

# SANYO

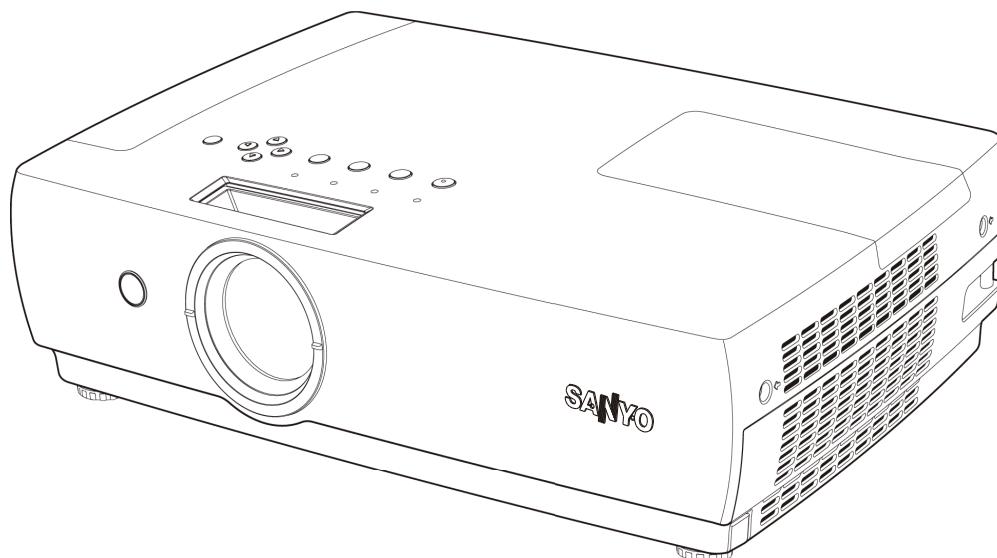
FILE NO.

## SERVICE MANUAL Multimedia Projector

**Model No. PLC-XC50  
PLC-XC55**

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

**Original Version**



**Chassis No. KK7-XC5000  
KL7-XC5500**

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.

### PRODUCT CODE

**PLC-XC50      PLC-XC55**

1 122 435 00 (KK7AC)	1 122 437 00 (KL7AC)
1 122 436 00 (LK7AC)	1 122 438 00 (LL7AC)
1 122 436 02 (LK7CC)	1 122 438 02 (LL7AC)

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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.

# Specifications

## Mechanical Information

Projector Type	Multi-media Projector
Dimensions (W x H x D)	410.0 mm x 85.0 mm x 262.8 mm (Not including protrusions)
Net Weight	8.82lbs (4.0 kg)
Foot Adjustment	0° to 10.0°

## Panel Resolution

LCD Panel System	0.63" TFT Active Matrix type, 3 panels
Panel Resolution	1,024 x 768 dots
Number of Pixels	2,359,296 (1,024 x 768 x 3 panels)

## Signal Compatibility

Color System	PAL, SECAM, NTSC, NTSC4.43, PAL-M, and PAL-N
High Definition TV Signal	480i, 480p, 575i, 575p, 720p, 1035i, and 1080i
Scanning Frequency	H-sync. 15 ~ 100 KHz, V-sync. 50 ~ 100 Hz

## Optical Information

Projection Image Size (Diagonal)	Adjustable from 40" to 300"
Projection Lens	F 1.60-1.76 lens with f =22.33 mm ~ 26.80 mm with manual zoom and focus
Throw Distance	4.6' ~ 41.3' (1.4 m ~ 12.6 m)
Projection Lamp	220W

## Interface

Video Input Jack	RCA Type x 1
S-video Input Jack	Mini DIN 4 pin x 1
Audio Input Jacks	RCA Type x 2
Computer Input 1/DVI-I	Digital/Analog RGB (DVI-I) Terminal x 1
Computer Input 2/Component Input	Analog RGB (Mini D-sub 15 pin) Terminal x 1
Monitor Output	Analog RGB (Mini D-sub 15 pin) Terminal x 1
Computer2/ Component Audio Input Jack	Mini Jack (stereo) x 1
Computer1 Audio Input Jack	Mini Jack (stereo) x 1
Control Input	Mini D-sub 9 pin x 1
Audio Output Jack	Mini Jack (stereo) x 1 (Variable)

## Audio

Internal Audio Amp	7.0 W RMS
Built-in Speaker	1 speaker, ø1.46" (37mm)

## Power

Voltage and Power Consumption	AC 100 ~ 120 V (3.4A Max. Ampere), 50/60 Hz (The U.S.A and Canada) AC 200 ~ 240 V (1.7A Max. Ampere), 50/60 Hz (Continental Europe and The U.K.)
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## Operating Environment

Operating Temperature	41°F ~ 95°F (5°C ~ 35°C)
Storage Temperature	14°F ~ 140°F (-10°C ~ 60°C)

## Remote Control

Battery	AA or LR6 1.5 V ALKALINE TYPE x 2
Operating Range	16.4' (5 m)/±30°
Dimensions	1.9" (W) x 0.87" (H) x 5.7" (D) (49 mm x 22 mm x 145.3 mm)
Net Weight	3.53 oz (100 g) (including batteries)

- The specifications are subject to change without notice.
- LCD panels are manufactured to the highest possible standards. Even though 99.99% of the pixels are effective, a tiny fraction of the pixels (0.01% or less) may be ineffective by the characteristics of the LCD panels.



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.

# Circuit Protections

This projector provides 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.

## Thermal switch

There is the thermal switch (SW902) inside of the projector to detect the internal temperature rising abnormally. When the internal temperature reaches near 80°C, the thermal switch opens to stop the operation of the power supply circuit.

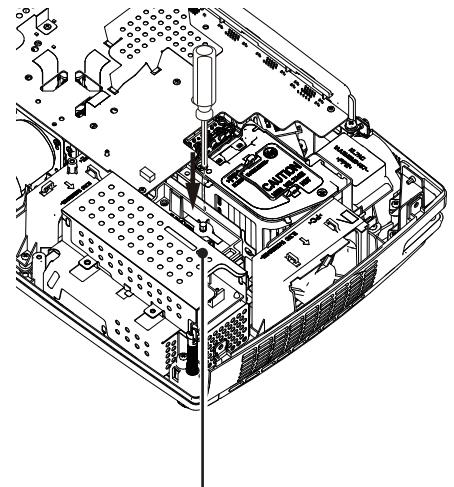
The thermal switch cannot be reset itself automatically even if the internal temperature becomes normal. Reset the thermal switch following to the below procedure.

### How to reset the thermal switch

1. Remove the cabinet top.
2. Press the reset button on the thermal switch with the screwdriver.

#### CAUTION:

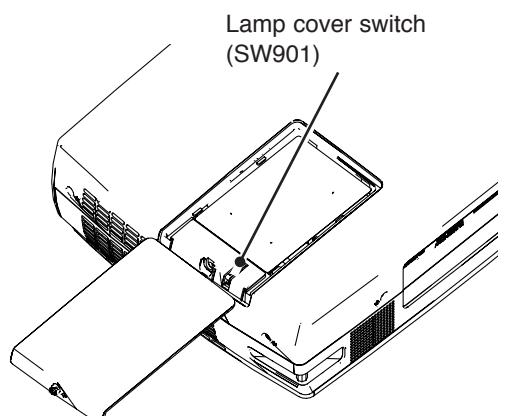
Before press the reset button, make sure that the AC cord must be disconnected from the AC outlet.



Thermal switch (SW902)

## Lamp cover switch

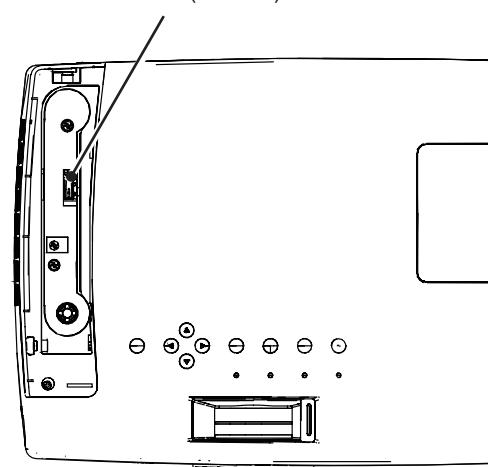
The lamp cover switch (SW901) cuts off the drive signal to the lamp circuit when the lamp cover is removed or not closed completely. After opening the lamp cover for replacing the lamp ass'y, place the lamp cover correctly otherwise the projector can not turn on.



Lamp cover switch (SW901)

## Filter switch

The filter switch (SW903) is to detect the condition of filter cartridge installation. The projector can not turn on if the filter cartridge is not installed correctly. Check the handle on the filter cartridge is set into "Close" position.



Filter switch (SW903)

## Fuse

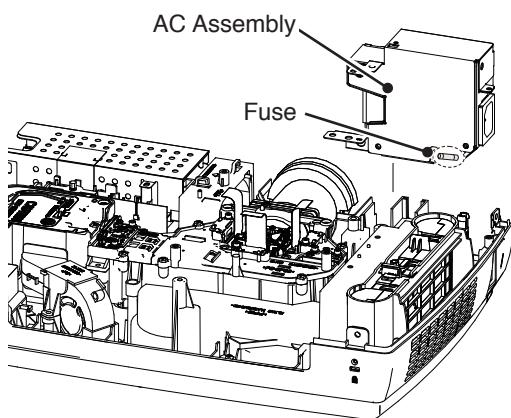
A fuse(F601) is located inside of the projector. When the POWER indicator is not lightning, the fuse may be opened. Check the fuse as following steps.

The fuse should be used with the following type;

**Fuse Part No.: 323 021 7804  
TYPE 6.3AH 250V FUSE  
LITTLE FUSE INC. TYPE 21506.3**

### How to replace the fuse

1. The fuse is placed on the filter board. Remove the cabinet top and main board and AC Assembly following to the "Mechanical Disassemblies".
2. Take the fuse off from fuse holder on the Filter board and replace the new one with the specified type.



To install the fuse, take reversed steps above.

## Warning temperature and power failure protection

The projector will be automatically turned off when the internal temperature of the projector is abnormally high, or the cooling fans stop spinning, or the power supplies in the projector are failed.

- If the WARNING TEMP. indicator is flashing, it may detect the abnormal temperature inside the projector. Check the following possible causes and wait until the WARNING TEMP. indicator stops flashing, and then try to turn on the projector.
- If the WARNING TEMP. indicator lights red, it may defect the cooling fans or power supply circuits. Check fans operation and power supply lines referring to the chapter "Power supply & protection circuit" in the Chassis Block Diagram section.

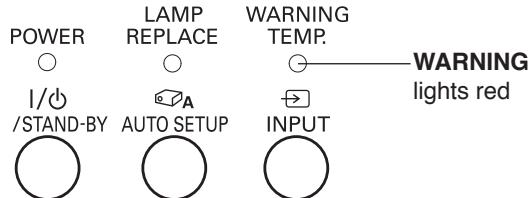
### Possible causes

- This projector has an electrically operated filter which helps you to replace the filter easily. The projector monitors the condition of the filter at all time and replaces a filter with a new one automatically when it detects the clogging. if the projector reaches a time set in the timer, please replace the filter by following instructions in the "Replace the Filter Cartridge" 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)

## The projector is shut down and the WARNING TEMP. indicator emits a red light .

When the projector detects an abnormal condition, it is automatically shut down to protect the inside and the WARNING TEMP. indicator becomes red. In this case, disconnect the AC power cord and reconnect it, and then turn the projector on once again for check. If the projector cannot be turned on and the WARNING TEMP. indicator still emits a red light it may detect the failure of cooling fans or power supply circuits.

### Top Control



### CAUTION

DO NOT LEAVE THE PROJECTOR WITH THE AC POWER CORD CONNECTED UNDER AN ABNORMAL CONDITION. IT MAY RESULT IN FIRE OR ELECTRIC SHOCK.

# Maintenance

## Replacing the Filter Cartridge

- 1 Turn off the projector, and unplug the AC power cord from the AC outlet.
- 2 First, clean up the dust on the projector and around the air vents.
- 3 Loosen 2 screws of the filter cover with a screwdriver and open the filter cover.
- 4 Rotate the handle of the filter and pull out the filter cartridge.
- 5 Put the new one back into the position and rotate back the handle. Make sure that the filter cartridge is properly and fully inserted. Close the filter cover and tighten the 2 screws back into position.
- 6 Connect the AC power cord to the projector and turn on the projector.
- 7 Reset the filter counter and the scroll counter.



### CAUTION

Make sure the filter cartridge is inserted in the projector. If the filter cartridge is not inserted, the projector cannot be turned on.  
Do not put anything into the air vents. Doing so may result in malfunction of the projector.

### RECOMMENDATION

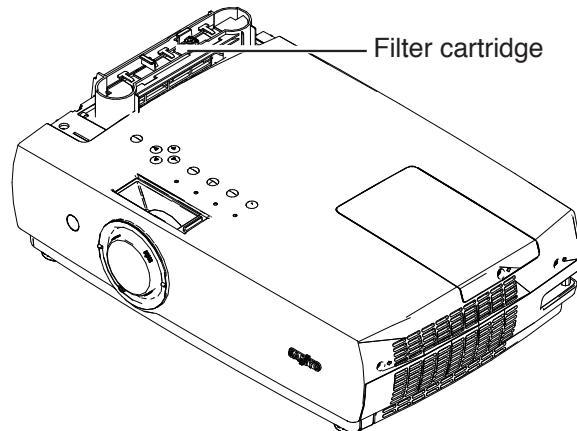
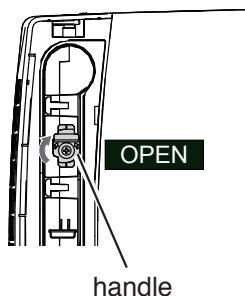
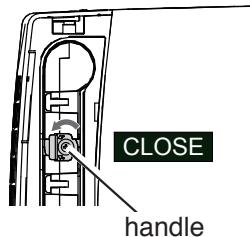
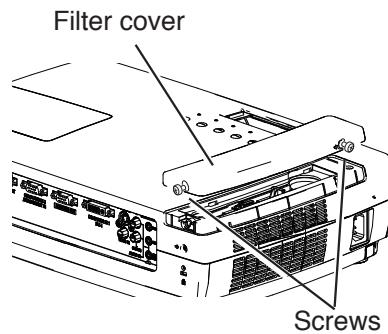
We recommend avoiding dusty/smoky environments when operating the projector. Usage in these environments may cause a poor image quality.

When using the projector under dusty or smoky conditions, dust may accumulate on a lens, liquid crystal panels, or optical elements inside the projector. Such condition may degrade the quality of the projected image.  
When the symptoms above are noticed, contact your authorized dealer or service station for proper cleaning.

### **ORDER REPLACEMENT FILTER CARTRIDGE**

Replacement filter cartridge can be ordered through your dealer. When ordering, give the following information to the dealer.

- Model No. of your projector  
PLC-XC50/PLC-XC55
- Replacement Filter Cartridge Type No.  
POA-FIL-063  
(Service Parts No. 610 339 7665)

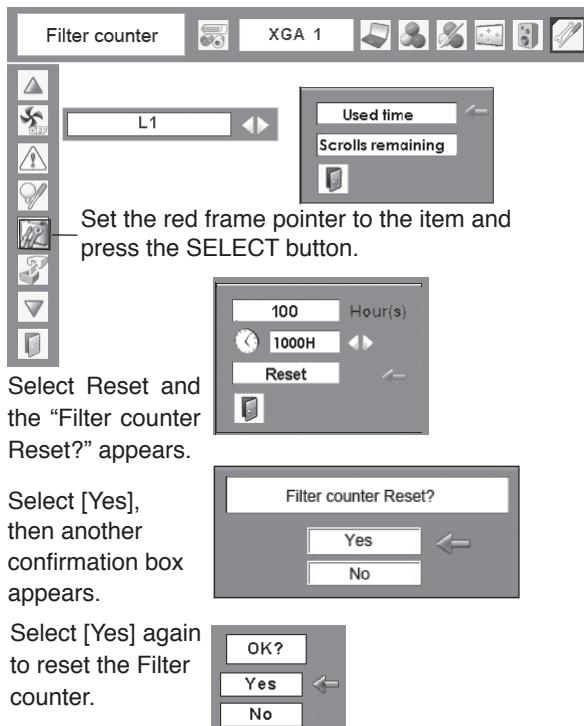


## Resetting the Filter Counter

Be sure to reset the Filter counter after replacing the filter and the filter cartridge.

- 1 Press the MENU button to display the On-Screen Menu. Use the Point **◀▶** buttons to move the red frame pointer to the Setting Menu icon.
- 2 Use the Point **▲▼** buttons to move the red frame pointer to Filter counter and then press the SELECT button. A dialog box appears showing the Used time option and the Scrolls remaining option. Use the Point **▲▼** buttons to select Used time.
- 3 Used time shows the total accumulated time of the filter use, a timer setting option, and the Reset option. Select Reset and the "Filter counter Reset?" appears. Select [Yes] to continue.
- 4 Another confirmation dialog box appears, select [Yes] to reset the Filter counter.

**Filter counter**

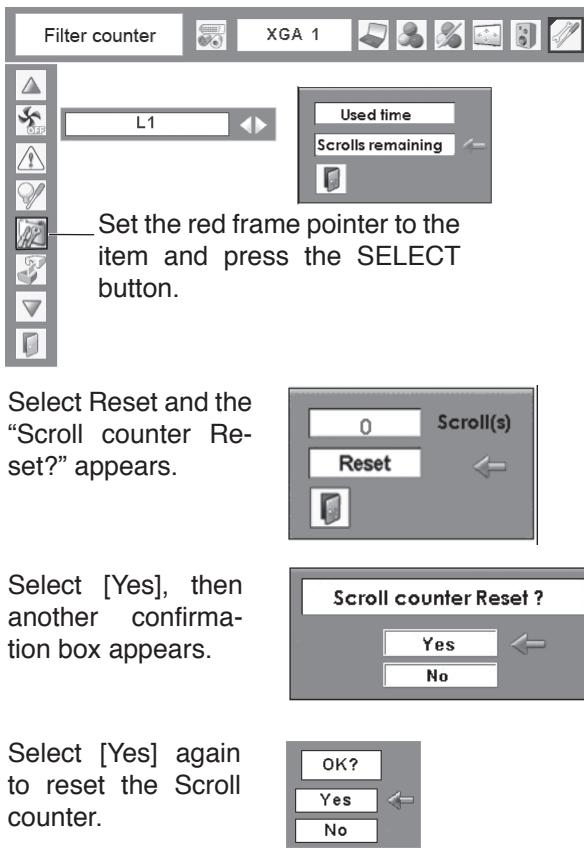


## Resetting the Scroll Counter

Be sure to reset the Scroll counter after replacing the filter cartridge.

- 1 Press the MENU button to display the On-Screen Menu. Use the Point **◀▶** buttons to move the red frame pointer to the Setting Menu icon.
- 2 Use the Point **▲▼** buttons to move the red frame pointer to Filter counter and then press the SELECT button. A dialog box appears showing the Used time option and the Scrolls remaining option. Use the Point **▲▼** buttons to select Scroll(s) remaining.
- 3 Scroll(s) remaining shows the number of the remaining scrolls and the Reset option. Select Reset and the "Scroll counter Reset?" appears. Select [Yes] to continue.
- 4 Another confirmation dialog box appears, select [Yes] to reset the Scroll counter.

**Scroll counter**

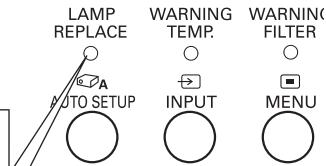


## Lamp Replacement

When the life of the projection lamp of this projector draws to an end, the Lamp replacement icon appears on the screen and LAMP REPLACE indicator lights yellow. Replace the lamp with a new one promptly. The timing when the LAMP REPLACE indicator should light is depending on the lamp mode.

This indicator is yellow when the life of the projection lamp draws to an end.

Top Control



Lamp replacement icon

Lamp replacement



✓Note:

- The Lamp replacement icon will not appear when the Display function is set to "Off", during "Freeze", or "No show".



### CAUTION

Allow a projector to cool, for at least 45 minutes before you open the Lamp cover. The inside of the projector can become very hot.



### CAUTION

For continued safety, replace with a lamp of the same type. Do not drop a lamp or touch a glass bulb! The glass can shatter and may cause injury.



### CAUTION

When replacing the lamp because it has stopped illuminating, there is a possibility that the lamp may be broken.

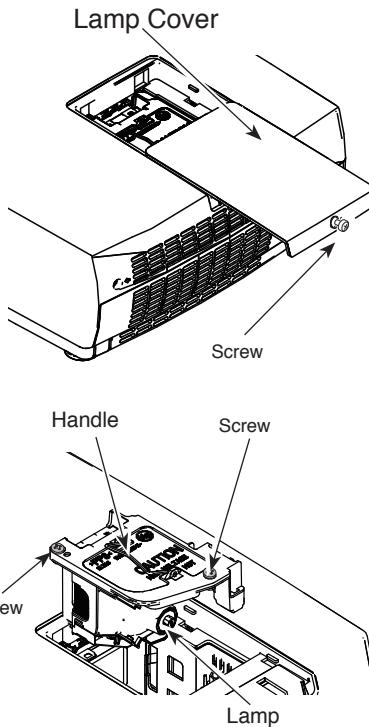
If replacing the lamp of a projector which has been installed on the ceiling, you should always assume that the lamp is broken, and you should stand to the side of the lamp cover, not underneath it. Remove the lamp cover gently. Small pieces of glass may fall out when the lamp cover is opened. If pieces of glass get into your eyes or mouth, seek medical advice immediately.

Refer to the next page for replacing a lamp.

## Maintenance

Follow these steps to replace the lamp.

- 1 Turn off the projector and disconnect the AC power cord. Allow the projector to cool for at least 45 minutes.
- 2 Loosen the screw with a screwdriver, slide and open the lamp cover.
- 3 Loosen 2 screws of the lamp with a screwdriver and pull out the lamp upwards vertically by grasping the handle.
- 4 Replace the lamp with a new one and tighten the 2 screws back into position. Make sure that the lamp is set properly. Replace the lamp cover and tighten the screw.
- 5 Connect the AC power cord to the projector and turn on the projector.
- 6 Reset the lamp replacement counter.  
See "Resetting the Lamp Counter" on the next page .



### ORDER REPLACEMENT LAMP

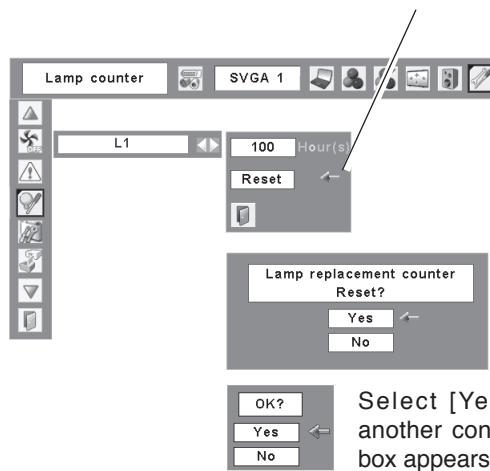
Type No. POA-LMP127  
Service Parts No. 610 339 8600

## Resetting the Lamp Counter

Be sure to reset the Lamp replacement counter after the lamp is replaced. When the Lamp replacement counter is reset, the LAMP REPLACE indicator stops lighting.

