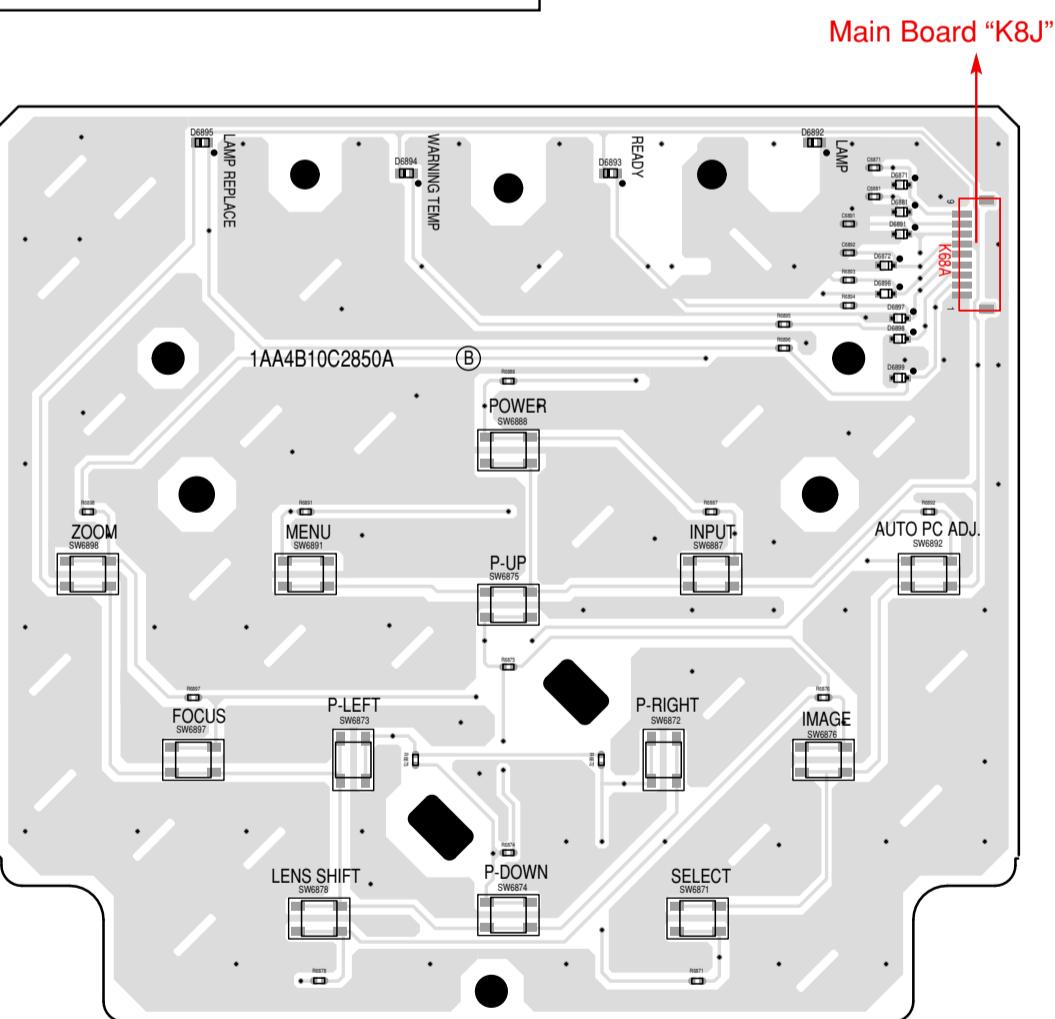
**AV Board (SIDE:A)**



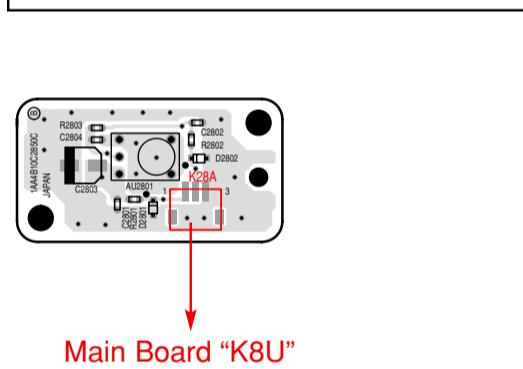
**I/F Board (SIDE:A)**



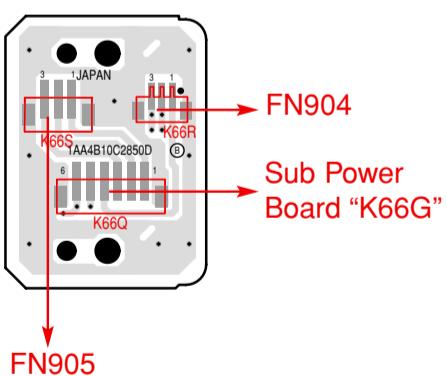
**Control Board (SIDE:A)**



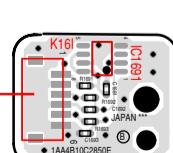