- 1 Turn the projector on, press the MENU button to display the On-Screen Menu. Press the Point **↔** buttons to move the red frame pointer to the Setting Menu icon.
- 2 Press the Point **▲▼** buttons to move the red frame pointer to the Lamp counter function and then press the SELECT button. The first dialog box appears and shows the total accumulated time of the lamp usage and the reset option. If you select "Reset", a "Lamp replacement counter Reset?" message appears. Select [Yes] to continue.
- 3 Another confirmation dialog box appears, select [Yes] to reset the Lamp replacement counter.

To reset the lamp counter, move the pointer to Reset and then press the SELECT button. "Lamp replacement counter Reset?" dialog box is displayed.



Select [Yes], then another confirmation box appears.

Select [Yes] again to reset the lamp counter.

### ✓Note:

- Do not reset the Lamp replacement counter without implementation of lamp replacement. Be sure to reset the Lamp replacement counter only after replacing the lamp.

## How to check Lamp Used Time

The LAMP REPLACE indicator will light yellow when the total lamp used time (Corresponding value) reaches 3,000 hours. This is to indicate that lamp replacement is required.

The total lamp used time is calculated by using the below expression,

$$\text{Total lamp used time} = T_{\text{Eco}} + T_{\text{Normal}} \times 2$$

$T_{\text{Eco}}$ : used time in the Eco mode

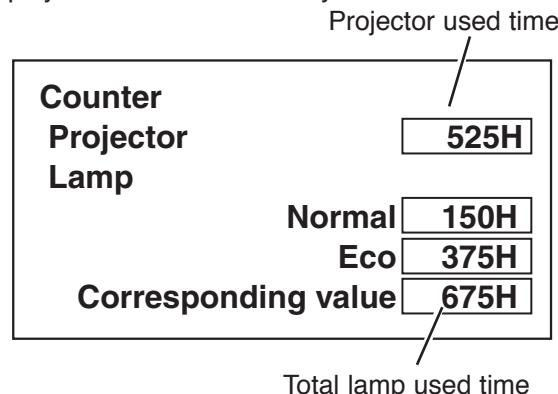
$T_{\text{Normal}}$  : used time in the Normal mode and Auto mode.

You can check the lamp used time following to the below procedure.

- 1 Press and hold the **ON/STAND-BY** button on the pro-

jector for more than 20 seconds.

- 2 The projector used time and lamp used time will be displayed on the screen briefly as follows.



## 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.

# Security Function Notice

## Security Function Disable

This projector provides security functions such as "Key lock", "PIN code lock" and "Logo PIN code lock". When the projector has set these security function on, you are required to enter correct PIN code to use the projector. If you do not know the correct PIN code to the projector, the projector can no longer be operated or started. In this case, you must reset those function first according to the resetting procedure described below and then check up on the projector.

Function	Description
<b>Key lock</b>	Locks operation of the top control or the remote control. If the Key lock is enabled with top control lock, the projector can no longer be started. Initial setting: Key lock function is disabled
<b>PIN code lock</b>	Prevents the projector from being operated by an unauthorized person. Initial code: "1234"
<b>Logo PIN code lock</b>	Prevents an unauthorized person for changing the start-up logo and captured image on the screen. Initial code: "4321"

## Resetting procedure

- 1 Disconnect the AC power cord from the AC outlet.
- 2 As pressing the **SELECT** button on the projector, connect the AC power cord into an AC outlet again. Keep pressing the **SELECT** button until the POWER indicator lights continuously.

This is complete the resetting of the security function. The PIN code lock and Logo PIN code lock are reset as the initial PIN code at the factory and the Key lock function is disabled.

Please refer to the owner's manual for further information of the security functions.

# Mechanical Disassembly

Mechanical disassembly 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.

Screws Expression (Type Diameter x Length) mm	
T type	M Type
	

## 1 Cabinet Top, Lamp Cover, Filter Cover and Lens Cover removal

1. Remove 8 screws A (M3x8) to remove the Cabinet Top.
2. Loosen Screw B (M3x7) to remove the Lamp Cover.
3. Loosen 2 Screws B (M3x7) to remove the Filter Cover.
4. Remove the Control Buttons.
5. Remove the Front Glass and the Front Ring.
6. Remove 2 Screws C (T3x6) to remove the Holder of Front Glass. Remove 2 Screws D (T3x6) to remove the Holder of Lens Shutter.

Turn the Front Ring anticlockwise and remove the Front Glass.

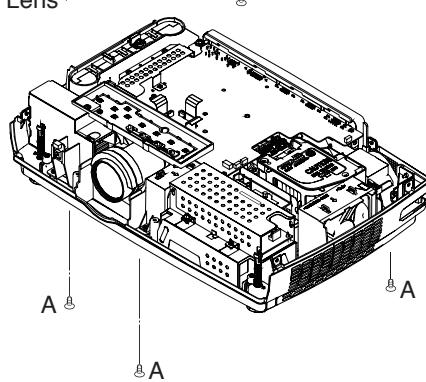
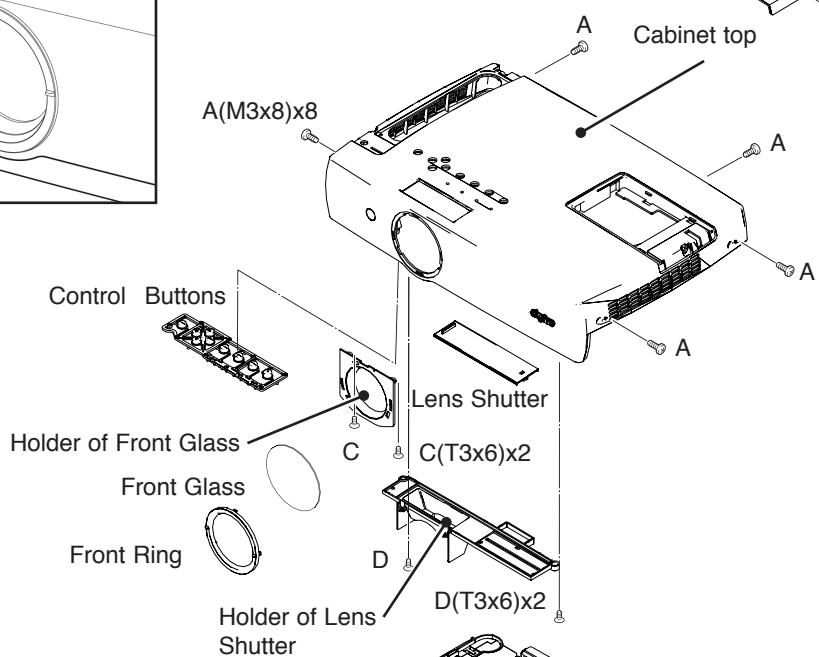
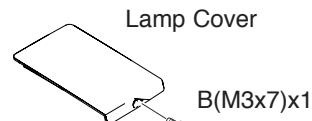
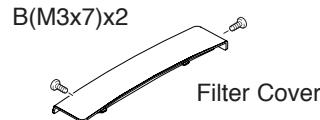
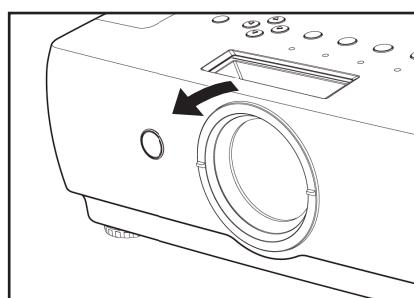


Fig.1

## 2 Main Board , Control Board, Rear Panel and Fan(FN902) removal

1. Remove 2 screws A (T3x8) and 2 screws B (M2.5x6) to remove the Control Board from the Control board holder.
2. Remove 2 screws D (M4x8), 2 screws E (T3x8) and 2 screws F (M2.5x6) to remove the main board shield.
3. Remove 2 screws G (M2.5x6) to remove the main board.
4. Unhook 3 hooks and remove the Rear Panel.
5. Remove 2 screws J (T3x8) to remove the fan (FN902).

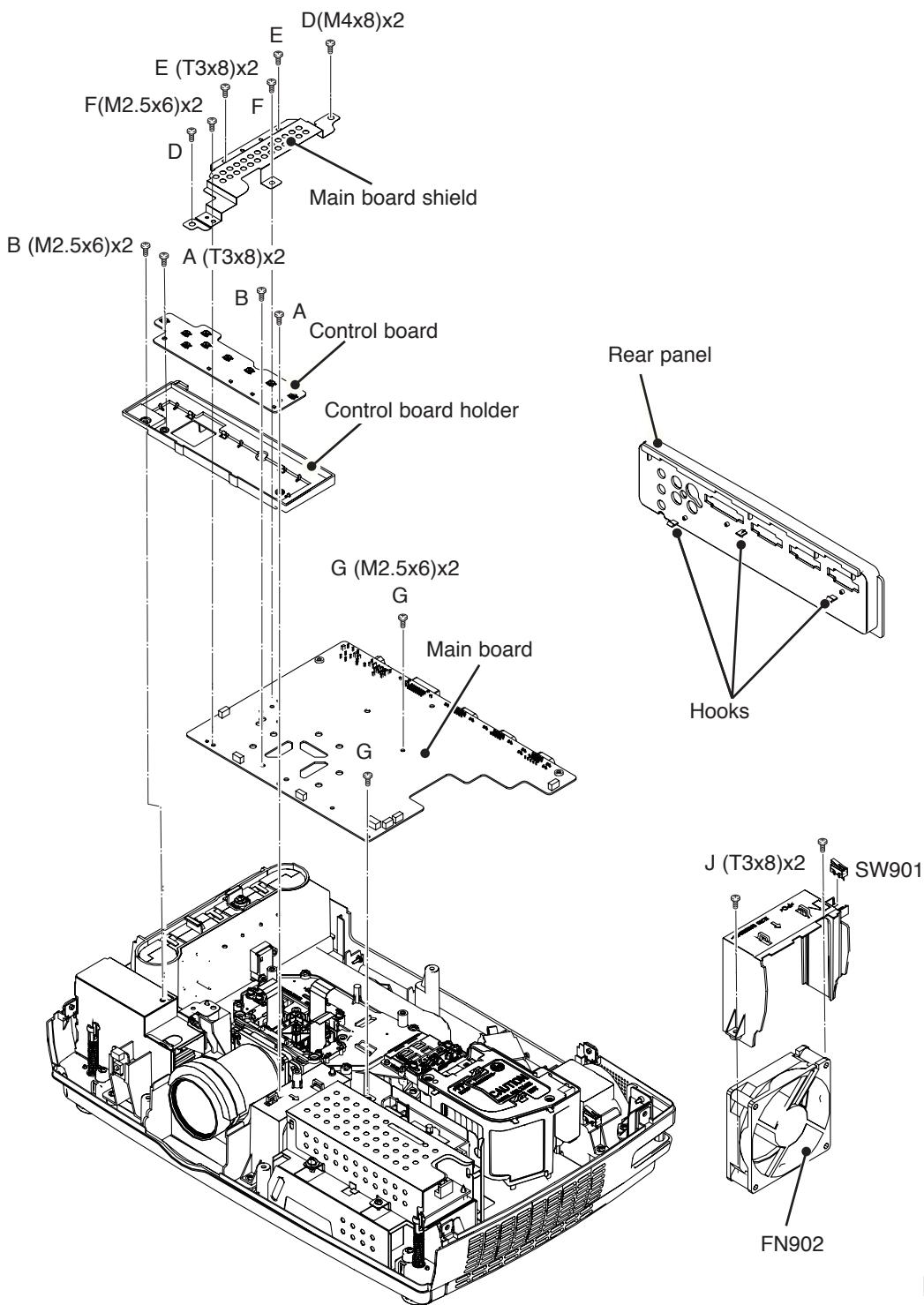


Fig.2

### 3 Optcal Unit, RC Board,Security Kits, Speaker (SP901) and Fan (FN906) Removal

1. Remove 6 screws A (T3x8) to remove the Optical Unit and remove 4 screws B(M2.5x4) to remove the Projection Lens.
2. Remove the RC Board.
- 3 .Remove 2 screws C(T3X8) and 1 screw D(M3X6) to remove the Security Kits.
4. Remove 2 screws E(T3x8) and 2 screws F (T3x8) to remove the speaker (SP901).
5. Remove 2 screws G(T3x8) and one black screw H (T3x12) to remove fan (FN906).

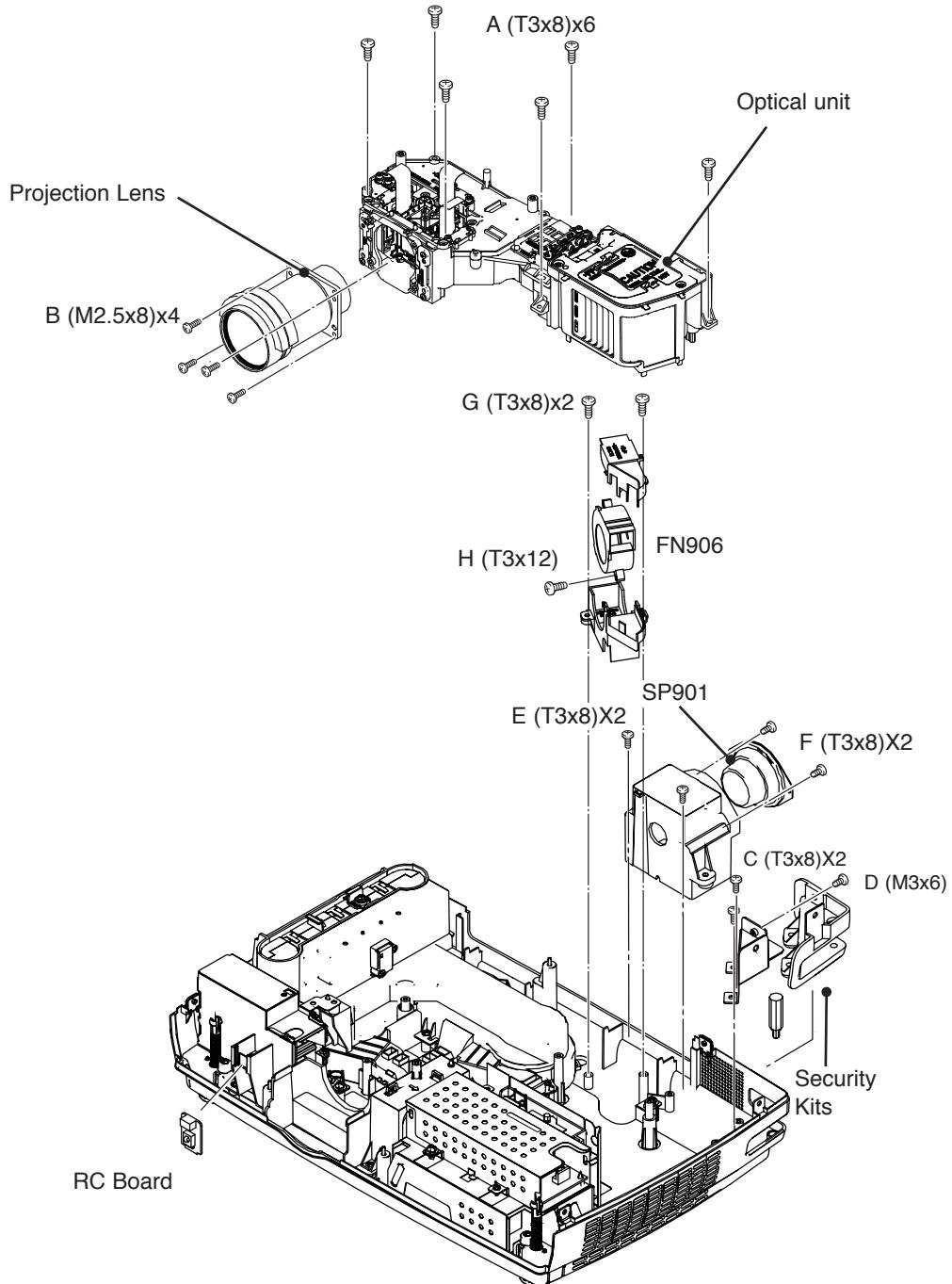


Fig.3

## 4 Filter Board, Fan(FN901), Power Board, Ballast Board and SW902 removal

1. Remove 3 screws A (T3x8), 2 screws B(M4x8) to take off the Filter board ass'y and then remove 7 screws C(M3x6) to remove the Filter Board Holder, Filter Board Sheet and the Filter Board.
2. Remove 2 screws D(T3x8) to remove the fan (FN901 ).
3. Remove 2 screws E(M4x8) and 2 screws F(T3x8) to remove the power and ballast ass'y from the cabinet bottom.
4. Remove screw G(M4x8) and 3 screws H(M3x6) to remove the Ballast Board.
5. Remove 2 screws I (T3x8) and 2 screws J (M3x6) to remove SW902.
6. Remove 2 screws K (M3x6) and a black hook to remove the power board.
7. Remove 3 screws L(T3x8) to remove the Lens Holder.

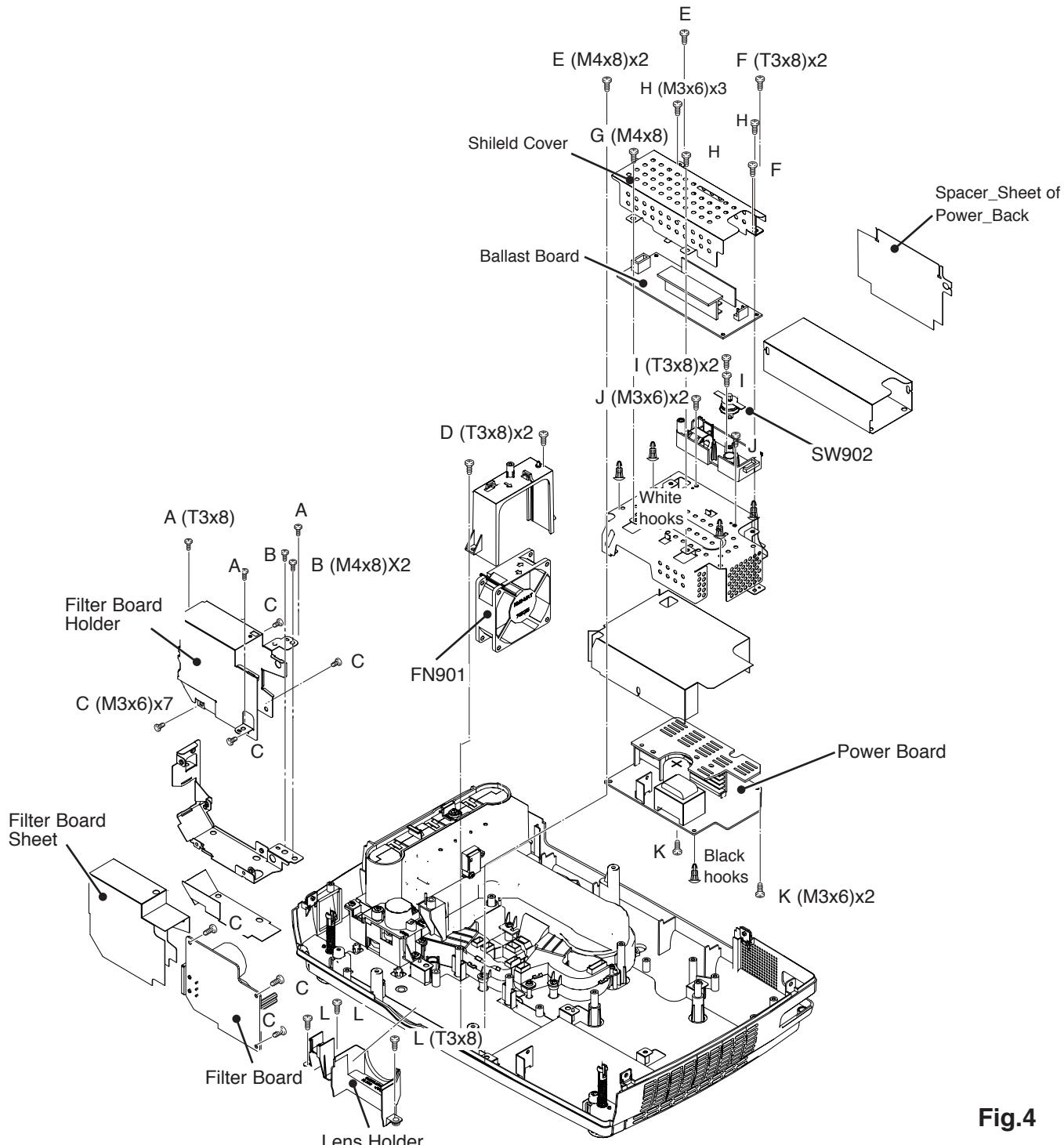


Fig.4

## 5 Duct, Wind Velocity Sensor (S901), Sensor Board, Motor (M901), SW903, Filter and Fans (FN903, FN904, FN905) Removal

1. Remove 4 screws A (T3x8) and 2 black screws B (T3x12) to remove the duct top and duct bottom. Remove 1 screw C (T3x14) to remove the Wind Velocity Sensor (S901).
2. Rotate the handle on the Filter and take off the Filter.
3. Remove 3 screws D (T3x10), 1 screw E(M3x6) and then take off the filter holder upward. Remove 4 screws F(T3x8) to remove the motor and gear ass'y. Remove the filter switch (SW903).
4. Remove the Sensor Board.Remove the motor sheet and remove 2 screws G(M4x8) to remove the Motor (M901).
5. Remove 3 black screws H (T3x12) to remove fans (FN903,FN904,FN905).

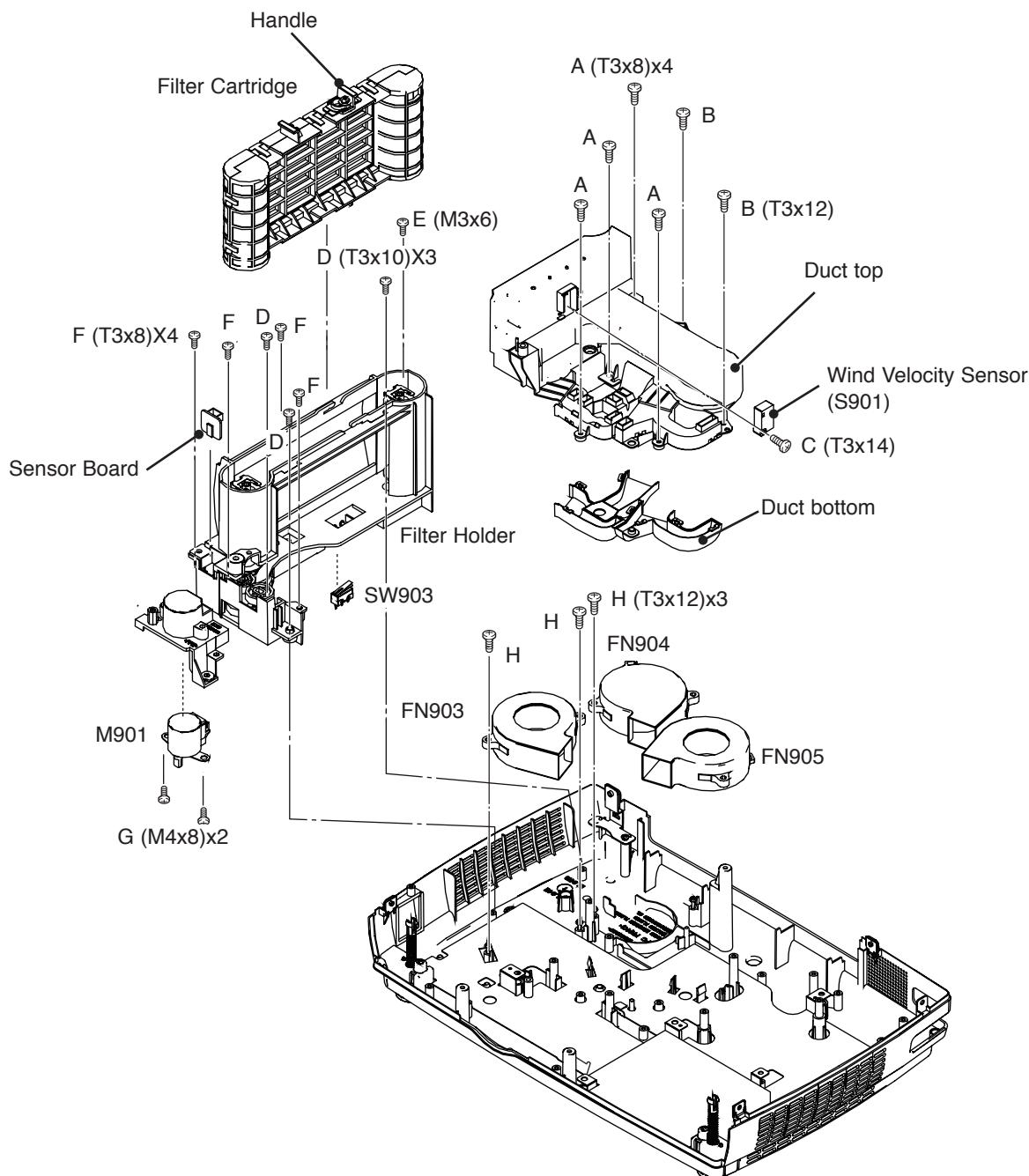


Fig.5

# Optical Parts Disassembly

Before taking this procedure, remove Cabinet Top and Main Board following to the “Mechanical Disassembly”. Disassembly requires a 2.0mm hex wrench.

## 1 Projection lens disassembly

Note: The optical unit should be removed from the cabinet bottom before removing the projection lens.

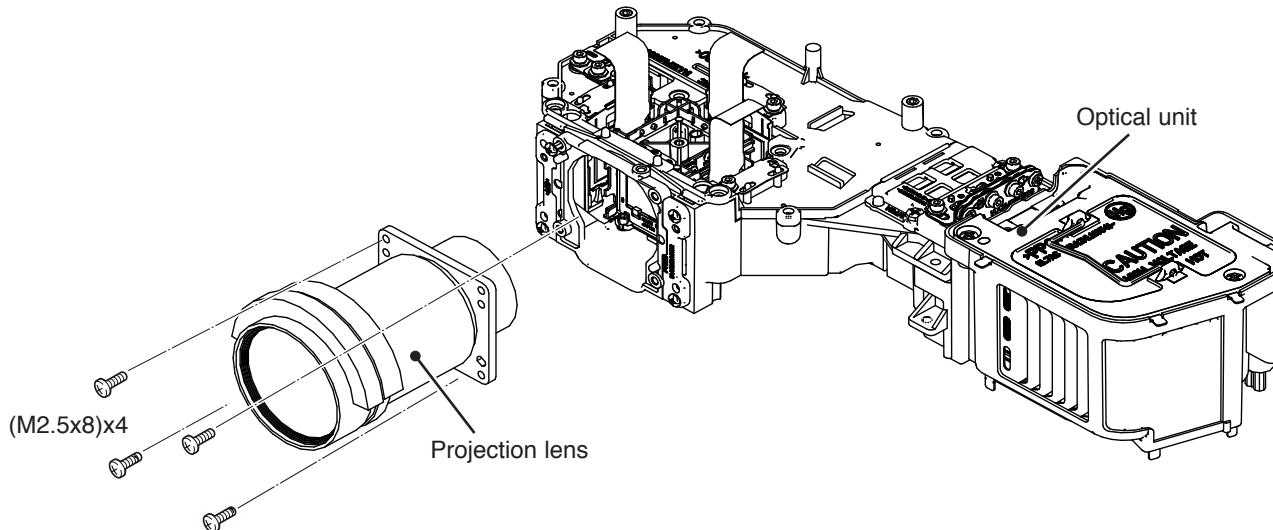


Fig.1

## 2 Integrator lens-in disassembly

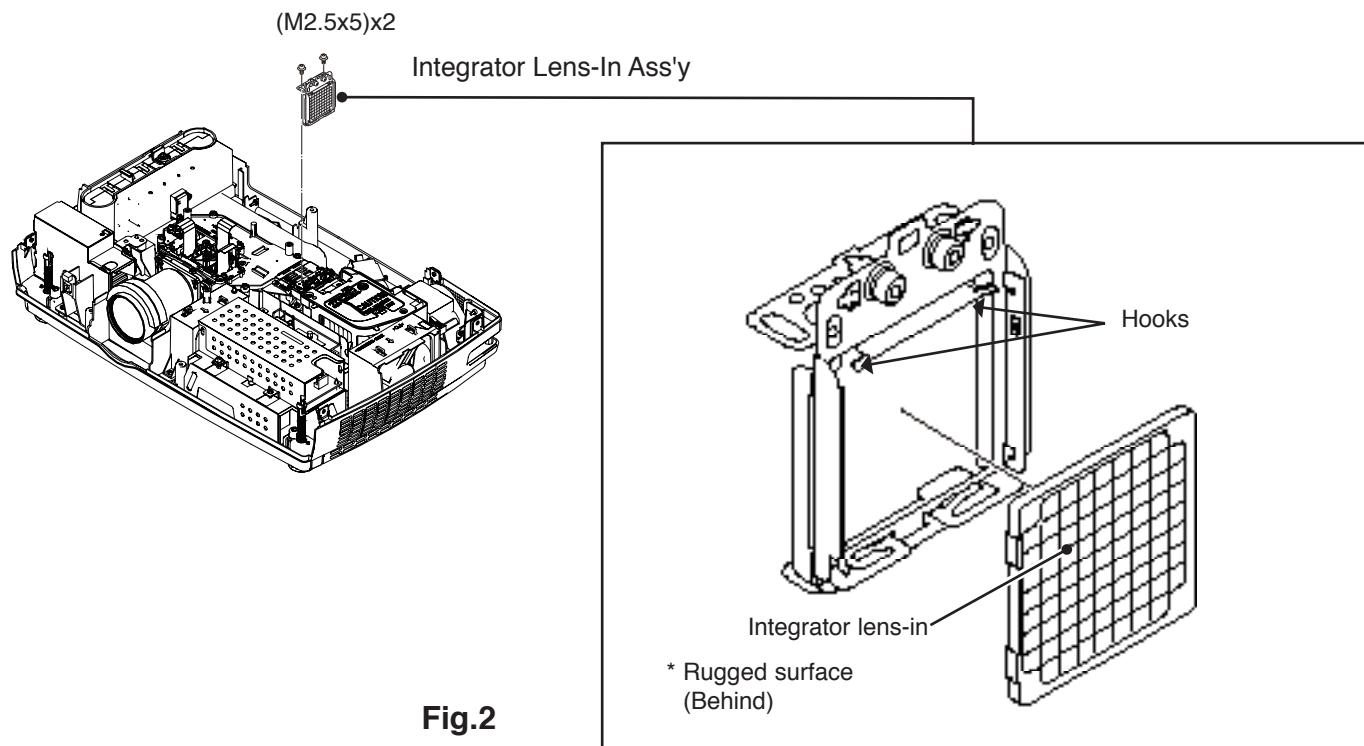


Fig.2

## Optical Parts Disassembly

### 3 Relay lens disassembly

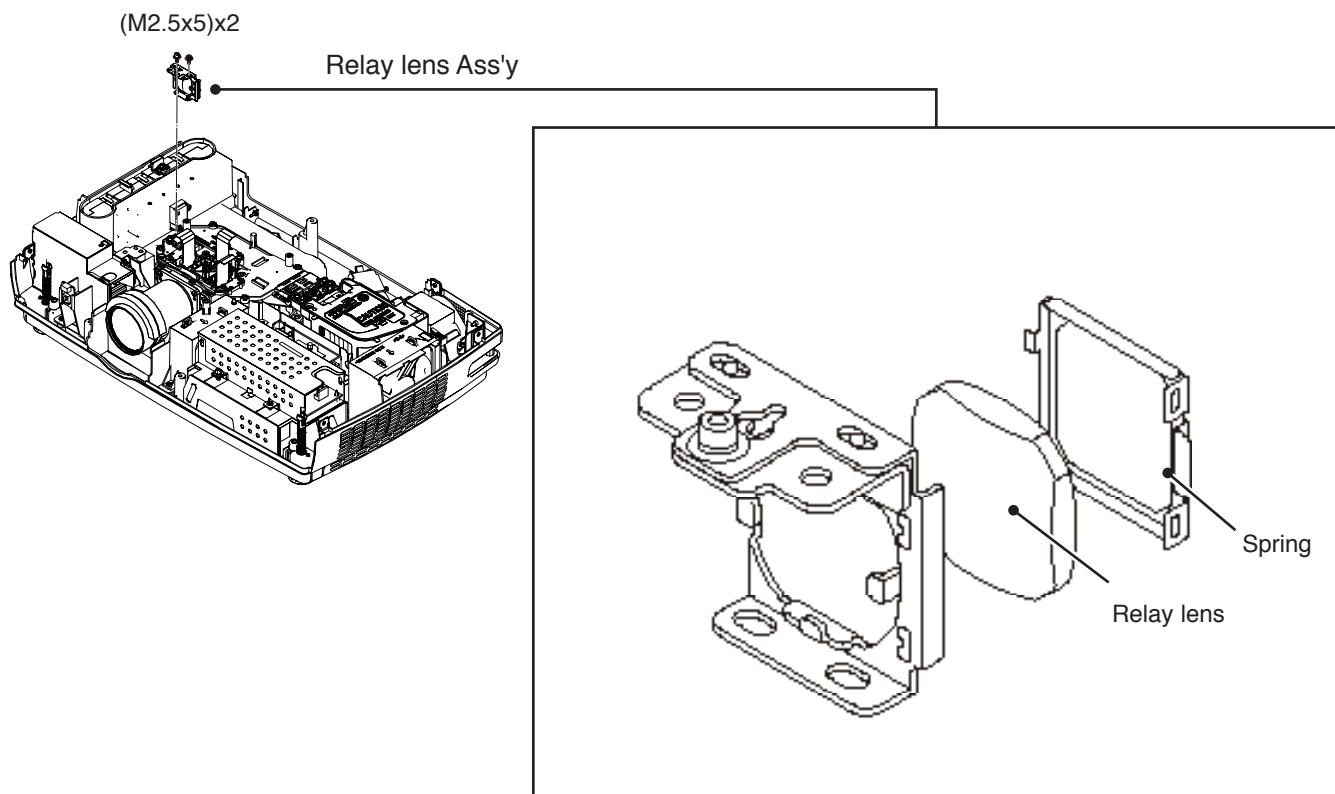


Fig.3

### 4 Polarized glass-in disassembly

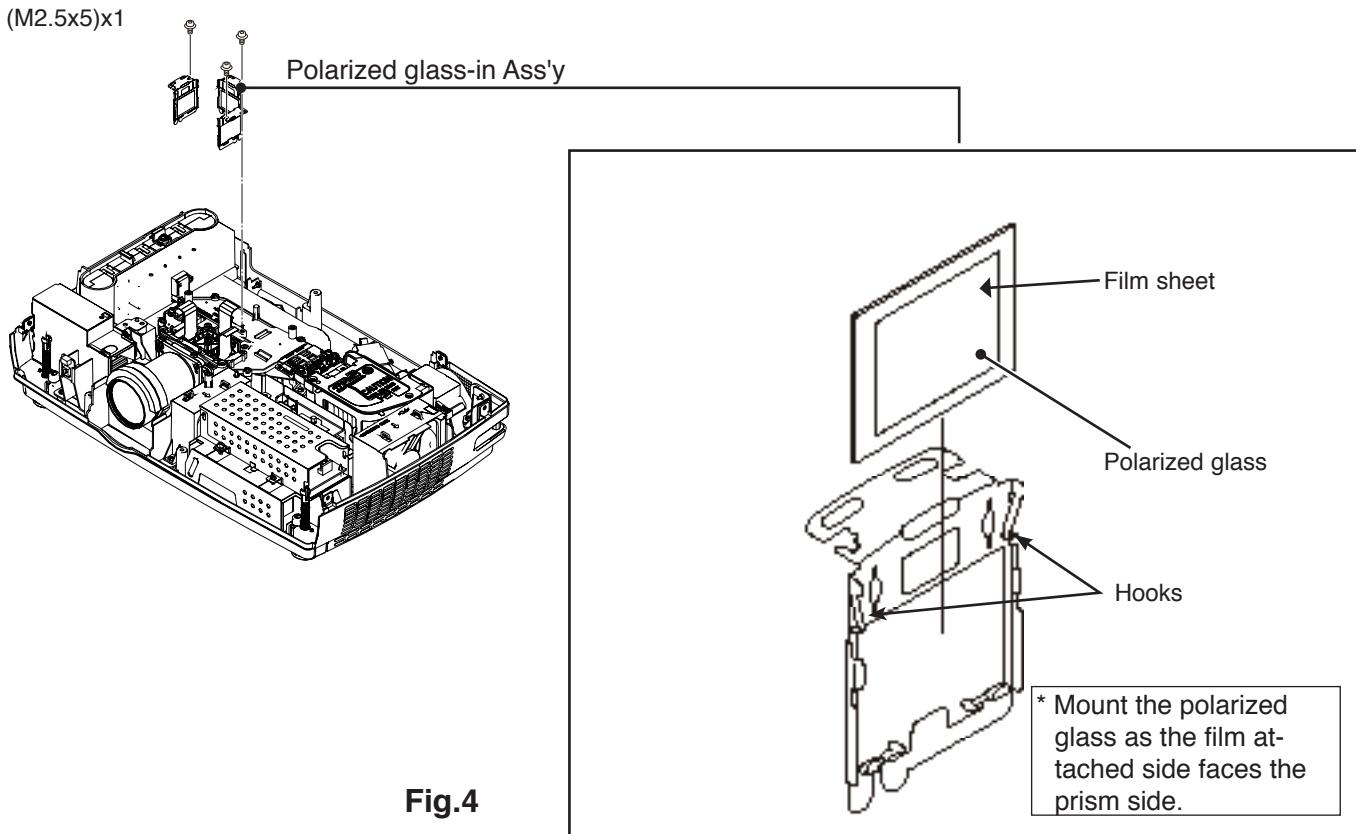


Fig.4

## 5 LCD Panel/Prism Ass'y removal

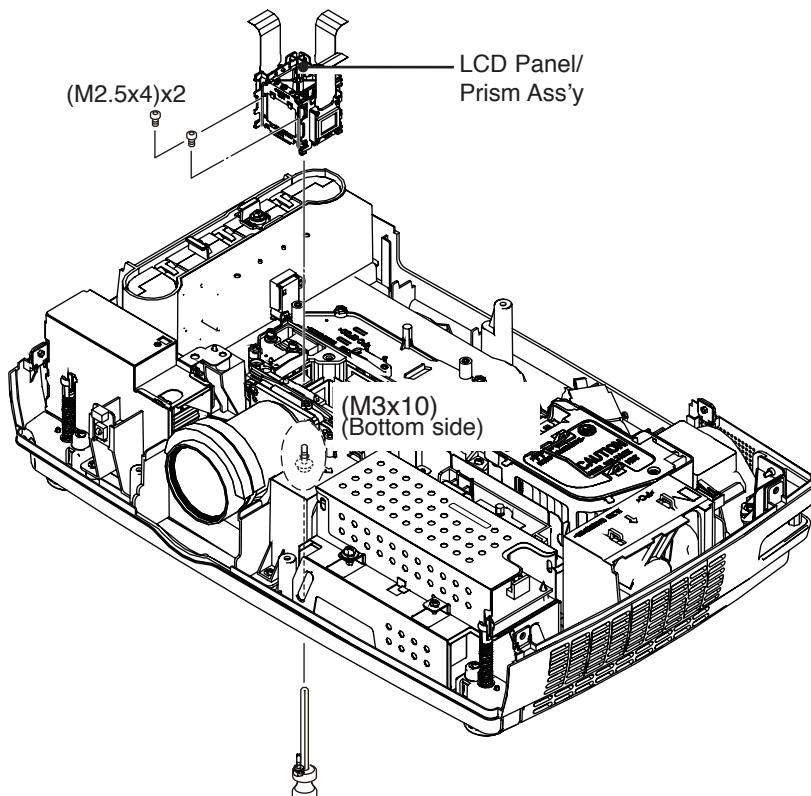


Fig.5-1

### 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 points.

- Check that there is no color shading at the top, bottom, left or right of the screen. If there is, try to remove the shading following to the chapter "Optical Adjustment".
- Check the white balance. If it needs the adjustment, adjust the white balance following to the "White Balance Adjustment", "Gamma Adjustment" and "Common Center Adjustment" in the chapter "Electrical Adjustment".
- Check the white uniformity on the screen.

If you find the color shading at the some part of the screen, it needs to take the color shading adjustment. This adjustment should be performed by a computer and it also requires a special software "Color Shading Correction". The software will be supplied separately and can be ordered as follows;

**COLOR SHADING CORRECTION Ver. 4.00**  
**Service Parts No. 645 075 9611**

## Panel Type Check

There are 2 types of LCD Panel/Prism Ass'y for this model. Either L-Type or R-Type LCD Panel/Prism Ass'y is used on the projector. Check which type of LCD Panel/Prism Ass'y is used with the figure below.

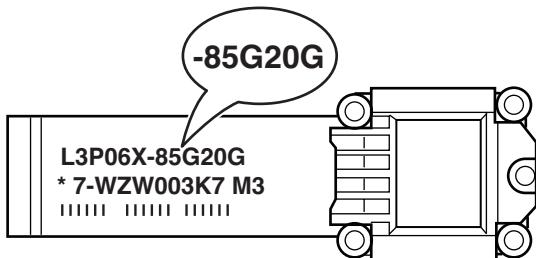
When replacing the LCD Panel/Prism Ass'y, you need to take "Panel Type Check and Setting" on the Electrical Adjustment for the replaced LCD Panel/Prism Ass'y.

The gamma-characteristics is different between L-Type and R-Type LCD Panel/Prism Ass'y.

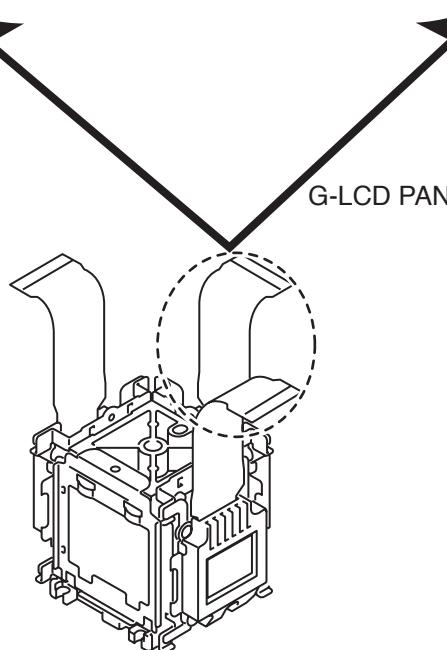
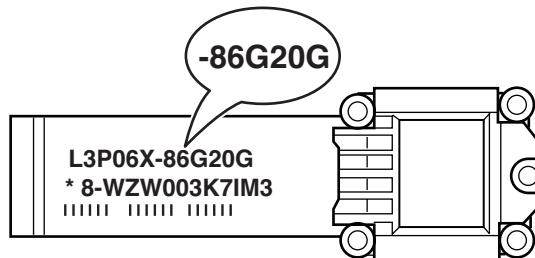
### How to check the type of LCDPanel/Prism Ass'y

Check the printed number on the flat cable of the G-LCD Panel.