**RC Front Board (SIDE:A)**



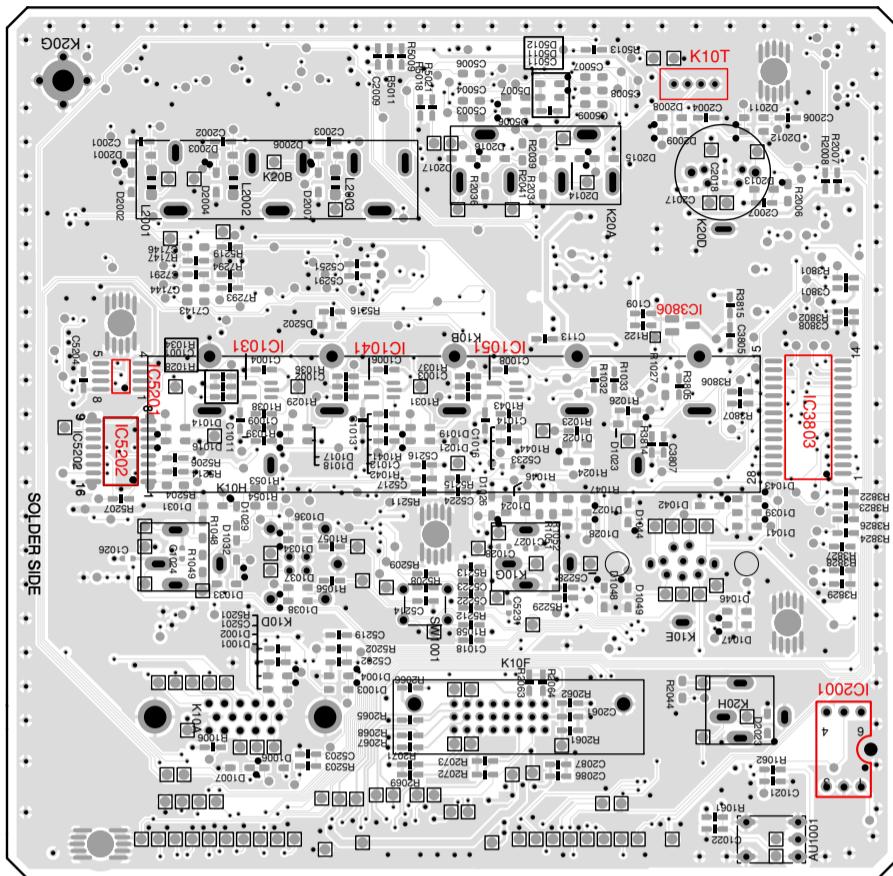
**Connect Board (SIDE:A)**



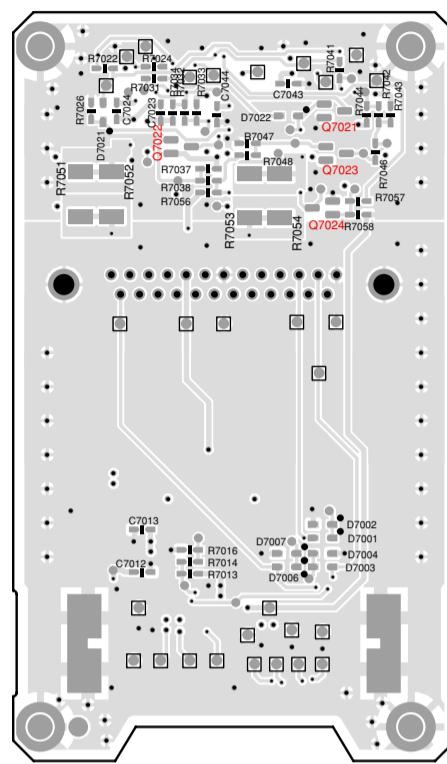
**Sensor1 Board (SIDE:A)**



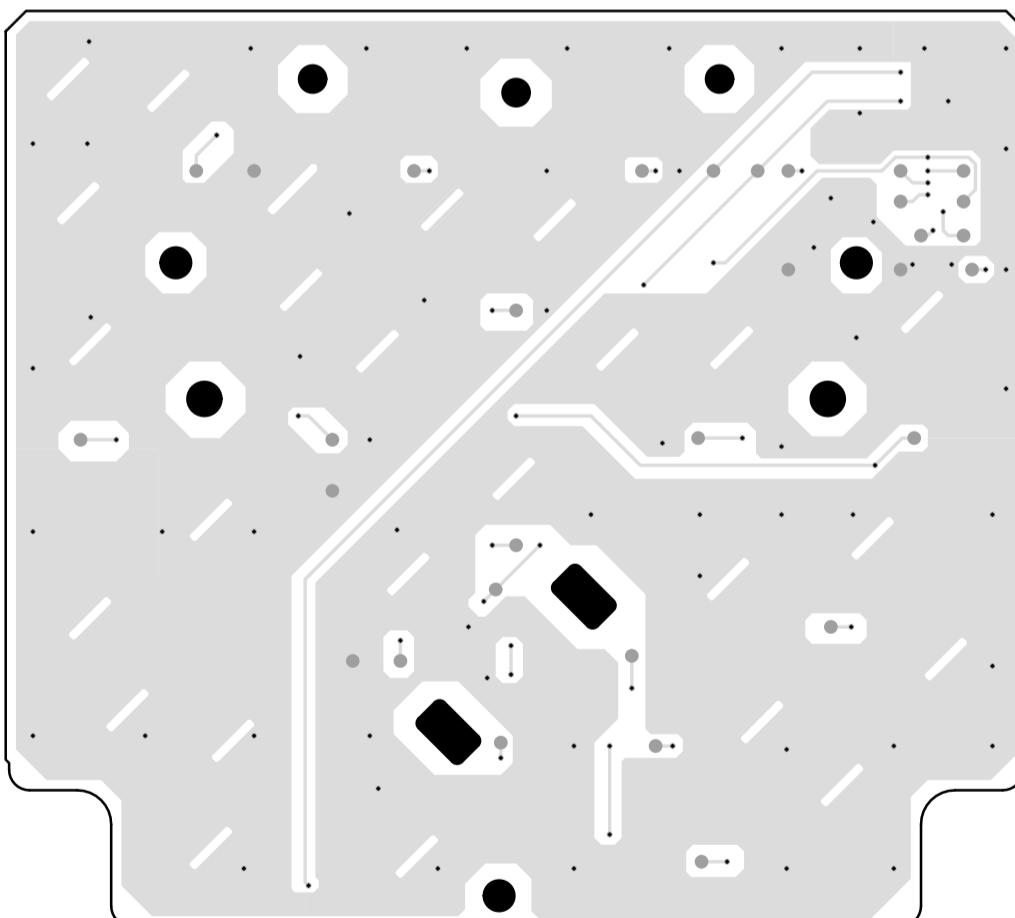
AV Board (SIDE:B)



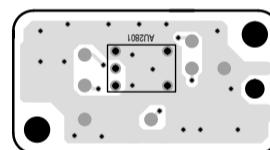
I/F Board (SIDE:B)



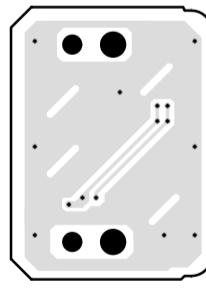
Control Board (SIDE:B)



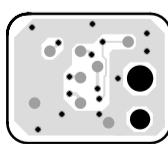
RC Front Board (SIDE:B)