L-Type LCD Panel/Prism Ass'y



R-Type LCD Panel/Prism Ass'y



**Fig.5-2**

## 6 Polarized glass, Pre-polarized glass removal

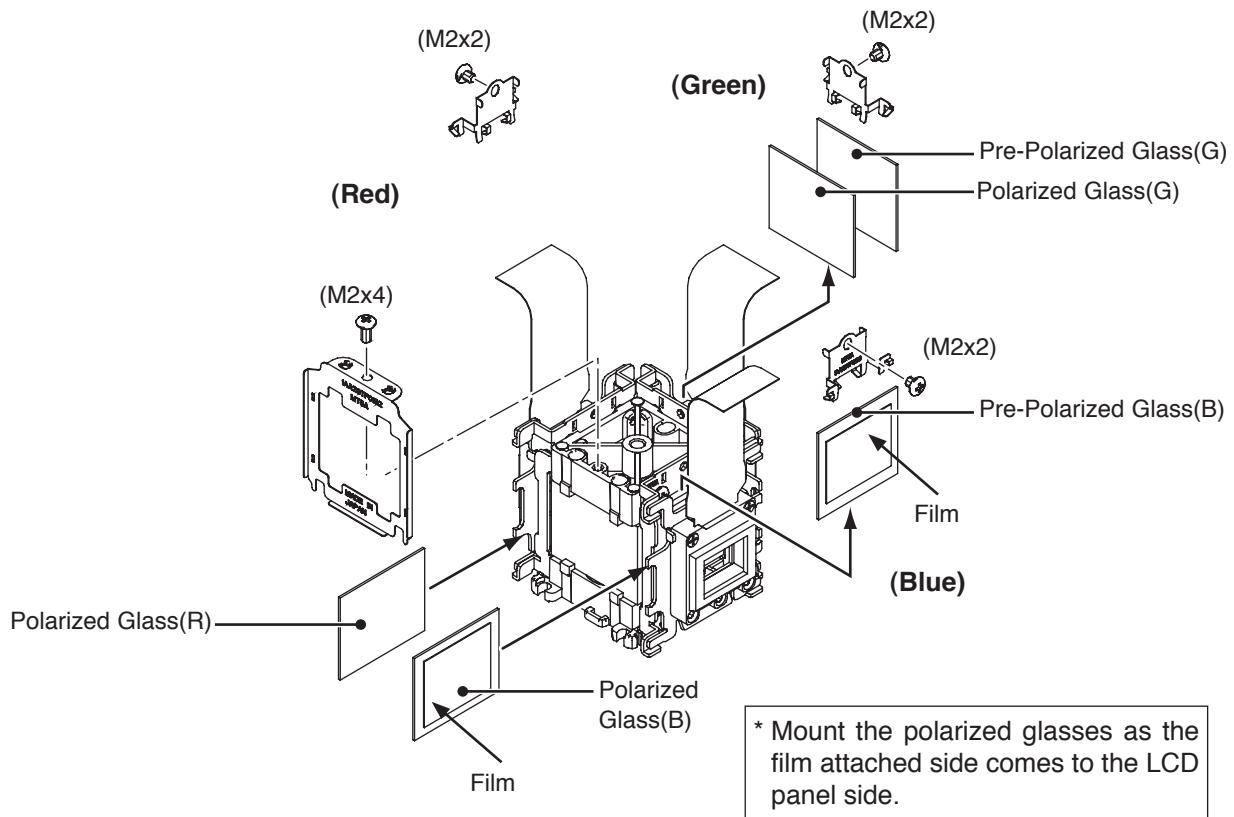


Fig.6

## 7 Optical unit top removal

1. Remove the Optical top A and Optical Top B.

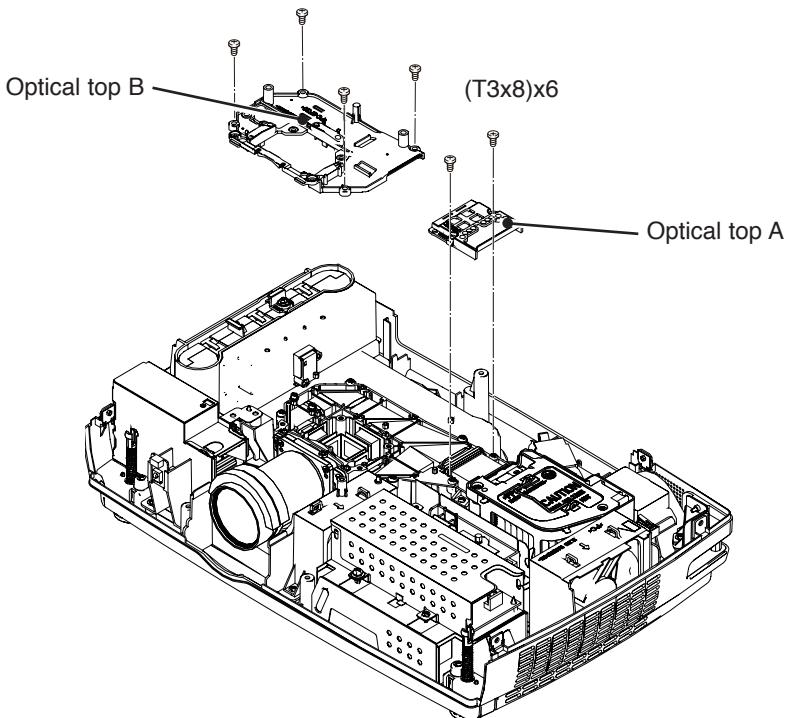
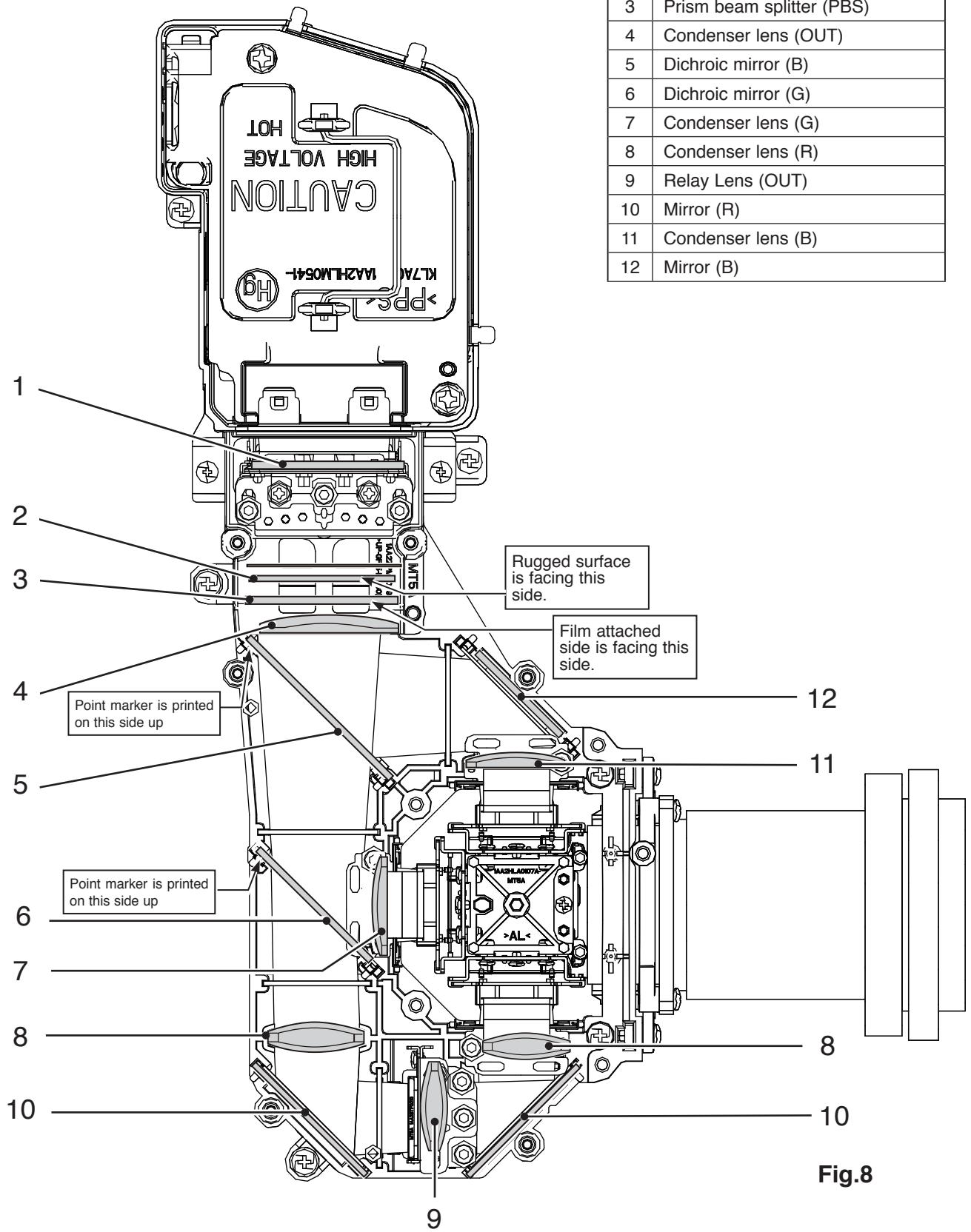


Fig.7

## 8 Locations and Directions

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



# Adjustments

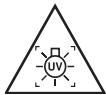
## Adjustments after Parts Replacement

● : Adjustment necessary ○ : Check necessary

		Disassembly / Replaced Parts						
		LCD/ Prism Ass'y	Integrator Lens (OUT)	Relay Lens (OUT)	Polarized Glass			Power Board
		R	G	B				
Optical Adjustments	Contrast Adjustment							
	R-Contrast adjustment				●			
	G-Contrast adjustment					●		
	B-Contrast adjustment					●		
	Integrator lens adjustment	○	●					
Electrical Adjustments	Relay lens-out adjustment	○		●				
	Fan control adjustment					●	●	
	Panel type check and setting	●					●	
	Auto calibration adjustment [PC]						●	
	Auto calibration adjustment [Component]						●	
	Auto calibration adjustment [Video]						●	
	Common center adjustment	●					●	
	50% white adjustment [PC]	●					●	
	White balance adjustment [PC]	○					○	
	50% white adjustment [Video]	●					●	
	White balance adjustment [Video]	○					○	
	White uniformity adjustment	○					○	
	Keystone offset adjustment						●	
	Wind Velocity Sensor Calibration						●	

# Optical Adjustments

Before taking optical adjustments below, remove the Cabinet Top following to the "Mechanical Disassembly". Adjustments require a 2.0mm hex wrench and a slot screwdriver. When you adjust Integrator lens or Relay lens adjustment, you need to disconnect FPC cables of LCD panels on the main board. Optical adjustment requires a 2.0mm hex wrench and a slot screwdriver. Note: Do not disconnect connectors on the main board, because the projector cannot turn on due to operate the power failure protection.



**WARNING : USE UV RADIATION EYE AND SKIN PROTECTION DURING SERVICING**

**CAUTION:** To prevent suffer of UV radiation, those adjustment must be completed within 25 minutes.

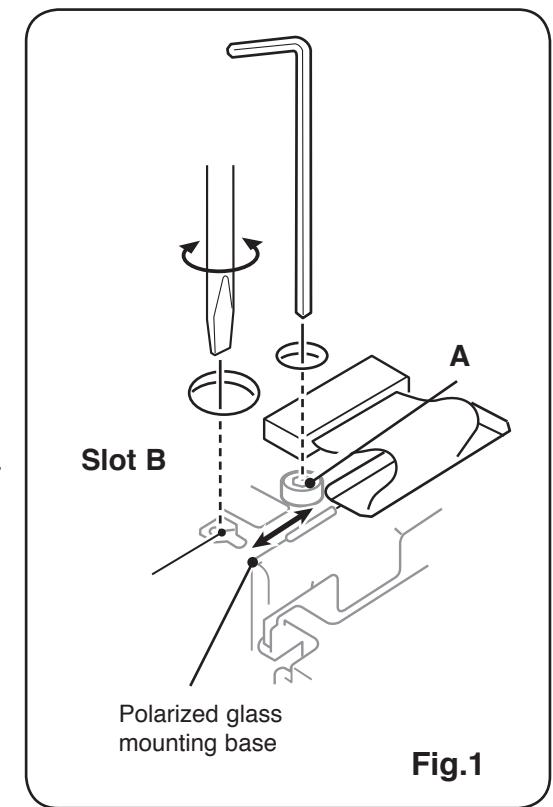
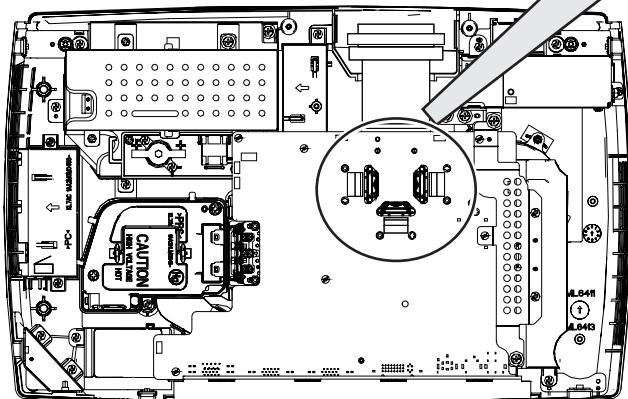
## Contrast adjustment

### [Before Adjustment]

- Input a 100% of black raster signal.

- 1 Loosen a screw **A** (**Fig.1**) on the polarized glass mounting base which you intend to adjust.
- 2 Adjust the slot **B** to obtain the darkest brightness on the screen by using a slot screwdriver.
- 3 Tighten the screw **A** to fix the polarized glass mounting base.

Repeat steps 1 to 3 for remaining polarized glasses.



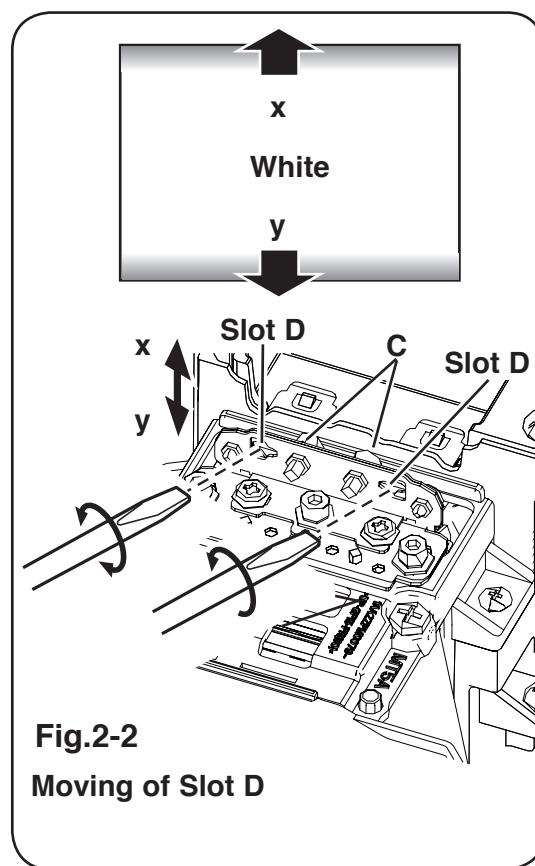
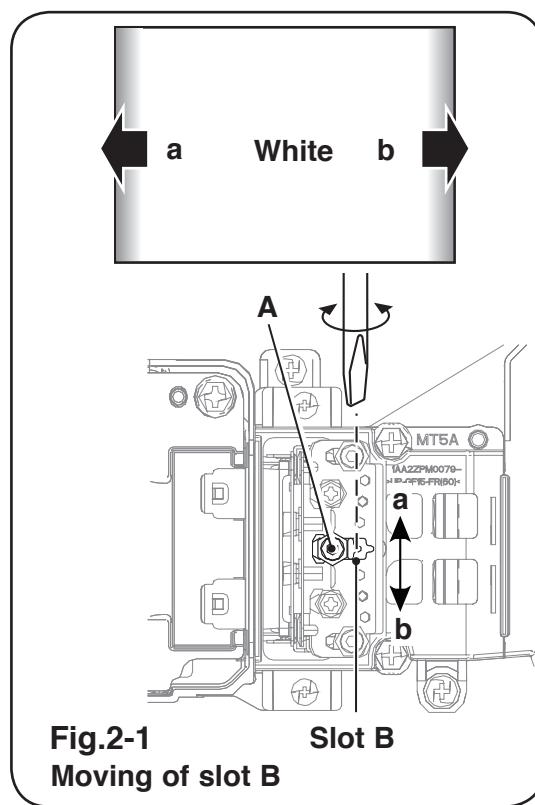
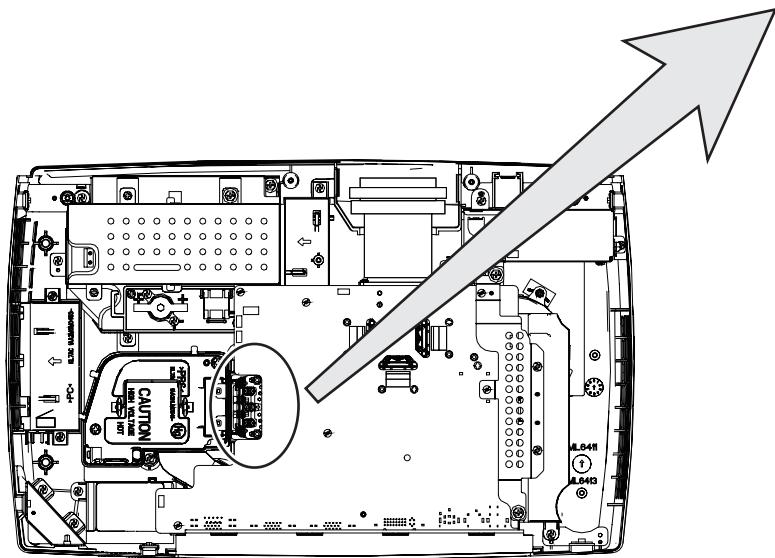
**Fig.1**

## Integrator lens adjustment

- 1 Turn the projector on by a state of without FPC cables.
- 2 Project all of lights on the screen.
- 3 Adjust the adjustment base of integrator lens assy 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 1 screw **A**, and adjust the slot **B** to make color uniformity in white 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 2 screws **C**, and insert a slot screwdriver into the slot **D** and adjust color uniformity in white by turning a slot screwdriver up or down.
- 4 Tighten screws **A** and **C** to fix the Integrator lens unit.

Note:

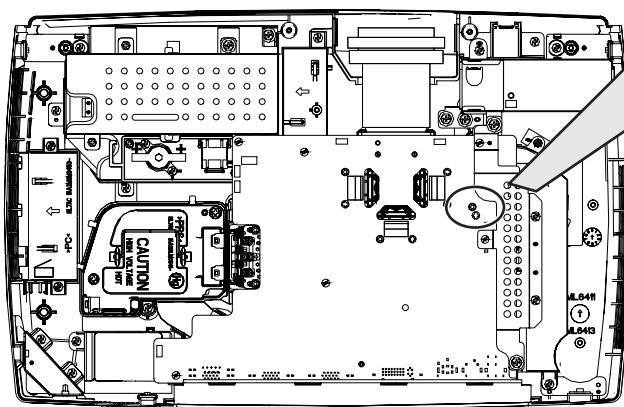
The relay lens adjustment must be carried out after completing this adjustment.



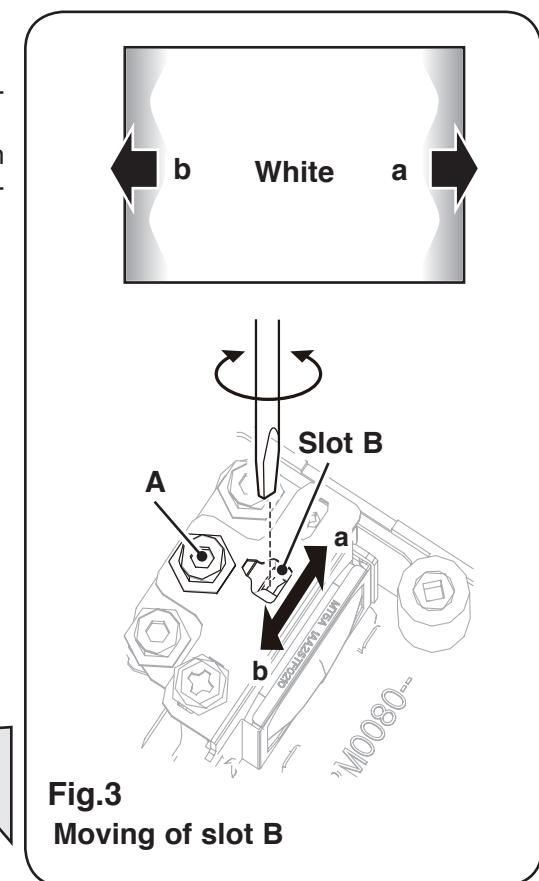
## Optical Adjustments

### Relay lens-Out adjustment

- 1 Turn the projector on by a state of without FPC cables.
- 2 Project all of lights on the screen.
- 3 Adjust the adjustment base of relay lens assy to make color uniformity in white.  
If the shading appears on the left or right of the screen as shown in **Fig.3**, loosen 1 screw **A**, and adjust the slot **B** to make color uniformity in white by using a slot screwdriver.
- 4 Tighten the screw **A** to fix the relay lens unit.



-27-



# Electrical Adjustments

## Service Adjustment Menu Operation

### To enter the service mode

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

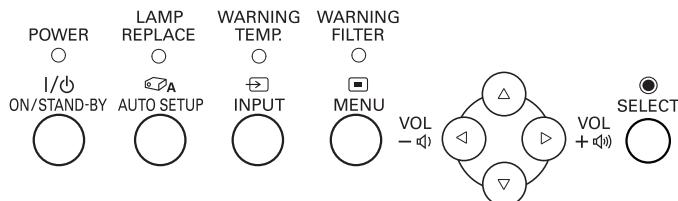
### To adjust service data

Select the adjustment group no. by pressing the **MENU button** (increase) or **SELECT button** (decrease), and select the adjustment item no. by pressing the pointer **▲** or **▼ button**, and change the data value by pressing the **◀** or **▶ 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 **ON/STAND-BY button**.

Service Mode		
Input	Video	
Group	No.	Data
Ver.	0	32
Group No.	Item No.	Data value
	1	00



## Memory IC (IC1371) Replacement

Memory IC 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, the re-adjustments are required following to the “Electrical Adjustments”.

The data of lamp replacement counter is stored in the Memory IC.

Please note that the lamp replace counter will be reset when the memory IC is replaced.

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

factory shipped data, it should be required to perform the re-adjustments following to the “Electrical Adjustments”.

Please note that in this case the lamp replace counter will be reset.

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

When the main board is replaced, memory IC 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.

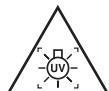
### ● Caution to memory IC replacement

When memory IC is replaced with new one, the CPU writes down the default data of the service adjustments to the replaced IC as the mentioned on the service adjustment table. As these data are not the same data as

## 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.

Before adjustment, turn on the projector more than 10 minutes.



**WARNING : USE UV RADIATION EYE AND SKIN PROTECTION DURING SERVICING.**



**CAUTION:**  
To prevent suffer of UV radiation, those adjustments must be completed within 25 minutes.

[Adjustment Condition]

● Input signal

Video signal ..... 1.0Vp-p/75ohm terminated, 16 steps gray scale (Composite video signal)

Component Video signal..... 1.0Vp-p/75ohm terminated, 8 color 100% color bar or 16 steps gray scale (Component video signal)

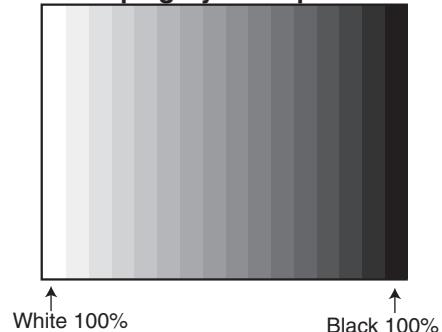
Computer signal..... 0.7Vp-p/75ohm terminated, 16 steps gray scale pattern

● Image control mode ..... "STANDARD" mode unless otherwise noted.

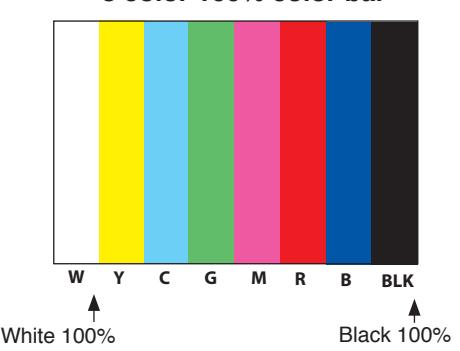
**Note:**

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

**16 steps gray scale pattern**



**8 color 100% color bar**



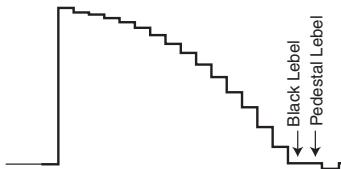
## 1. Fan Control adjustment

1. Enter the service mode.  
Lamp mode : Eco
2. Connect a digital voltmeter to test point “TPFANA” (+) and chassis ground (-).  
Select group no. “250”, item no. “0” and change data value to adjust voltage to be  $5.0 \pm 0.1V$ .
3. Connect a digital voltmeter to test point “TPFANB” (+) and chassis ground (-).  
Select group no. “250”, item no. “2” and change data value to adjust voltage to be  $5.5 \pm 0.1V$ .
4. Connect a digital voltmeter to test point “TPFANC” (+) and chassis ground (-).  
Select group no. “250”, item no. “4” and change data value to adjust voltage to be  $5.0 \pm 0.1V$ .
5. Connect a digital voltmeter to test point “TPFANA” (+) and chassis ground (-).  
Select group no. “250”, item no. “1” and change data value to adjust voltage to be  $13.5 \pm 0.1V$ .
6. Connect a digital voltmeter to test point “TPFANB” (+) and chassis ground (-).  
Select group no. “250”, item no. “3” and change data value to adjust voltage to be  $13.5 \pm 0.1V$ .
7. Connect a digital voltmeter to test point “TPFANC” (+) and chassis ground (-).  
Select group no. “250”, item no. “5” and change data value to adjust voltage to be  $13.5 \pm 0.1V$ .

Below adjustments are performed when the above auto calibration is failed.

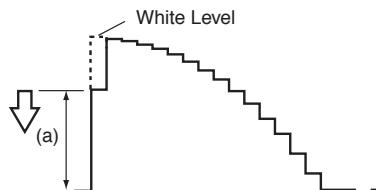
### Pedestal adjustment [PC]

1. Enter the service mode.
2. Receive the 16-step grey scale computer signal with **Computer2 [RGB]** mode.
3. Connect an oscilloscope to test point “TP\_G1” (+) and chassis ground (-).
4. Select group no. “0”, item no. “0” and change data value to adjust the pedestal level and black level to be the same level.
5. Connect an oscilloscope to test point “TP\_R1” (+) and chassis ground (-).
6. Select item no. “1” and change data value to adjust the pedestal level and black level to be the same level.
7. Connect an oscilloscope to test point “TP\_B1” (+) and chassis ground (-).
8. Select item no. “2” and change data value to adjust the pedestal level and black level to be the same level.



### Gain adjustment [PC]

1. Enter the service mode.
2. Receive the 16-step grey scale computer signal with **Computer2 [RGB]** mode.
3. Connect an oscilloscope to test point “TP\_G1” (+) and chassis ground (-).
4. Select group no. “0”, item no. “3” and adjust the amplitude “a” to be minimum by changing the Data value.
5. Connect an oscilloscope to test point “TP\_R1” (+) and chassis ground (-).
6. Select group no. “0”, item no. “4” and adjust the amplitude “a” to be minimum by changing the Data value.
7. Connect an oscilloscope to test point “TP\_B1” (+) and chassis ground (-).
8. Select group no. “0”, item no. “5” and adjust the amplitude “a” to be minimum by changing the Data value.



## 2. Panel Type Check and Setting

\* Before setting, you need to check which type of LCD panel is placed on the projector according to the item "LCD Panel/Prism Ass'y removal" in the chapter "Optical Parts Disassembly".

1. Enter the service mode.
2. Panel Type Check  
Select group no. “290”, item no. “0”. Check the data value as follows;  
Data value: 0 For L-Type of LCD Panel  
Data value: 20 For R-Type of LCD panel
3. Panel Type Setting  
Select group no. “290”, item no. “1” and change data value from 10 to 0 or 20 depending on your LCD Panel type. When the data value reaches 0 or 20, it returns to 10 quickly. The gamma-characteristics changes according to your selection.

## 3. Auto Calibration adjustment [PC]

1. Enter the service mode.
2. Receive the 16-step grey scale computer signal with **Computer2 [RGB]** mode.
3. To start the auto-calibration for PC adjustment, select group no. “260”, item no. “0” and then change data value from “0” to “1”. After the auto-calibration completed, “OK” will appear on the screen.

## Electrical Adjustments

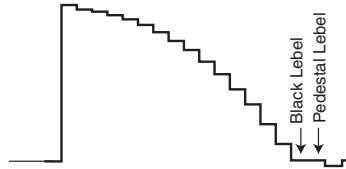
### 4. Auto Calibration adjustment [Component]

1. Enter the service mode.
2. Receive the 8 color 100% color bar 480i-component signal with **Computer2 [Component]** mode.
3. To start the auto-calibration for Component adjustment, select group no. “**260**”, item no. “**0**” and then change data value from “**0**” to “**1**”. After the auto-calibration completed, “OK” will appear on the screen.

Below adjustments are performed when the above auto calibration is failed.

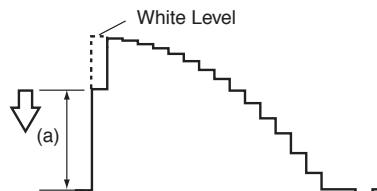
#### Pedestal adjustment [Component]

1. Enter the service mode.
2. Receive the 16-step grey scale 480i-component signal with **Computer2 [Component]** mode.
3. Connect an oscilloscope to test point “**TP\_G1**” (+) and chassis ground (-).
4. Select group no. “**0**”, item no. “**0**” and change data value to adjust the pedestal level and black level to be the same level.
5. Connect an oscilloscope to test point “**TP\_R1**” (+) and chassis ground (-).
6. Select item no. “**1**” and change data value to adjust the pedestal level and black level to be the same level.
7. Connect an oscilloscope to test point “**TP\_B1**” (+) and chassis ground (-).
8. Select item no. “**2**” and change data value to adjust the pedestal level and black level to be the same level.



#### Gain adjustment [Component]

1. Enter the service mode.
2. Receive the 16-step grey scale 480i-component signal with **Computer2 [component]** mode.
3. Connect an oscilloscope to test point “**TP\_G1**” (+) and chassis ground (-).
4. Select group no. “**0**”, item no. “**3**” and adjust the amplitude “**a**” to be minimum by changing the Data value.



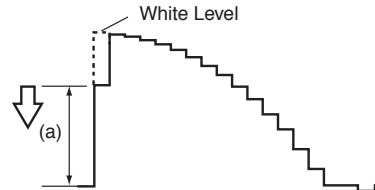
### 5. Auto Calibration adjustment [Video]

1. Enter the service mode.
2. Receive the 16-step grey scale composite video signal with **Video** mode.
3. To start the auto-calibration for Component adjustment, select group no. “**260**”, item no. “**0**” and then change data value from “**0**” to “**1**”. After the auto-calibration completed, “OK” will appear on the screen.

below adjustment is performed when the above auto calibration is failed.

#### Gain adjustment [Video]

1. Enter the service mode.
2. Receive the 16-step grey scale composite video signal with **Video** mode.
3. Connect an oscilloscope to test point “**TP\_G1**” (+) and chassis ground (-).
4. Select group no. “**20**”, item no. “**0**” and adjust the amplitude “**a**” to be minimum by changing the Data value.

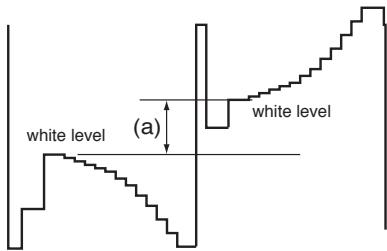


### 6. Common Center adjustment

1. Enter the service mode.
2. Receive the 50%-Whole Gray computer signal with **Computer2 [RGB]** mode.
3. Select group no. “**100**”, item no. “**92**” and change data value to “**2**” to reduce the panel frequency.
4. Project only green light component to the screen.
5. Select group no. “**101**”, item no. “**1**” and change data value to obtain the minimum flicker on the screen.
6. Project only red light component to the screen.
7. Select item no. “**0**” and change data value to obtain the minimum flicker on the screen.
8. Project only blue light component to the screen.
9. Select item no. “**2**” and change data value to obtain the minimum flicker on the screen.
10. Select group no. “**100**”, item no. “**92**” and change data value to “**0**” to reset the panel frequency.

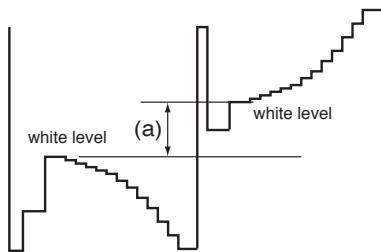
### 7. 50% White adjustment [PC]

1. Enter the service mode.
2. Receive the 16-step grey scale computer signal with **Computer2 [RGB]** mode.
3. Connect an oscilloscope to test point “**TP\_G1**” (+) and chassis ground (-).
4. In standard mode, select group no. “**100**”, item no. “**6**” and change data value to adjust amplitude “**a**” to be **1.6V**.



### 9. 50% White adjustment [Video]

1. Enter the service mode.
2. Receive the 16-step grey scale composite video signal with **Video** mode.
3. Connect an oscilloscope to test point “**TP\_G1**” (+) and chassis ground (-).
4. In standard mode, select group no. “**100**”, item no. “**6**” and change data value to adjust amplitude “**a**” to be **1.6V**.



### 8. White Balance adjustment [PC]

1. Enter the service mode,
2. Receive the 16-step gray scale computer signal with **Computer2 [RGB]** mode.
3. Select group no. “**100**” 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.

### 10. White Balance adjustment [Video]

1. Enter the service mode.
2. Receive the 16-step grey scale composite video signal with **Video** mode.
3. Select group no. “**100**” 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.

## 11. Keystone Offset adjustment

After replacing the G-sensor circuit (IC3851 and peripheral circuit) and EPROM (IC1371), readjust the Keystone Offset adjustment as follows.

1. Put the projector on a horizontal place with the adjustable feet being minimum range and then enter the service mode.
2. Select group no. "102", item no. "3" and set data value from "0" to "5".
3. By pressing the **SELECT** button, the Keystone Offset adjustment will start.
4. When it has completed, the "OK" message will appear on the screen.
5. By pressing any button on the projector or the remote control, the "OK" message will disappear.  
(Data value of Group no. "102", item no. "3" will be back from "5" to "0" for initial value.)

**Caution:**

Before adjustment, turn on the projector more than 25 minutes.

## 12. Color Shading Correction adjustment

If the correction of the Color shading adjustment is necessary, please adjust the "Color shading" by using the "COLOR SHADING CORRECTION" software supplied separately.

The color shading correction adjustment for this model should be performed with the whole-gray patterns specified as below.

**4-input patterns:**

**6.25% gray, 12.5% gray, 25% gray, 50% gray**

The Color Shading Correction can be ordered with following service code.

**COLOR SHADING CORRECTION Ver. 4.00**

Service Parts No.      645 075 9611

## 13. Wind Velocity Sensor Calibration

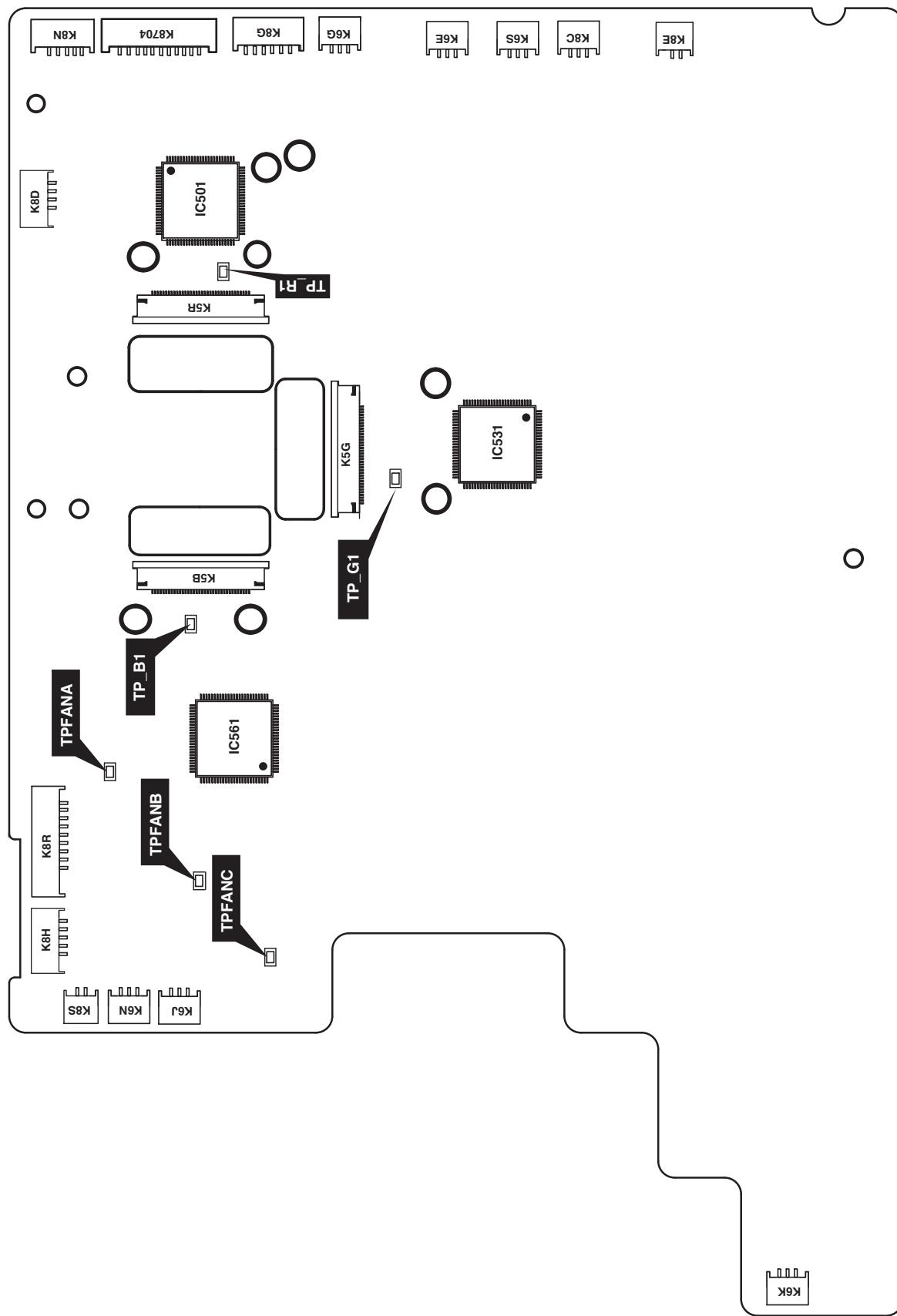
1. Enter the service mode, select group no. "240" and item no. "0".
2. To start the calibration, change data value from "0" to "1". During the calibration, the word "Please wait..." appears on the screen. After the calibration completed correctly, "OK" will appear on the screen.

**IMPORTANT**

Before taking this adjustment, you need to replace the filter cartridge with new one or scrolled up to new filter.

## Test Points and Locations

### MAIN BOARD



## 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.

Group/Item	Item Name	Function	Initial	Range	Note
<b>Group 0</b>	<b>AD Converter (PW190)</b>				
0	ADC G-OFFSET	PC / Component / SCART	128/120/128	0 - 255	* G-Pedestal Adjustment
1	ADC R-OFFSET	PC / Component / SCART	128/140/128	0 - 255	* R-Pedestal Adjustment
2	ADC B-OFFSET	PC / Component / SCART	128/140/128	0 - 255	* B-Pedestal Adjustment
3	ADC G-GAIN	PC / Component / SCART	50/50/50	0 - 255	* G-Gain Adjustment
4	ADC R-GAIN	PC / Component / SCART	40/40/40	0 - 255	* R-Gain Adjustment
5	ADC B-GAIN	PC / Component / SCART	40/40/40	0 - 255	* B-Gain Adjustment
6	GRAAFLTR/RBA AFLTR	Green (Red and Blue) Anti-Alias Filter	4 / R / R	0 - 7	
7	GRNAADWNSMPL / RBAADWNSMPL	Green (Red and Blue) Anti-Alias Downsample	0 / R / R	0 - 3	Composite & S-Video / Component / PC
8	GRNAAHF / RBAAHF	Green (Red and Blue) Anti-Alias High Frequency	3 / R / R	0 - 3	*R: Read only value
10	SOGTH	PC / Component / SCART SyncOn Green Threhold	4 / 4 / 4	0 - 15	
11	SOGHYSDIS	PC / Component / SCART Sync On Green Hysterisis Enable	0	0 - 1	
12	HS1TH		4	0 - 7	
13	HS0TH		4	0 - 7	
100	PreCoast PC Signal		3	0 - 63	
101	PostCoast PC Signal		8	0 - 63	
120	PreCoast PC Video 480i		7	0 - 63	
121	PostCoast PC Video 480i		13	0 - 63	
122	PreCoast PC Video 575i		7	0 - 63	
123	PostCoast PC Video 575i		13	0 - 63	
124	PreCoast PC Video 480p		7	0 - 63	
125	PostCoast PC Video 480p		13	0 - 63	
126	PreCoast PC Video 575p		7	0 - 63	
127	PostCoast PC Video 575p		13	0 - 63	
128	PreCoast PC Video 720p 60Hz		7	0 - 63	
129	PostCoast PC Video 720p 60Hz		13	0 - 63	
130	PreCoast PC Video 720p 50Hz		7	0 - 63	
131	PostCoast PC Video 720p 50Hz		13	0 - 63	
132	PreCoast PC Video 1080i 60Hz		7	0 - 63	
133	PostCoast PC Video 1080i 60Hz		13	0 - 63	
134	PreCoast PC Video 1080i 50Hz		7	0 - 63	
135	PostCoast PC Video 1080i 50Hz		13	0 - 63	
136	PreCoast PC Video 1035i		7	0 - 63	
137	PostCoast PC Video 1035i		13	0 - 63	
138	PreCoast PC Video 1080p 60Hz		7	0 - 63	
139	PostCoast PC Video 1080p 60Hz		13	0 - 63	
140	PreCoast PC Video 1080p 50Hz		7	0 - 63	
141	PostCoast PC Video 1080p 50Hz		13	0 - 63	
142	PreCoast PC Video 1080p 30Hz		7	0 - 63	
143	PostCoast PC Video 1080p 30Hz		13	0 - 63	
144	PreCoast PC Video 1080p 25Hz		7	0 - 63	
145	PostCoast PC Video 1080p 25Hz		13	0 - 63	
146	PreCoast PC Video 1080p 24Hz		7	0 - 63	

## Electrical Adjustments

Group/Item	Item Name	Function	Initial	Range	Note
147	PostCoast PC Video 1080p 24Hz		13	0 - 63	
150	PreCoast YCbCr 480i		7	0 - 63	
151	PostCoast YCbCr 480i		13	0 - 63	
152	PreCoast YCbCr 575i		7	0 - 63	
153	PostCoast YCbCr 575i		13	0 - 63	
154	PreCoast YCbCr 480p		7	0 - 63	
155	PostCoast YCbCr 480p		13	0 - 63	
156	PreCoast YCbCr 575p		7	0 - 63	
157	PostCoast YCbCr 575p		13	0 - 63	
158	PreCoast YCbCr 720p 60Hz		7	0 - 63	
159	PostCoast YCbCr 720p 60Hz		13	0 - 63	
160	PreCoast YCbCr 720p 50Hz		7	0 - 63	
161	PostCoast YCbCr 720p 50Hz		13	0 - 63	
162	PreCoast YCbCr 1080i 60Hz		7	0 - 63	
163	PostCoast YCbCr 1080i 60Hz		13	0 - 63	
164	PreCoast YCbCr 1080i 50Hz		7	0 - 63	
165	PostCoast YCbCr 1080i 50Hz		13	0 - 63	
166	PreCoast YCbCr 1035i		7	0 - 63	
167	PostCoast YCbCr 1035i		13	0 - 63	
180	PreCoast SCART 480i		7	0 - 63	
181	PostCoast SCART 480i		13	0 - 63	
182	PreCoast SCART 575i		7	0 - 63	
183	PostCoast SCART 575i		13	0 - 63	
<b>Group 10 Sync Processor</b>					
0	SYNCAMPHLCKTOLOW	Minimum sync amplitude threshold for HLCK 1 to 0 transition	0x1000	0 - 9999	
1	SYNCAMPHLCKTOHI	Minimum sync amplitude threshold for HLCK 0 to 1 transition	0x700	0 - 9999	
<b>Group 20 Video Decoder *R : Read Only Value</b>					
0	Y Level	Composite / S-Video - Y Level (ADC RGB Gain)	10 / 10	0 - 255	Composite / S-Video * Gain Adjustment [Video]
1	C Level	Composite / S-Video - C Level (ADC Saturation)	115 / 115	0 - 255	Composite / S-Video
2	XCXL Level	Cross-Chroma, Cross-Luma Level	3	0 - 5	
4	C2DNBANDWIDTH	Comb 2D Narrow Bandwidth	3 / 3	0 - 3	NTSC/PAL
5	C2DWBANDWIDTH	Comb 2D Wide Bandwidth	4 / 4	0 - 7	NTSC/PAL
6	C2DCNMINLEAK	Comb 2D Chroma Narrow Band Minimum Leakage	0 / 3	0 - 3	Left Values are adjustable if XCXL Level = 5.
7	C2DCNSLOPELEAK	Comb 2D Narrow Band Slope Leakage	7 / 7	0 - 7	NTSC/PAL
8	C2DCWMINLEAK	Comb 2D Wide Band Minimum Leakage	1 / 3	0 - 3	NTSC/PAL
9	C2DCWSLOPELEAK	Comb 2D CW Slope Leakage	6 / 6	0 - 7	NTSC/PAL
10	COMBLEAK2BPGAIN	Comb Leak To Ban Pass Gain	1 / 0	0 - 3	NTSC/PAL
11	C2DBDIAGONALGAIN	Comb 2D Band Pass Diagonal Gain	1 / 3	0 - 3	NTSC/PAL
12	C2DNBCWBCLGAIN	Comb 2D Narrow Band Comb Wide Band Comb	1 / 1	0 - 3	NTSC/PAL
13	RLUMASETUP-Enable	7.5IRE Setup Enable	0	0 - 1	Effective only NTSC Signal
<b>Group 40 General</b>					
0	IP Mode	Sets for IP Off	1	0 - 1	0: IP Block not used 1: IP OFF used with IP Block
1	3:2 PullDown Mode		1	1 - 3	bit0 : Global Motion bit1 : Video Motion
2	Detect Film Mode Enable		0	0 - 2	0 : 2:3pull down & 2:2pull down 1 : 2:3pull down 2 : 2:2pull down
3	Force IP Mode		2	0 - 2	0 : IP Process Disable 1 : Force Normal IP Mode 2 : Force Film Mode Effective only for PSF Signal.