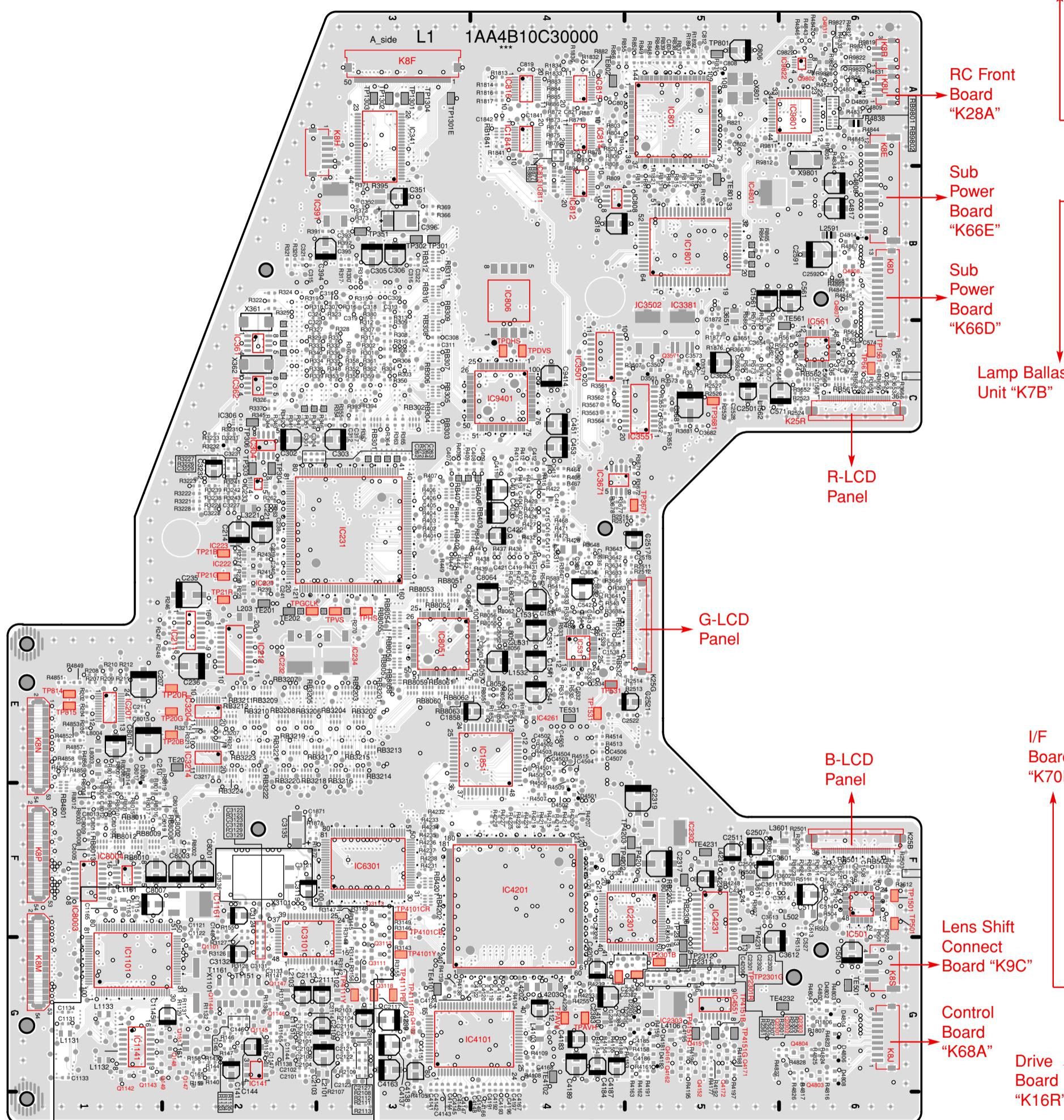
## Connect Board (SIDE:B)