## Electrical Adjustments

Group/Item	Item Name	Function	Initial	Range	Note
<b>Group 41</b>	<b>Deinterlacer setting</b> Effective only for Progressive ON-L1 mode.				
0	Motion Adaptive Weight Value	<KDEINT>	30	0 - 255	
1	Angle Interpolation Level	0 : Conservative <===== 4 : Aggressive	4	0 - 4	
2	CUE Low Pass Filter Enable	<CUELPFEN>	0	0 - 1	
<b>Group 42</b>	<b>Deinterlacer setting</b> Effective only for Progressive ON-L2 mode.				
0	Motion Adaptive Weight Value	<KDEINT>	0	0 - 255	
1	Angle Interpolation Level	0 : Conservative <===== 4 : Aggressive	2	0 - 4	
2	CUE Low Pass Filter Enable	<CUELPFEN>	0	0 - 1	
<b>Group 43</b>	<b>Deinterlacer setting</b> Effective only for Progressive ON/Film mode.				
0	Motion Adaptive Weight Value	<KDEINT>	30	0 - 255	
1	Angle Interpolation Level	0 : Conservative <===== 4 : Aggressive	4	0 - 4	
2	CUE Low Pass Filter Enable	<CUELPFEN>	0	0 - 1	
<b>Group 45</b>	<b>Noise Reduction (Time)</b> Effective only for N.R - Off				
0	Noise Pixel Range	<NSRANGEY> / <NSRANGEUV>	1	0 - 2	
1	Noise Region 0	<NSREGIONY0> / <NSREGIONUV0>	12	0 - 1023	
2	Noise Region 1	<NSREGIONY1> / <NSREGIONUV1>	24	0 - 1023	
3	Noise Region 2	<NSREGIONY2> / <NSREGIONUV2>	40	0 - 1023	
4	Noise Gain Level	<NSFILTERY**> / <NSFILTERUV**>	0	0 - 255	
<b>Group 47</b>	<b>Noise Reduction (Time)</b> Effective only for N.R L1				
0	Noise Pixel Range	<NSRANGEY> / <NSRANGEUV>	1	0 - 2	
1	Noise Region 0	<NSREGIONY0> / <NSREGIONUV0>	12	0 - 1023	
2	Noise Region 1	<NSREGIONY1> / <NSREGIONUV1>	24	0 - 1023	
3	Noise Region 2	<NSREGIONY2> / <NSREGIONUV2>	40	0 - 1023	
4	Noise Gain Level	<NSFILTERY**> / <NSFILTERUV**>	50	0 - 255	
<b>Group 49</b>	<b>Noise Reduction (Time)</b> Effective only for N.R L2				
0	Noise Pixel Range	<NSRANGEY> / <NSRANGEUV>	1	0 - 2	
1	Noise Region 0	<NSREGIONY0> / <NSREGIONUV0>	12	0 - 1023	
2	Noise Region 1	<NSREGIONY1> / <NSREGIONUV1>	24	0 - 1023	
3	Noise Region 2	<NSREGIONY2> / <NSREGIONUV2>	40	0 - 1023	
4	Noise Gain Level	<NSFILTERY**> / <NSFILTERUV**>	100	0 - 255	
<b>Group 50</b>	<b>2:2pull down setting</b>				
0	22Film Mode Sensitivity	Film Detection Sensitivity <FILMSTVT22>	4	1 - 5	
1	22Film Mode Threshold Low	<FILMTHRD22A>	80	0 - 32767	
2	22Film Mode Threshold High	<FILMTHRD22B>	120	0 - 32767	
3	VOFTHR13	<VOFTHR13>	124	0 - 1023	Read only
4	VOFTHR12	<VOFTHR12>	124	0 - 1023	Read only
5	VOFTHR23	<VOFTHR23>	124	0 - 1023	Read only
6	Video Motion Window Start X	<VOFSTARX>	10	0 - 2047	Range of detective for Film mode
7	Video Motion Window Stop X	<VOFSTOPX>	10	0 - 2047	Range of detective for Film mode
8	Video Motion Window Start Y	<VOFSTARY>	10	0 - 1023	Range of detective for Film mode
9	Video Motion Window Stop Y	<VOFSTOPY>	10	0 - 1023	Range of detective for Film mode
<b>Group 51</b>	<b>2:3pull down setting</b>				
0	Global Motion Sensitivity	Film Detection Sensitivity <FILMSTVT23>	4	1 - 5	
1	Video Motion Sensitivity	Film Detection Sensitivity <VOFSTVT>	4	1 - 5	
2	Video Motion Threshold Low	<VOFTHRDA>	120	0 - 32767	
3	Video Motion Threshold High	<VOFTHRDB>	180	0 - 32767	
4	Global Motion Threshold	<GMDTHRD>	124	0 - 1023	Read only
5	23Film Mode Threshold	<FILMTHRD23>	100	0 - 32767	
6	Global Motion Window Start X	<GMDSTARX>	10	0 - 2047	Range of detective for Film mode
7	Global Motion Window Stop X	<GMDSTOPX>	10	0 - 2047	Range of detective for Film mode
8	Global Motion Window Start Y	<GMDSTARY>	10	0 - 1023	Range of detective for Film mode
9	Global Motion Window Stop Y	<GMDSTOPY>	10	0 - 1023	Range of detective for Film mode

## Electrical Adjustments

Group/Item	Item Name	Function	Initial	Range	Note
Group 60	Image				
0	Center Contrast		534/578/534/534/492/492	0 - 1023	Video(S-Video)
1	Center Brightness		512/496/512/500/512/512	0 - 1023	/ Component /
2	Center Color		512/534/512/512/512/512	0 - 1023	SCART /
3	Center Tint		90/90/90/90/90/90	0-180	ANALOG / DIGITAL
4	Center Sharpness		16/16/16/16/16/16	16	/ HDCP
5	Alpha Contrast		40/40/40/40/40/40	0-1000	Setting Value=
6	Alpha Brightness		70/70/70/70/70/70	0-1000	(MENU Value -
7	Alpha Color		70/70/70/70/70/70	0-1000	MENU Center
8	Alpha Tint		10/10/10/10/10/10	0-1000	Value ) x Alpha / 10
9	Alpha Sharpness		10/10/10/10/10/10	0-1000	+ Center
					[Setting Value to
					PW]
					Contrast [Max]
					1023 [Min] 0
					Brightness [Max]
					1023 [Min] 0
					Color [Max]
					1023 [Min] 0
					Tint [Max]
					180 [Min] 0
					Sharpness [Max]
					57 [Min] 0
Group 100	Panel Service				
0	G-SubGain		2048/2068/2048/2080/2128/2046/2000/2048	0-4095	PCStandard/PC-Dynamic/PCReal/PCBlackBoard/AVStandard/AVDynamic/AVCinema/AVBlackBoard
1	R-SubGain		2048/2068/2048/2000/2099/2036/2048/2048	0-4095	
2	B-SubGain		2048/2068/2048/2048/2319/1890/2048/2048	0-4095	
3	G-SubBright		2048/2048/2060/2048/2131/2038/2000/2076	0-4095	PCStandard/PC-Dynamic/PCReal/PCBlackBoard/AVStandard/AVDynamic/AVCinema/AVBlackBoard
4	R-SubBright		2048/2048/2060/1980/2085/2013/2020/2088	0-4095	
5	B-SubBright		2048/2048/2060/2080/2134/2084/2020/2076	0-4095	
6	G-GammaShift		2048/2048	0-4095	PC/AV Center=512
7	R-GammaShift		2048/2048	0-4095	R] and [B] are linked with [G]
8	B-GammaShift		2048/2048	0-4095	* 50% White adj.
9	G-ReferH		3947/3947	0-4095	[R] and [B] are linked with [G] Scan Direction (Front/Rear)
10	G-ReferL		1266/1266	0-4095	[R] and [B] are linked with [G] Scan Direction (Front/Rear)
11	R-ReferH		3947/3947	0-4095	Scan Direction (Front/Rear)
12	R-ReferL		1266/1266	0-4095	Scan Direction (Front/Rear)
13	B-ReferH		3947/3947	0-4095	Scan Direction (Front/Rear)
14	B-ReferL		1266/1266/	0-4095	Scan Direction (Front/Rear)
15	DXOutR		246	0-1023	
16	DXOutG		246	0-1023	
17	DXOutB		246	0-1023	
18	H_Change_Pos		36	0-255	
19	SH_Base		273	0-4095	
20	NRG_Pos		39	0-127	
21	NRG_Width		30	0-255	
22	OSD_Pos		2	0-3	
23	OSD_Ptn		0	0-9	
24	GammaCtrl		1	0-1	
25	REF_GatePos		27	0-1023	
26	REF_GateDur		130	0-1023	
27	R-BasePos		8	0-15	
28	G-BasePos		8	0-15	
29	B-BasePos		8	0-15	
30	RGB-Adjust		0	0-7	
31	RGB-AdjLv		0	0-4095	Operation STEP=256[0->256->512->768->1023]

## Electrical Adjustments

Group/Item	Item Name	Function	Initial	Range	Note
32	LineR0		0	0-1023	(MIN<->MAX Cyclic Operation)
33	LineR1		0	0-1023	(MIN<->MAX Cyclic Operation)
34	LineR2		0	0-1023	(MIN<->MAX Cyclic Operation)
35	LineR3		0	0-1023	(MIN<->MAX Cyclic Operation)
36	LineR4		0	0-1023	(MIN<->MAX Cyclic Operation)
37	LineG0		0	0-1023	(MIN<->MAX Cyclic Operation)
38	LineG1		0	0-1023	(MIN<->MAX Cyclic Operation)
39	LineG2		0	0-1023	(MIN<->MAX Cyclic Operation)
40	LineG3		0	0-1023	(MIN<->MAX Cyclic Operation)
41	LineG4		0	0-1023	(MIN<->MAX Cyclic Operation)
42	LineB0		0	0-1023	(MIN<->MAX Cyclic Operation)
43	LineB1		0	0-1023	(MIN<->MAX Cyclic Operation)
44	LineB2		0	0-1023	(MIN<->MAX Cyclic Operation)
45	LineB3		0	0-1023	(MIN<->MAX Cyclic Operation)
46	LineB4		0	0-1023	(MIN<->MAX Cyclic Operation)
47	GhostR-Pos		8	0-31	
48	GhostG-Pos		8	0-31	
49	GhostB-Pos		8	0-31	
50	GhostR-Cent		2	0-2047	
51	GhostR-Start		128	0-255	
52	GhostR-End		128	0-255	
53	GhostG-Cent		2	0-2047	
54	GhostG-Start		128	0-255	
55	GhostG-End		128	0-255	
56	GhostB-Cent		2	0-2047	
57	GhostB-Start		128	0-255	
58	GhostB-End		128	0-255	
59	BlockR1		0	0-2047	(MIN<->MAX Cyclic Operation)
60	BlockG1		0	0-2047	(MIN<->MAX Cyclic Operation)
61	BlockB1		0	0-2047	(MIN<->MAX Cyclic Operation)
62	BlockR2		0	0-2047	(MIN<->MAX Cyclic Operation)
63	BlockG2		0	0-2047	(MIN<->MAX Cyclic Operation)
64	BlockB2		0	0-2047	(MIN<->MAX Cyclic Operation)
65	ReverceR		0	0-2047	(MIN<->MAX Cyclic Operation)
66	ReverceG		0	0-2047	(MIN<->MAX Cyclic Operation)
67	ReverceB		0	0-2047	(MIN<->MAX Cyclic Operation)
68	BackCrossR-Cent		10	0-2047	
69	BackCrossR-Start		131	0-255	
70	BackCrossR-End		128	0-255	
71	BackCrossG-Cent		10	0-2047	
72	BackCrossG-Start		131	0-255	
73	BackCrossG-End		128	0-255	
74	BackCrossBR-Cent		10	0-2047	
75	BackCrossB-Start		131	0-255	
76	BackCrossB-End		128	0-255	
77	ColshdSelect		1	0-1	
78	R-Min		216	0-1023	
79	R-Mid2		380	0-1023	
80	R-Mid1		560	0-1023	
81	R-Max		668	0-1023	
82	G-Min		216	0-1023	
83	G-Mid2		380	0-1023	
84	G-Mid1		560	0-1023	

## Electrical Adjustments

Group/Item	Item Name	Function	Initial	Range	Note
85	G-Max		668	0-1023	
86	B-Min		216	0-1023	
87	B-Mid2		380	0-1023	
88	B-Mid1		560	0-1023	
89	B-Max		668	0-1023	
90	H-OutPos		108	0-2047	
91	OutAreaLv		0	0-1023	
92	FlickerAdj		0	0/2	* Common center adj.
93	FRC_Bit		3	0-3	
94	FrontCTalkR-Cent		2043	0-2047	
95	FrontCTalkR-Start		128	0-255	
96	FrontCTalkR-End		128	0-255	
97	FrontCTalkG-Cent		2043	0-2047	
98	FrontCTalkG-Start		128	0-255	
99	FrontCTalkG-End		128	0-255	
100	FrontCTalkB-Cent		2043	0-2047	
101	FrontCTalkB-Start		128	0-255	
102	FrontCTalkB-End		128	0-255	
103	R-DCOffset-NGain		0/0	0-1023	Scan Direction (Front/Rear)
104	R-DCOffset-N1		0/0	0-1023	Scan Direction (Front/Rear)
105	R-DCOffset-N2		0/0	0-1023	Scan Direction (Front/Rear)
106	R-DCOffset-N3		0/0	0-1023	Scan Direction (Front/Rear)
107	R-DCOffset-N4		0/0	0-1023	Scan Direction (Front/Rear)
108	R-DCOffset-N5		0/0	0-1023	Scan Direction (Front/Rear)
109	R-DCOffset-N6		0/0	0-1023	Scan Direction (Front/Rear)
110	R-DCOffset-N7		0/0	0-1023	Scan Direction (Front/Rear)
111	R-DCOffset-N8		0/0	0-1023	Scan Direction (Front/Rear)
112	R-DCOffset-N9		0/0	0-1023	Scan Direction (Front/Rear)
113	R-DCOffset-N10		0/0	0-1023	Scan Direction (Front/Rear)
114	R-DCOffset-N11		0/0	0-1023	Scan Direction (Front/Rear)
115	R-DCOffset-N12		0/0	0-1023	Scan Direction (Front/Rear)
116	G-DCOffset-NGain		0/0	0-1023	Scan Direction (Front/Rear)
117	G-DCOffset-N1		0/0	0-1023	Scan Direction (Front/Rear)
118	G-DCOffset-N2		0/0	0-1023	Scan Direction (Front/Rear)
119	G-DCOffset-N3		0/0	0-1023	Scan Direction (Front/Rear)
120	G-DCOffset-N4		0/0	0-1023	Scan Direction (Front/Rear)
121	G-DCOffset-N5		0/0	0-1023	Scan Direction (Front/Rear)
122	G-DCOffset-N6		0/0	0-1023	Scan Direction (Front/Rear)
123	G-DCOffset-N7		0/0	0-1023	Scan Direction (Front/Rear)
124	G-DCOffset-N8		0/0	0-1023	Scan Direction (Front/Rear)
125	G-DCOffset-N9		0/0	0-1023	Scan Direction (Front/Rear)
126	G-DCOffset-N10		0/0	0-1023	Scan Direction (Front/Rear)
127	G-DCOffset-N11		0/0	0-1023	Scan Direction (Front/Rear)
128	G-DCOffset-N12		0/0	0-1023	Scan Direction (Front/Rear)
129	B-DCOffset-NGain		0/0	0-1023	Scan Direction (Front/Rear)
130	B-DCOffset-N1		0/0	0-1023	Scan Direction (Front/Rear)
131	B-DCOffset-N2		0/0	0-1023	Scan Direction (Front/Rear)
132	B-DCOffset-N3		0/0	0-1023	Scan Direction (Front/Rear)

## Electrical Adjustments

Group/Item	Item Name	Function	Initial	Range	Note
	133	B-DCOffset-N4	0/0	0-1023	Scan Direction (Front/Rear)
	134	B-DCOffset-N5	0/0	0-1023	Scan Direction (Front/Rear)
	135	B-DCOffset-N6	0/0	0-1023	Scan Direction (Front/Rear)
	136	B-DCOffset-N7	0/0	0-1023	Scan Direction (Front/Rea)
	137	B-DCOffset-N8	0/0	0-1023	Scan Direction (Front/Rear)
	138	B-DCOffset-N9	0/0	0-1023	Scan Direction (Front/Rear)
	139	B-DCOffset-N10	0/0	0-1023	Scan Direction (Front/Rear)
	140	B-DCOffset-N11	0/0	0-1023	Scan Direction (Front/Rear)
	141	B-DCOffset-N12	0/0	0-1023	Scan Direction (Front/Rear)
	142	R-DCOffset-PGain	0/0	0-1023	Scan Direction (Front/Rear)
	143	R-DCOffset-P1	0/0	0-1023	Scan Direction (Front/Rear)
	144	R-DCOffset-P2	0/0	0-1023	Scan Direction (Front/Rear)
	145	R-DCOffset-P3	0/0	0-1023	Scan Direction (Front/Rear)
	146	R-DCOffset-P4	0/0	0-1023	Scan Direction (Front/Rear)
	147	R-DCOffset-P5	0/0	0-1023	Scan Direction (Front/Rear)
	148	R-DCOffset-P6	0/0	0-1023	Scan Direction (Front/Rear)
	149	R-DCOffset-P7	0/0	0-1023	Scan Direction (Front/Rear)
	150	R-DCOffset-P8	0/0	0-1023	Scan Direction (Front/Rear)
	151	R-DCOffset-P9	0/0	0-1023	Scan Direction (Front/Rear)
	152	R-DCOffset-P10	0/0	0-1023	Scan Direction (Front/Rear)
	153	R-DCOffset-P11	0/0	0-1023	Scan Direction (Front/Rear)
	154	R-DCOffset-P12	0/0	0-1023	Scan Direction (Front/Rear)
	155	G-DCOffset-PGain	0/0	0-1023	Scan Direction (Front/Rear)
	156	G-DCOffset-P1	0/0	0-1023	Scan Direction (Front/Rear)
	157	G-DCOffset-P2	0/0	0-1023	Scan Direction (Front/Rear)
	158	G-DCOffset-P3	0/0	0-1023	Scan Direction (Front/Rear)
	159	G-DCOffset-P4	0/0	0-1023	Scan Direction (Front/Rear)
	160	G-DCOffset-P5	0/0	0-1023	Scan Direction (Front/Rear)
	161	G-DCOffset-P6	0/0	0-1023	Scan Direction (Front/Rear)
	162	G-DCOffset-P7	0/0	0-1023	Scan Direction (Front/Rear)
	163	G-DCOffset-P8	0/0	0-1023	Scan Direction (Front/Rear)
	164	G-DCOffset-P9	0/0	0-1023	Scan Direction (Front/Rear)
	165	G-DCOffset-P10	0/0	0-1023	Scan Direction (Front/Rear)
	166	G-DCOffset-P11	0/0	0-1023	Scan Direction (Front/Rear)
	167	G-DCOffset-P12	0/0	0-1023	Scan Direction (Front/Rear)
	168	B-DCOffset-PGain	0/0	0-1023	Scan Direction (Front/Rear)
	169	B-DCOffset-P1	0/0	0-1023	Scan Direction (Front/Rear)
	170	B-DCOffset-P2	0/0	0-1023	Scan Direction (Front/Rear)
	171	B-DCOffset-P3	0/0	0-1023	Scan Direction (Front/Rear)
	172	B-DCOffset-P4	0/0	0-1023	Scan Direction (Front/Rear)
	173	B-DCOffset-P5	0/0	0-1023	Scan Direction (Front/Rear)

## Electrical Adjustments

Group/Item	Item Name	Function	Initial	Range	Note
	174	B-DCOffset-P6	0/0	0-1023	Scan Direction (Front/Rear)
	175	B-DCOffset-P7	0/0	0-1023	Scan Direction (Front/Rear)
	176	B-DCOffset-P8	0/0	0-1023	Scan Direction (Front/Rear)
	177	B-DCOffset-P9	0/0	0-1023	Scan Direction (Front/Rear)
	178	B-DCOffset-P10	0/0	0-1023	Scan Direction (Front/Rear)
	179	B-DCOffset-P11	0/	0-1023	Scan Direction (Front/Rear)
	180	B-DCOffset-P12	0/0	0-1023	Scan Direction (Front/Rear)
	181	ENBX-R	0	0-127	
	182	ENBX-G	0	0-127	
	183	ENBX-B	0	0-127	
	184	DXOutPos	0	0-1	
	185	R_V_INPUT_SETP_0	0	0-1023	
	186	R_V_INPUT_SETP_512	0	0-1023	
	187	R_V_INPUT_SETP_1024	0	0-1023	
	188	R_V_INPUT_SETP_1536	0	0-1023	
	189	R_V_INPUT_SETP_2048	0	0-1023	
	190	R_V_INPUT_SETP_2560	0	0-1023	
	191	R_V_INPUT_SETP_3072	0	0-1023	
	192	R_V_INPUT_SETP_3584	0	0-1023	
	193	R_V_INPUT_SETP_4096	0	0-1023	
	194	G_V_INPUT_SETP_0	0	0-1023	
	195	G_V_INPUT_SETP_512	0	0-1023	
	196	G_V_INPUT_SETP_1024	0	0-1023	
	197	G_V_INPUT_SETP_1536	0	0-1023	
	198	G_V_INPUT_SETP_2048	0	0-1023	
	199	G_V_INPUT_SETP_2560	0	0-1023	
	200	G_V_INPUT_SETP_3072	0	0-1023	
	201	G_V_INPUT_SETP_3584	0	0-1023	
	202	G_V_INPUT_SETP_4096	0	0-1023	
	203	B_V_INPUT_SETP_0	0	0-1023	
	204	B_V_INPUT_SETP_512	0	0-1023	
	205	B_V_INPUT_SETP_1024	0	0-1023	
	206	B_V_INPUT_SETP_1536	0	0-1023	
	207	B_V_INPUT_SETP_2048	0	0-1023	
	208	B_V_INPUT_SETP_2560	0	0-1023	
	209	B_V_INPUT_SETP_3072	0	0-1023	
	210	B_V_INPUT_SETP_3584	0	0-1023	
	211	B_V_INPUT_SETP_4096	0	0-1023	
	212	FRPPOL	84	0-4095	
	213	FRP_POS	28	0-255	
	214	SWAP	1280	0-2047	
	215	PRE_COLSHD_SEL	0	0-255	
	216	HSYNC_FOLLOW	1	0-1	
	217	DELAY_HSYNC	0	0-2047	
	218	DELAY_VSYNC	16	0-255	
	219	VSYNC_FOLLOW	0	0-1	
	220	BLANK_RCENTER	0	0-2047	
	221	BLANK_RSTART	128	0-255	
	222	BLANK_RENDER	128	0-255	
	223	BLANK_GCENTER	0	0-2047	
	224	BLANK_GSTART	128	0-255	
	225	BLANK_GEND	128	0-255	
	226	BLANK_BCENTER	0	0-2047	
	227	BLANK_BSTART	128	0-255	
	228	BLANK_BEND	128	0-255	
	229	Output limit R	3686/3686	0-4095	
	230	Output limit G	3686/3686	0-4095	
	231	Output limit B	3686/3686	0-4095	
	232	CROSSTALK_COEF_R	1023	0-1023	
	233	CROSSTALK_COEF_G	1023	0-1023	
	234	CROSSTALK_COEF_B	1023	0-1023	
	235	LCCON_ENABL	1	0-1	1: LCCON disable 0: LCCON enable
	236	ENBY_L1	10	0-255	

## Electrical Adjustments

Group/Item	Item Name	Function	Initial	Range	Note
	237 ENBY_H1		690	0-1023	
	238 ENBY_L2		10	0-255	
	239 ENBY_H22		690	0-1023	
<b>Group 101</b>	<b>Panel Service(6150/1060)</b>				
	0 R-LCCOM		360	0-511	*R-Common center adj.
	1 G-LCCOM		358	0-511	*G-Common center adj.
	2 B-LCCOM		355	0-511	*B-Common center adj.
	3 R-LCCOM-Gain		189	0-255	
	4 G-LCCOM-Gain		189	0-255	
	5 B-LCCOM-Gain		189	0-255	
	6 R-LCCOM-Bright		0	0-255	
	7 G-LCCOM-Bright		0	0-255	
	8 B-LCCOM-Bright		0	0-255	
	9 R-LCCOM-Cent		15	0-63	
	10 G-LCCOM-Cent		15	0-63	
	11 B-LCCOM-Cent		15	0-63	
	12 R-ENBX-PW		12	0-127	
	13 G-ENBX-PW		12	0-127	
	14 B-ENBX-PW		12	0-127	
	15 R-DXIN		9	0-255	Link with No.18
	16 G-DXIN		9	0-255	Link with No.19
	17 B-DXIN		9	0-255	Link with No.20
	18 R-CLXIN		9	0-255	Link with No.15
	19 G-CLXIN		9	0-255	Link with No.16
	20 B-CLXIN		9	0-255	Link with No.17
	21 R-ENBX1IN		2	0-255	
	22 G-ENBX1IN		2	0-255	
	23 B-ENBX1IN		2	0-255	
<b>Group 102</b>	<b>Auto Keystone Setup Value</b>				
	0 OFFSET		0	-1056 - 1056	
	1 OFFSET SWITCH		0	0 - 1	
	2 DEBUG MODE		0	0 - 1	
	3 SERVICE CALIBRATION		0	0 - 1	*Keystone offset adj.
	4 LOCK COUNT		5	1 - 255	
	5 DELTA VERT RESULT		64	1 - 255	
	6 ANGLE 1 COUNT		1	1 - 10	
	7 ANGLE 2 COUNT		5	1 - 10	
	8 BLIND SECTOR 1		160	0 - 1024	
	9 BLIND SECTOR 2		32	0 - 1024	
	10 BLIND SECTOR BIAS		61	0 - 1024	
<b>Group 103</b>	<b>Help Mode for Panel Domain</b>				
	0 help mode on/off		1	0-1	0: disable / 1:enable
	1 APL threshold value		230	0-255	Contrastup isexecuted when bigger than the threshold value.
	2 Max value		21	1-255	Max variable of Contrast CenterContrast (Gr. 60 No1) is corrected
	3 Value per unit time		3	1-50	Contrast varialbe for each step CenterContrast (Gr. 60 No1) is corrected
	4 Time per 1step		1	1-30	Time for each variable(val x 50msec)
	5 Realtime APL		R0	0-255	Current APL value
<b>Group 104:PW190 register DRVSEL</b>					
	0 Display Port Output TTL Mode Drive Select		1	0-1	0: 4ma / 1: 8ma
<b>Group 200</b>	<b>Option</b>				

## Electrical Adjustments

Group/Item	Item Name	Function	Initial	Range	Note
0	Logo Prohibition (Forced No Brand)	Logo Prohibition (0: Menu, 1: Forced, 2: China, 3-9: not used)	0	0 - 2	Effective after AC On
1	RS232C Baudrate	Baud Rate	0	0 - 2	0: 19200bps, 1: 9600bps, 2: 115200bps
2	PJLink	0:Disable 1:Enable	1		
3	Shipping Setting		0	0 - 20	Default set when the value is set to 10
4	CABLE SW	Long Cable	0	0 - 1	0: Disable, 1: Enable
5	PW Debug Command Enable		0	0 - 1	0:Disable (Serial Command Eanble) 1: Enable (PW Debug Mode)
6	Device Refresh Disable		0	0 - 1	0:Enable, 1:Disable No last memory
7	Device Access Disable		0	0 - 1	0:Enable (Normal), 1:Disable No last memory
20	Projector Time Reset		0	0 - 20	Projector Time is cleared when the value is set to 10
21	Lamp Warning Time (NORMAL)	Lamp Life at Normal Mode (Warning Time at Normal)		500 - 8000	
22	Lamp Warning Time (ECO)	Lamp Life at Eco Mode (Warning Time at Eco)		500 - 8000	
23	Lamp Warning Time (HIGH)	Lamp Life at High Mode (Warning Time at High)		500 - 8000	
30	Lamp life test enable		0		0:Disable 1:Enable, for safety test only
31	Lmap On time(for life test)	For test purpose	1		
32	Lamp Off time(for life test)	For test purpose	3		
33	Lamp total time(for life test)	For test purpose	0		
40	Lamp PWM PresAv 50Hz	Lamp PWM PRES0 setting (AV50Hz)	80	0-255	
41	Lamp PWM PresAv 60Hz	Lamp PWM PRES0 setting (AV60Hz)	67	0-255	
42	Lamp PWM PresUnlock	Lamp PWM REFS0 setting (no signal)	67	0-255	
43	Lamp PWM PresPcA	Lamp PWM frequency setting coeddicient A (PC)	2	0-255	
44	Lamp PWM PresPcB	Lamp PWM frequency setting coeddicient B (PC)	3	0-255	
45	Lamp PWM PrefHAv50Hz	Lamp PWM PREF0 setting (AV50Hz)	5000	0-65535	
46	Lamp PWM PrefHAv60Hz	Lamp PWM PREF0 setting (AV60Hz)	5000	0-65535	
47	Lamp PWM PrefHUnlock	Lamp PWM PREF0 setting (no signal)	5000	0-65535	
50	Lamp Replacement Display	Lamp Warning Display On / Off	1	0 - 1	1: On, 0: Off
51	Filter Warning Display	Filter Warning Display On / Off	1	0 - 1	1: On, 0: Off
52	Lamp Counter reset Times	Reset Times of Lamp Counter	0	0 - 255	Read only
53	Filter Counter Reset Times	Reset Times of Filter Counter	0	0-255	
54	Factory Default Execute Times	Reset times of Fanctry Default	0	0 - 255	Read only
55	Motor Disable	Motors Disable	0	0 - 1	0: On, 1: Off
56	Menu Position	Move menu (X axis)	0	0 - 1024	
57	Menu Position	Move menu (Y axis)	0	0 - 1024	
58	Lamp Go Out		0	0 - 1	
59	Souce Search Enable	Source Search Enable (0:Disable 1:Enable)	0	0 - 1	
60	Language Default setting	Set dafault language 0: English (Default) / 1: Japanese	-	0-1	
80	Panel life test mode	Set panel life test mode	1	0-1	0: Life test mode / 1: Normal
Group 201	Option (signal)				
0	FrameLock Option		1	0 - 1	0: FrameLockOFF at PC signal 1: FrameLockON at PC signal and 47Hz (Vfreq) ~ Panel frequency of input signal
1	AV TRUE	Change to AV Signal True	0	0-1	0: effective 1: invalid (it is TRUE when "Natural Wide" is selected.
2	Field Sense Invert Enable		0	0 - 1	Reverse Processing of FLDINVSetting Value 0: Disable - Used FLDINV Setting Value 1: Enable - Used Reversed FLDINV Setting Value

## Electrical Adjustments

Group/Item	Item Name	Function	Initial	Range	Note
	4 Sub Image Enable		1	0 - 1	0:Disable (Service Adjustment 1:Enable (Service Adjustment Enable))
	6 Zoom Accelerator Enable		0	0 - 1	0:Zoom Accelerator OFF, 1:Zoom Accelerator ON No last memory
	7 DZoom Reset by Keystone		0	0 - 1	0:Enable (Normal), 1:Disable (Dzoom is not cancelled even if Keystone is cancelled) No last memory
	8 Stability Count	Count Value of V-missing	5	0 - 255	
	9 Sensivity for Signal Lost (HSYNC)	Only used this value for No Signal Judgement(Hz)	350	0 - 32676	
	10 Sensivity for Signal Lost (VSYNC)	Only used this value for No Signal Judgement(Line)	3	0 - 255	
	11 Keystone Filter Center Value	Reference Value	16	0 - 30	
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Group 205	Spread Spectrum				
	0 Enable	0=Enable, 1=Disable	1	0-1	
	1 Modulation frequency		80	0-500	
	2 Diffusivity		100	0-300	
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Group 210	LampControl				
	0 DIMMER_CTRL_LEVEL1	Luminance Level 1 Data for Dimmer: Dim Level 1 at the less than the Value	7	0 - 255	
	1 DIMMER_CTRL_LEVEL2	Luminance Level 2 Data for Dimmer: Dim Level 2 at the less than the Value	14	0 - 255	
	2 DIMMER_CTRL_LEVEL3	Luminance Level 3 Data for Dimmer: Dim Level 3 at the less than the Value	21	0 - 255	
	3 DIMMER_CTRL_LEVEL4	Luminance Level 4 Data for Dimmer: Dim Level 4 at the less than the Value	28	0 - 255	
	4 DIMMER_CTRL_LEVEL5	Luminance Level 5 Data for Dimmer: Dim Level 5 at the less than the Value	35	0 - 255	
	5 DIMMER_CTRL_LEVEL6	Luminance Level 6 Data for Dimmer: Dim Level 6 at the less than the Value	42	0 - 255	
	6 DIMMER_CTRL_LEVEL7	Luminance Level 7 Data for Dimmer: Dim Level 7 at the less than the Value	49	0 - 255	
	7 DIMMER_CTRL_LEVEL8	Luminance Level 8 Data for Dimmer: Dim Level 8 at the less than the Value	56	0 - 255	
	8 DIMMER_CTRL_LEVEL9	Luminance Level 9 Data for Dimmer: Dim Level 9 at the less than the Value	63	0 - 255	
	9 DIMMER_CTRL_LEVEL10	Luminance Level 10 Data for Dimmer: Dim Level 10 at the less than the Value	70	0 - 255	
	10 DIMMER_CTRL_LEVEL11	Luminance Level 11 Data for Dimmer: Dim Level 11 at the less than the Value	77	0 - 255	
	11 DIMMER_CTRL_LEVEL12	Luminance Level 12 Data for Dimmer: Dim Level 12 at the less than the Value	84	0 - 255	
	12 DIMMER_CTRL_LEVEL13	Luminance Level 13 Data for Dimmer: Dim Level 13 at the less than the Value	91	0 - 255	
	13 DIMMER_CTRL_LEVEL14	Luminance Level 14 Data for Dimmer: Dim Level 14 at the less than the Value	98	0 - 255	
	14 DIMMER_CTRL_LEVEL15	Luminance Level 15 Data for Dimmer: Dim Level 15 at the less than the Value	105	0 - 255	
	15 DIMMER_AVERAGE_POINT	Luminance Data Avarage Point for Mimmer	4	0 - 16	
	16 DIMMER_AVERAGE_DATA	Luminance Data Avarage Value for Dimmer	-	-	* Read only
	17 DIMMER_LEVEL_AUTO	Current Dimmer Leverl	-	-	* Read only
	18 DIMMER_LEVEL_NORMAL	Normal Dimmer Level	15	0 - 15	
	19 DIMMER_LEVEL_ECO	Eco Dimmer Level	0	0 - 15	
	20 PANEL LIFE MODE	Panel Life Mode	1	0-1	
	21 VOLTAGE_LEVEL	Lamp Voltage	-		Unit: 8bit(Raw Data) * Read only
	22 DIMMER_LEVEL_HIGH	Dimmer level High	-	0 - 15	
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Group 230	closed caption				
	0 Generic Initial Slicing Level		0x34	0-255	
	1 Generic High Level Threshold		-	0-255	
	2 Generic Low Level Threshold		-	0-255	
	3 Generic Minimum Low Level		0x30	0-255	

## Electrical Adjustments

Group/Item	Item Name	Function	Initial	Range	Note
	4 Generic Maximum High Level		0xe0	0-255	
<b>Group 240</b>	<b>Flow Calibration</b>				
	0 Flow Calibration Exe		0	0-1	*Wind velocity sensor calibration
	1 Flow Calibration Error Log		255	-	
	2 Clog Check Enable		0	0-1	
<b>Group 241</b>	<b>Flow Ideal Data</b>				
	0 Flow Ideal Data 1		84	0-255	
	1 Flow Ideal Data 2		98	0-255	
	2 Flow Ideal Data 3		108	0-255	
	3 Flow Ideal Data 4		111	0-255	
	4 Flow Ideal Data 5		120	0-255	
	5 Flow Ideal Data 6		-	0-255	
	6 Flow Ideal Data 7		-	0-255	
	7 Flow Ideal Data 8		-	0-255	
<b>Group 242</b>	<b>Flow Calib Fan Volt</b>				
	0 Flow Calib Fab Volt 1		60	0-255	
	1 Flow Calib Fab Volt 2		80	0-255	
	2 Flow Calib Fab Volt 3		100	0-255	
	3 Flow Calib Fab Volt 4		115	0-255	
	4 Flow Calib Fab Volt 5		135	0-255	
	5 Flow Calib Fab Volt 6		-	0-255	
	6 Flow Calib Fab Volt 7		-	0-255	
	7 Flow Calib Fab Volt 8		-	0-255	
<b>Group 243</b>	<b>Flow Calib Effective Difference</b>				
	0 Flow Calib Effective Diff 1		40	0-255	
	1 Flow Calib Effective Diff 2		45	0-255	
	2 Flow Calib Effective Diff 3		50	0-255	
	3 Flow Calib Effective Diff 4		50	0-255	
	4 Flow Calib Effective Diff 5		50	0-255	
	5 Flow Calib Effective Diff 6		-	0-255	
	6 Flow Calib Effective Diff 7		-	0-255	
	7 Flow Calib Effective Diff 8		-	0-255	
<b>Group 244</b>	<b>Flow Clog Threshold</b>				
	0 Flow Clog Threshold 1		40	0-255	
	1 Flow Clog Threshold 2		50	0-255	
	2 Flow Clog Threshold 3		60	0-255	
	3 Flow Clog Threshold 4		70	0-255	
	4 Flow Clog Threshold 5		75	0-255	
	5 Flow Clog Threshold 6		-	0-255	
	6 Flow Clog Threshold 7		-	0-255	
	7 Flow Clog Threshold 8		-	0-255	
<b>Group 245</b>	<b>Filter Roll</b>				
	0 Take Up Bend		0	0-1	
	1 Take Up Time		-	-	
	2 Take Up Time Reset		0	0-10	
	3 Scroll Counter Reset Time		-	0-255	
	4 Scroll Information Cartridge No		0	0-2	
<b>Group 246</b>	<b>Flow Clog Monior</b>				
	0 Real Flow Data		-	0-255	
	1 Ideal Flow Data		-	0-255	
	2 Flow Difference Data		-	0-255	
	3 Clog Detect Flow Difference Data		-	0-255	
	4 Warn Detect Flow Difference Data		-	0-255	
	5 Press Add Data		-	0-255	
	6 Filter Scroll Timer		-	0-32767	

## Electrical Adjustments

Group/Item	Item Name	Function	Initial	Range	Note
Group 247	Filter Scroll Time				
0	Filter 1st Cartridge Scroll Time 1		9999	0-32767	
1	Filter 1st Cartridge Scroll Time 2		9999	0-32767	
2	Filter 1st Cartridge Scroll Time 3		9999	0-32767	
3	Filter 1st Cartridge Scroll Time 4		9999	0-32767	
4	Filter 1st Cartridge Scroll Time 5		9999	0-32767	
5	Filter 1st Cartridge Scroll Time 6		9999	0-32767	
6	Filter 1st Cartridge Scroll Time 7		9999	0-32767	
7	Filter 1st Cartridge Scroll Time 8		9999	0-32767	
8	Filter 1st Cartridge Scroll Time 9		9999	0-32767	
9	Filter 1st Cartridge Scroll Time 10		9999	0-32767	
10	Filter 2nd Cartridge Scroll Time 1		9999	0-32767	
11	Filter 2nd Cartridge Scroll Time 2		9999	0-32767	
12	Filter 2nd Cartridge Scroll Time 3		9999	0-32767	
13	Filter 2nd Cartridge Scroll Time 4		9999	0-32767	
14	Filter 2nd Cartridge Scroll Time 5		9999	0-32767	
15	Filter 2nd Cartridge Scroll Time 6		9999	0-32767	
16	Filter 2nd Cartridge Scroll Time 7		9999	0-32767	
17	Filter 2nd Cartridge Scroll Time 8		9999	0-32767	
18	Filter 2nd Cartridge Scroll Time 9		9999	0-32767	
19	Filter 2nd Cartridge Scroll Time 10		9999	0-32767	
20	Filter 3rd Cartridge Scroll Time 1		9999	0-32767	
21	Filter 3rd Cartridge Scroll Time 2		9999	0-32767	
22	Filter 3rd Cartridge Scroll Time 3		9999	0-32767	
23	Filter 3rd Cartridge Scroll Time 4		9999	0-32767	
24	Filter 3rd Cartridge Scroll Time 5		9999	0-32767	
25	Filter 3rd Cartridge Scroll Time 6		9999	0-32767	
26	Filter 3rd Cartridge Scroll Time 7		9999	0-32767	
27	Filter 3rd Cartridge Scroll Time 8		9999	0-32767	
28	Filter 3rd Cartridge Scroll Time 9		9999	0-32767	
29	Filter 3rd Cartridge Scroll Time 10		9999	0-32767	
Group 248	Filter Scroll Factor				
0	Filter 1st Cartridge Scroll Factor 1		255	0-255	
1	Filter 1st Cartridge Scroll Factor 2		255	0-255	
2	Filter 1st Cartridge Scroll Factor 3		255	0-255	
3	Filter 1st Cartridge Scroll Factor 4		255	0-255	
4	Filter 1st Cartridge Scroll Factor 5		255	0-255	
5	Filter 1st Cartridge Scroll Factor 6		255	0-255	
6	Filter 1st Cartridge Scroll Factor 7		255	0-255	
7	Filter 1st Cartridge Scroll Factor 8		255	0-255	
8	Filter 1st Cartridge Scroll Factor 9		255	0-255	
9	Filter 1st Cartridge Scroll Factor 10		255	0-255	
10	Filter 2nd Cartridge Scroll Factor 1		255	0-255	
11	Filter 2nd Cartridge Scroll Factor 2		255	0-255	
12	Filter 2nd Cartridge Scroll Factor 3		255	0-255	
13	Filter 2nd Cartridge Scroll Factor 4		255	0-255	
14	Filter 2nd Cartridge Scroll Factor 5		255	0-255	
15	Filter 2nd Cartridge Scroll Factor 6		255	0-255	
16	Filter 2nd Cartridge Scroll Factor 7		255	0-255	
17	Filter 2nd Cartridge Scroll Factor 8		255	0-255	
18	Filter 2nd Cartridge Scroll Factor 9		255	0-255	
19	Filter 2nd Cartridge Scroll Factor 10		255	0-255	
20	Filter 3rd Cartridge Scroll Factor 1		255	0-255	
21	Filter 3rd Cartridge Scroll Factor 2		255	0-255	
22	Filter 3rd Cartridge Scroll Factor 3		255	0-255	
23	Filter 3rd Cartridge Scroll Factor 4		255	0-255	
24	Filter 3rd Cartridge Scroll Factor 5		255	0-255	
25	Filter 3rd Cartridge Scroll Factor 6		255	0-255	
26	Filter 3rd Cartridge Scroll Factor 7		255	0-255	
27	Filter 3rd Cartridge Scroll Factor 8		255	0-255	
28	Filter 3rd Cartridge Scroll Factor 9		255	0-255	
29	Filter 3rd Cartridge Scroll Factor 10		255	0-255	
Group 249	Pressure Monitor				
0	Press Data	ADC Value for Pressure Sensor	-	0-255	
1	Press Data	mmHg Value for Pressure Sensor	-	0-1000	

## Electrical Adjustments

Group/Item	Item Name	Function	Initial		Range	Note
Group 250	FAN Control	* Fan control adj.				
0	FAN1 MIN ADJUST (DAC)	DAC Output for Fan	10		0 - 255	
1	FAN1 MAX ADJUST (DAC)	Adjust the tolerance of DAC and Fan Volage.	225		0 - 255	
2	FAN2 MIN ADJUST (DAC)	* Lamp mode is forced Eco	26		0 - 255	
3	FAN2 MAX ADJUST (DAC)		225		0 - 255	
4	FAN3 MIN ADJUST (DAC)		10		0 - 255	
5	FAN3 MAX ADJUST (DAC)		225		0 - 255	
6	Not used					
7	Not used					
Group 251	Not used					
Group 252	Fan Option					
0	HI-LAND SWITCH	0: Normal, 1: Hi-Land, 2-4: Hi-Land 1-3	0		0 - 5	
1	SAFETY SWITCH	For test purpose	0		0 - 6	
2	FAN MANUAL SWITCH	0: Auto, 1: Manual	0		0 - 3	
3	FAN1 MANUAL VOLTAGE	Fan Voltage (unit : 0.1V)	100		0 - 255	
4	FAN2 MANUAL VOLTAGE	Effective only when Fan Maual switch is 1	100		0 - 255	
5	FAN3 MANUAL VOLTAGE		100		0 - 255	
6	Not used					
7	Standard Mode	Mode Setting	0		0-4	
8	Fan Offset Voltage Update Interval	Fan Voltage Update Interval while clogging(Unit:Second)	60		1-600	
Group 253	Fan Tem Error Setting (Memorized)		Normal	Ceiling	HiLand-Normal	HiLand-Ceiling
0	Not used					
1	Not used					
2	Not used					
3	Not used					
4	Not used					
5	Temp A Warning (Normal)	Temp. A to judge the Temp Error at Normal (Room)	43	43	33	33 30-100
6	Temp B Warning (Normal)	Temp. B to judge the Temp Error at Normal (Panel)	65	65	56	55 30-100
7	Temp C Warning (Normal)	Temp. C to judge the Temp Error at Normal (Lamp)	72	72	64	63 30-100
8	Temp B-A Warning (Normal)	Temp. B-A to judge the Temp Error at Normal (Clogging Det.)	100	100	100	100 0-100
9	Temp C-A Warning (Normal)	Temp. C-A to judge the Temp Error at Normal (Clogging Det.)	100	100	100	100 0-100
10	Temp A Warning (Eco)	Temp. A to judge the Temp Error at Eco (Room)	42	42	38	36 30-100
11	Temp B Warning (Eco)	Temp. B to judge the Temp Error at Eco (Panel)	62	62	56	55 30-100
12	Temp C Warning (Eco)	Temp. C to judge the Temp Error at Eco (Lamp)	67	66	62	61 30-100
13	Temp B-A Warning (Eco)	Temp. B-A to judge the Temp Error at Normal (Clogging Det.)	100	100	100	100 0-100
14	Temp C-A Warning (Eco)	Temp. C-A to judge the Temp Error at Normal (Clogging Det.)	100	100	100	100 0-100
15	Temp A Warning Offset (Temp)			5		0-100
16	Temp B Warning Offset (Temp)	Offset of Temp Error (Temp.) Error Setting Value is increased XC at the below condition		5		0-100
17	Temp C Warning Offset (Temp)	* Standby * Right to turn on the lamp		5		0-100
18	Temp B-A Warning Offset (Temp)	*Right to change the Lamp mode		0		0-100
19	Temp C-A Warning Offset (Temp)			0		0-100
20	Temp A Warning Offset (Time)			3		0-5
21	Temp B Warning Offset (Time)	Offset of Temp Error (Minutes) Error Setting Value is increased X minute at the below condition		3		0-5
22	Temp C Warning Offset (Time)	* Standby * Right to turn on the lamp		3		0-20
23	Temp B-A Warning Offset (Time)	*Right to change the Lamp mode		3		0-5
24	Temp C-A Warning Offset (Time)			3		0-5
25	Factory Mode	For factor use		0		0-1
Group 254	Fan Control Range Setting (Temp./Voltage)		Normal	Ceiling	HiLand-Normal	HiLand-Ceiling
0	Not used		9999		9999	
1	Not used		9999		9999	
2	Not used		9999		9999	