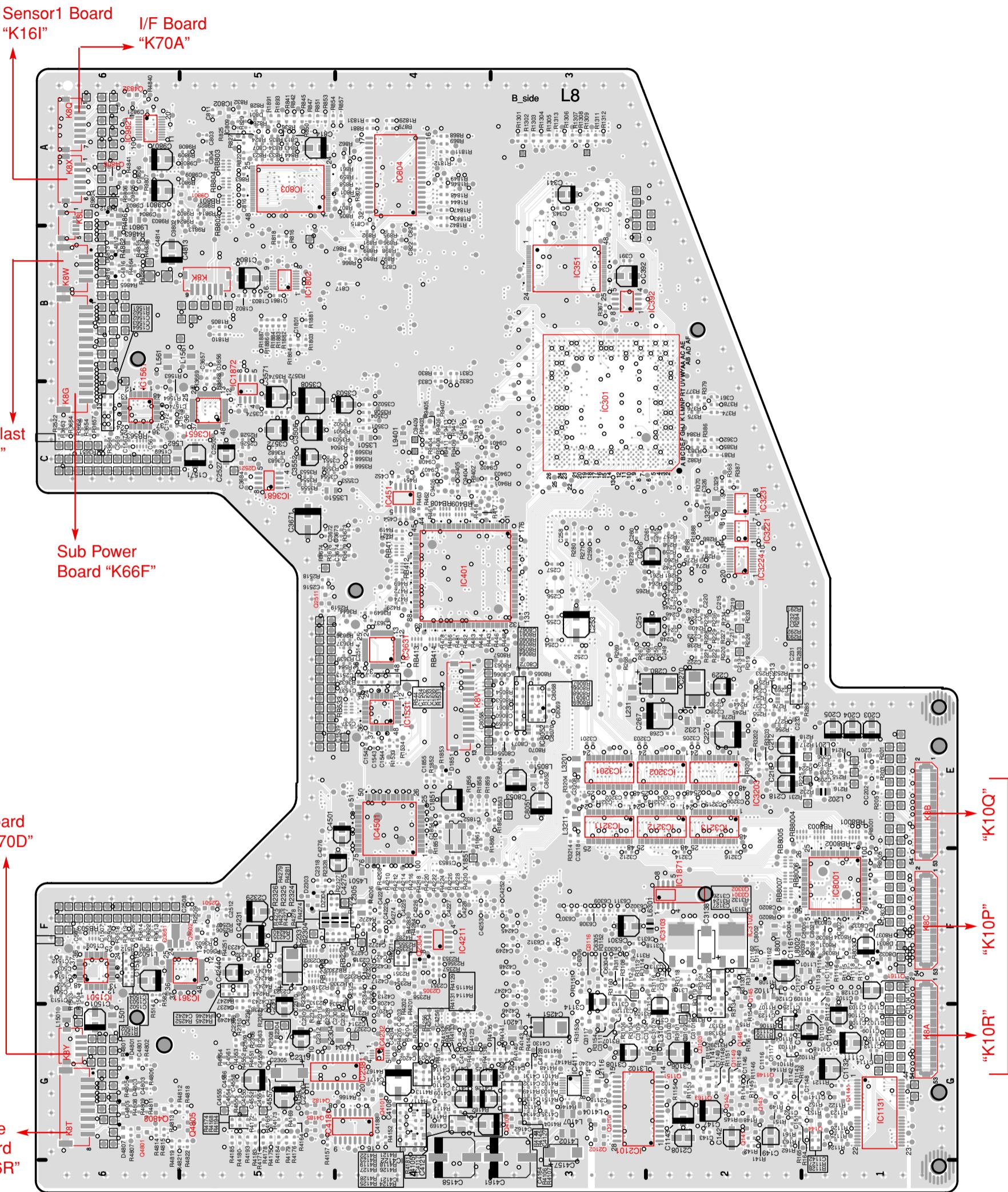
Sensor1 Board (SIDE:B)



## Main Board (SIDE:A)



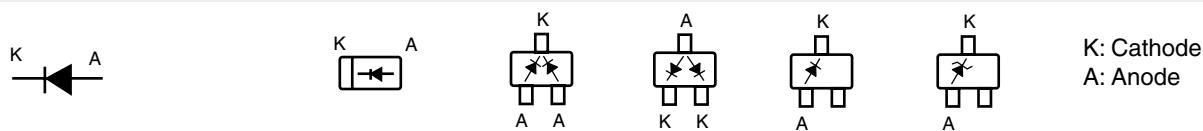
## Main Board (SIDE:B)



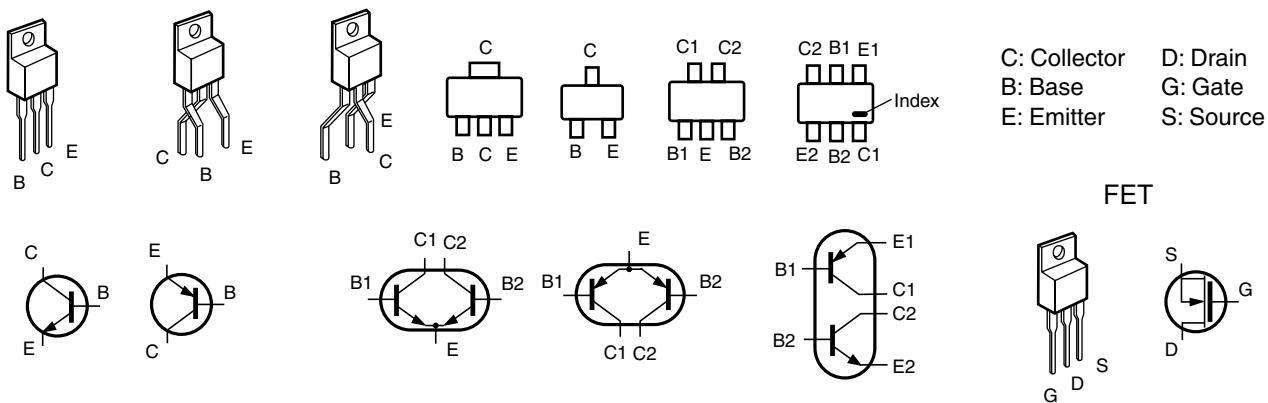
## ■ Pin description of diode, transistor and IC

MA8-XP4600, MA8-XP46L00, MB8-XP4100, MB8-XP41L00

### ● Diode



### ● Transistor/FET



### ● IC