## Electrical Adjustments

Group/Item	Item Name	Function	Initial				Range	Note
3	Not used		9999	9999				
4	Not used		9999	9999				
5	Not used		9999	9999				
6	Not used		9999	9999				
7	Not used		9999	9999				
8	Not used		9999	9999				
9	Not used		9999	9999				
10	Normal Fan Control Min Temp	Temp Senser Control Start/End Tem.p at Normal	28	28	20	20	20-100	
11	Normal Fan Control Max Temp		37	37	20	20	20-100	
12	Normal Fan1 Min		75	80	120	125	0-255	
13	Normal Fan1 Max		135	135	120	125	0-255	
14	Normal Fan2 Min		75	80	125	125	0-255	
15	Normal Fan2 Max		100	105	125	125	0-255	
16	Normal Fan3 Min	Fan voltage value at Normal (unit: 0.1V)	70	70	110	115	0-255	
17	Normal Fan3 Max		80	90	110	115	0-255	
18	Normal Fan4 Min		9999	9999			-	
19	Normal Fan4 Max		9999	9999			-	
20	Eco Fan Control Min Temp	Temp Senser Control Start/End Tem.p at Eco	28	28	20	20	20-100	
21	Eco Fan Control Max Temp		38	38	20	20	20-100	
22	Eco Fan1 Min		60	65	100	105	0-255	
23	Eco Fan1 Max		80	85	100	105	0-255	
24	Eco Fan2 Min		55	65	110	115	0-255	
25	Eco Fan2 Max	Fan voltage value at Eco (unit: 0.1V)	90	100	110	115	0-255	
26	Eco Fan3 Min		55	50	70	70	0-255	
27	Eco Fan3 Max		60	60	70	70	0-255	
28	Eco Fan4 Min		9999	9999			-	
29	Eco Fan4 Max		9999	9999			-	
30	Filter Error Detect Temp	Detected Temp for Filter Blocked (Temp B-A)	18	18	50	50	0-100	
31	Filter Error Offset Vot	Offset Volt for Filter Blocked (Unit: 0.1V)	3	3	10	10	0-255	
<b>Group 255</b>	<b>Fan Start/Cooling Setting</b>							
0	Fan1 Initial Volt			55			0-255	
1	Fan2 Initial Volt	Fan Start Voltage (0.1V)		55			0-255	
2	Fan3 Initial Volt			55			0-255	
3	Not used			255(Dummy)			-	
4	Fan1 Cooling Speed	Fan Voltage at Power Off (0.1V)		130			0-255	
5	Fan2 Cooling Speed			130			0-255	
6	Fan3 Cooling Speed			80			0-255	
7	Not used			255(Dummy)			-	
8	Cooling Time L1	Cooling Time sitting at Fan Mode L1 (x 30 sec) 1: 30, 3: 90, 15: 450 sec.		2			1-15	
9	Cooling Time L2	Cooling Time sitting at Fan Mode L2 (x 30 sec) 1: 30, 3: 90, 15: 450 sec.		3			1-15	
10	Temp Error Cooling Time	Cooling Time setting at Temp Errro (x 30 sec) 1: 30, 3: 90, 15: 450 sec.		3			1-15	
11	OnStart Cooling Start Threshold			38			0-100	
12	After shutdown cooling	Cooling after shutdown (0: No, 1: Yes)		1			0-1	
<b>Group 256</b>	<b>Fan Lamp Voltage Down Setting</b>							
0	Lamp Voltage	Current Lamp Voltage (0.1V)(Read only)		-			0-255	
1	Lamp Vol Threshold	Threshold to judge Lamp Voltage Down ( Vx 10)		0			30-90	
2	Fan1 Speed Gain			10			0-255	
3	Fan2 Speed Gain	Additional Fan Speed of Min at Lamp Voltage Down (unit: 0.1V)		10			0-255	
4	Fan3 Speed Gain			10			0-255	
5	Not used			9999(Dummy)			0-255	
<b>Group 257</b>	<b>Fan Dimmer Setting</b>							
0	Dimmer Average Check Period	Dimmer Average measurement Time (0:10sec, 1:30sec, 2:60sec, 90sec...10:300sec)		1			0-10	
1	Dimmer Average	Dimmer Average Value (Read only)		-				
2	Last Voltage Difference			-				
3	Voltate Difference Goal			-				
<b>Group 258</b>	<b>Fan IC Temp for Netowrk model</b>							
0	Not used							
1	Not used							

## Electrical Adjustments

Group/Item	Item Name	Function	Initial	Range	Note
2	Not used				
<b>Group 260</b>	<b>Auto Calibration (Commn) * Auto Calibration</b>				
0	Execute Calibration		0	0 - 1	Executes Auto-Calibration when changing the Value (PC White 100%)
1	Loop Count	Maximum Execution Times (OFFSET->GAIN)	10	1 - 30	
2	Auto Status	Result of Auto-Calibration (Last Memory)	0	0 / 1 / 9	0: OK, 1: Adjusting, 9: Error * ReadOnly
3	AutoWait	Wait Value for each setting	1	1 - 20	
4	CHECK -Tolerance	Tolerance of OFFSET	2	1 - 255	
<b>Group 261</b>	<b>Auto Calibration (RGB)</b>				
0	OFFSET AREA H START	Black Level Acquiring Area H-Start Position	975	0 - 1000	
1	OFFSET AREA V START	Black Level Acquiring Area V-Start Position	500	0 - 1000	
2	GAIN AREA H START	White Level Acquiring Area H-Start Position	25	0 - 1000	
3	GAIN AREA V START	White Level Acquiring Area V-Start Position	500	0 - 1000	
4	Image AREA H WIDTH	Black/White Level Acquiring Area	13	0 - 4095	
5	Image AREA V HIGHT	Black/White Level Acquiring Area Height	9	0 - 4095	
6	OFFSET target	Target Value of Black Level Adj.	3	0 - 127	
7	OFFSET tolerance	Tolerance of Black Level Adj.	1	1 - 127	
8	GAIN target	Target Value of White Level Adj.	238	0 - 255	
9	GAIN tolerance	Tolerance of White Level Adj.	1	1 - 255	
<b>Group 262</b>	<b>Auto Calibration (CVBS/SVIDEO)</b>				
0	Y Image Area Start X	Y Acquiring Area H-Start Position	20	0 - 1000	
1	Y Image Area Start Y	Y Acquiring Area V-Start Position	200	0 - 1000	
6	Image Area H Width	Image Level Acquiring Area	8	0 - 4095	
7	Image Area V Height	Image Level Acquiring Area Height	9	0 - 4095	
8	Y Target Level	Target Value of Y Level Adj.	217	0 - 255	
11	Gain Tolerance	Tolerance of Level Adj.	1	0 - 255	
12	Delta Gain	Deviation Width of Gain Value	9	0 - 255	
<b>Group 264</b>	<b>Auto Calibration (YCbCr)</b>				
0	Y-OFFSET AREA H START	Y - Offset Acquiring Area H-Start Position	925	0 - 1000	
1	Y-OFFSET AREA V START	Y - Offset Acquiring Area V-Start Position	500	0 - 1000	
2	CB - OFFSET AREA H START	CB - Offset Acquiring Area H-Start Position	925	0 - 1000	If not used: use Y's value
3	CB - OFFSET AREA V START	CB - Offset Acquiring Area V-Start Position	500	0 - 1000	If not used: use Y's value
4	CR - OFFSET AREA H START	CR - Offset Acquiring Area H-Start Position	925	0 - 1000	If not used: use Y's value
5	CR - OFFSET AREA V START	CR - Offset Acquiring Area V-Start Position	500	0 - 1000	If not used: use Y's value
6	Y - GAIN AREA H START	Y	50	0 - 1000	
7	Y - GAIN AREA V START		500	0 - 1000	
8	CB - GAIN AREA H START		800	0 - 1000	
9	CB - GAIN AREA V START		500	0 - 1000	
10	CR - GAIN AREA H START		700	0 - 1000	
11	CR - GAIN AREA V START		500	0 - 1000	
12	Image AREA H WIDTH	YCBCR Level Acquiring Area	13	0 - 4095	
13	Image AREA V HIGHT	YCBCR Level Acquiring Area Height	9	0 - 4095	
14	Y - OFFSET TARGET		4	0 - 255	
15	CB OFFSET TARGET		128	0 - 255	
16	CR OFFSET TARGET		128	0 - 255	
17	Y - GAIN TARGET		217	0 - 255	
18	CB - GAIN TARGET		237	0 - 255	
19	CR - GAIN TARGET		237	0 - 255	
20	OFFSET tolerance	Tolerance of OFFSET Adj.	1	1 - 255	
21	GAIN tolerance	Tolerance of GAIN Adj.	1	1 - 255	
<b>Group 270</b>	<b>CUSTOM (Aspect)</b>				
0	Scaler Horizontal	Horizontal Scaler	100	68-132	
1	Scaler Vertical	Vertical Scaler	100	68-132	
2	Connect	0: Individual, 1: Synchronization	0	0-1	
3	Position Horizontal	Horizontal Position Correction	100	85-115	
4	Position Vertical	Vertical Position Correction	100	85-115	
5	Aspect Enable	0: Disable, 1: Enable	0	0-1	

## Electrical Adjustments

Group/Item	Item Name	Function	Initial	Range	Note
<b>Group 280</b>	<b>AutoPC Adjstut</b>				
0	AutoPCAdjustEnable	Auto-PC Adj Operation Enable if Un-supported Signal Input	0	0 - 1	0: Enable, 1: Disable
1	Frequency Step	Frequency Steps of TotalDot	1	0-3	
2	Frequency Threshold	Total Dot Freqency Threshold	5	0 - 10	0 [] <--- -----> 10[Not matched]
3	Fine Phase	Do Phase Adj after Total Dot Adj.	1	0 - 1	0: Executes Fine Phase, 1: Not Execute
4	BLKDET	Black Level Detection Area	1	0 - 3	
5	PHASEMSK	Phase Detection Filter	0	0 - 3	0: Effective All Bit, 1: Disable Lower 1 bit 2: Disable Lower 2 bit, 3: Disable Lower 3 bit
<b>Group 290</b>	<b>PanelType * Panel Type Check</b>				
0	GammaL/R-View	Current Setting Check	0	0-20	0: Gamma for L-Turn 20: Gamma for R-Turn * Read only
1	GammaL/R-Change	Setting of Gamma	10	0-20	Sets L-Turn Gamma if the Value is set to 0. Sets R-Turn Gamma if the Value is set to 20.
<b>Group 500</b>	<b>Composite (NTSC) Composite / S-Video</b>				
0					
1	Disp Dots		668	0 ~ 4095	
2	H Back Porch		28	0 ~ 4095	
3	V Back Porch		18	0 ~ 4095	
4	Disp Line		458	0 ~ 4095	
<b>Group 501</b>	<b>Composite (PAL) Composite / S-Video</b>				
0					
1	Disp Dots		658	0 ~ 4095	
2	H Back Porch		34	0 ~ 4095	
3	V Back Porch		22	0 ~ 4095	
4	Disp Line		536	0 ~ 4095	
<b>Group 502</b>	<b>Composite (SECAM) Composite / S-Video</b>				
0					
1	Disp Dots		652	0 ~ 4095	
2	H Back Porch		28	0 ~ 4095	
3	V Back Porch		22	0 ~ 4095	
4	Disp Line		536	0 ~ 4095	
<b>Group 510</b>	<b>SCART(480i)</b>				
0					
1	Disp Dots		662	0 ~ 4095	
2	H Back Porch		142	0 ~ 4095	
3	V Back Porch		48	0 ~ 4095	
4	Disp Line		456	0 ~ 4095	
<b>Group 511</b>	<b>SCART (575i)</b>				
0					
1	Disp Dots		658	0 ~ 4095	
2	H Back Porch		162	0 ~ 4095	
3	V Back Porch		64	0 ~ 4095	
4	Disp Line		534	0 ~ 4095	
<b>Group 520</b>	<b>YCbCr (480i)</b>				
0	Total Dots		858	0 ~ 4095	
1	Disp Dots		670	0 ~ 4095	
2	H Back Porch		146	0 ~ 4095	
3	V Back Porch		48	0 ~ 4095	
4	Disp Line		458	0 ~ 4095	
<b>Group 521</b>	<b>YCbCr (575i)</b>				
0	Total Dots		864	0 ~ 4095	
1	Disp Dots		656	0 ~ 4095	
2	H Back Porch		162	0 ~ 4095	
3	V Back Porch		64	0~4095	
4	Disp Line		534	0~4095	

## Electrical Adjustments

Group/Item	Item Name	Function	Initial	Range	Note
Group 522	YCbCr (480P)				
0	Total Dots		858	0 ~ 4095	* Read only
1	Disp Dots		684	0 ~ 4095	
2	H Back Porch		136	0 ~ 4095	
3	V Back Porch		46	0 ~ 4095	
4	Disp Line		460	0 ~ 4095	
Group 523	YCbCr (575P)				
0	Total Dots		864	0 ~ 4095	* Read only
1	Disp Dots		690	0 ~ 4095	
2	H Back Porch		142	0 ~ 4095	
3	V Back Porch		56	0 ~ 4095	
4	Disp Line		550	0 ~ 4095	
Group 524	YCbCr (720P - 60)				
0	Total Dots		1650	0 ~ 4095	* Read only
1	Disp Dots		1248	0 ~ 4095	
2	H Back Porch		306	0 ~ 4095	
3	V Back Porch		34	0 ~ 4095	
4	Disp Line		700	0 ~ 4095	
Group 525	YCbCr (720P - 50 )				
0	Total Dots		1980	0 ~ 4095	* Read only
1	Disp Dots		1248	0 ~ 4095	
2	H Back Porch		338	0 ~ 4095	
3	V Back Porch		36	0 ~ 4095	
4	Disp Line		700	0 ~ 4095	
Group 526	YCbCr (1080i - 60)				
0	Total Dots		2200	0 ~ 4095	* Read only
1	Disp Dots		1872	0 ~ 4095	
2	H Back Porch		248	0 ~ 4095	
3	V Back Porch		54	0 ~ 4095	
4	Disp Line		1052	0 ~ 4095	
Group 527	YCbCr (1080i - 50)				
0	Total Dots		2640	0 ~ 4095	* Read only
1	Disp Dots		1870	0 ~ 4095	
2	H Back Porch		250	0 ~ 4095	
3	V Back Porch		54	0 ~ 4095	
4	Disp Line		1052	0 ~ 4095	
Group 528	YCbCr (1035i)				
0	Total Dots		2200	0 ~ 4095	* Read only
1	Disp Dots		1872	0 ~ 4095	
2	H Back Porch		248	0 ~ 4095	
3	V Back Porch		92	0 ~ 4095	
4	Disp Line		1012	0 ~ 4095	
Group 540	RGB Video (480i)				
0	Total Dots		960	0 ~ 4095	
1	Disp Dots		752	0 ~ 4095	
2	H Back Porch		166	0 ~ 4095	
3	V Back Porch		48	0 ~ 4095	
4	Disp Line		460	0 ~ 4095	
Group 541	RGB Video (575i)				
0	Total Dots		966	0 ~ 4095	
1	Disp Dots		736	0 ~ 4095	
2	H Back Porch		182	0 ~ 4095	
3	V Back Porch		66	0 ~ 4095	
4	Disp Line		536	0 ~ 4095	
Group 542	RGB Video (480P)				
0	Total Dots		960	0 ~ 4095	
1	Disp Dots		766	0 ~ 4095	
2	H Back Porch		156	0 ~ 4095	
3	V Back Porch		46	0 ~ 4095	
4	Disp Line		460	0 ~ 4095	

## Electrical Adjustments

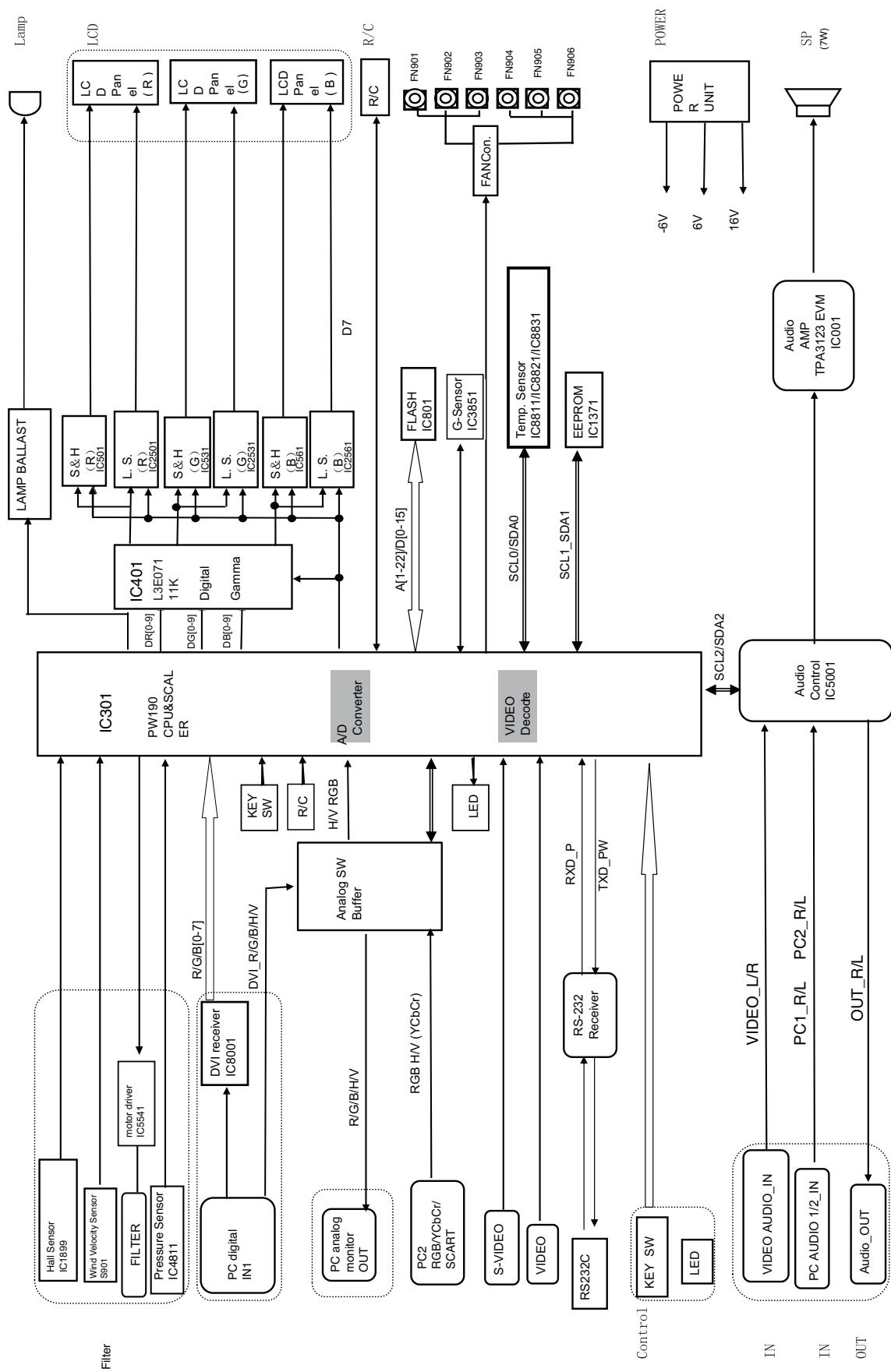
Group/Item	Item Name	Function	Initial	Range	Note
<b>Group 543</b>	<b>RGB Video (575P)</b>				
0	Total Dots		986	0 ~ 4095	
1	Disp Dots		774	0 ~ 4095	
2	H Back Porch		174	0 ~ 4095	
3	V Back Porch		62	0 ~ 4095	
4	Disp Line		540	0 ~ 4095	
<b>Group 544</b>	<b>RGB Video (720P - 60 )</b>				
0	Total Dots		1650	0 ~ 4095	
1	Disp Dots		1248	0 ~ 4095	
2	H Back Porch		310	0 ~ 4095	
3	V Back Porch		34	0 ~ 4095	
4	Disp Line		702	0 ~ 4095	
<b>Group 545</b>	<b>RGB Video (720P - 50 )</b>				
0	Total Dots		1980	0 ~ 4095	
1	Disp Dots		1246	0 ~ 4095	
2	H Back Porch		310	0 ~ 4095	
3	V Back Porch		34	0 ~ 4095	
4	Disp Line		702	0 ~ 4095	
<b>Group 546</b>	<b>RGB Video (1080i - 60)</b>				
0	Total Dots		2200	0 ~ 4095	
1	Disp Dots		1872	0 ~ 4095	
2	H Back Porch		254	0 ~ 4095	
3	V Back Porch		56	0 ~ 4095	
4	Disp Line		1052	0 ~ 4095	
<b>Group 547</b>	<b>RGB Video (1080i - 50)</b>				
0	Total Dots		2640	0 ~ 4095	
1	Disp Dots		1868	0 ~ 4095	
2	H Back Porch		258	0 ~ 4095	
3	V Back Porch		54	0 ~ 4095	
4	Disp Line		1052	0 ~ 4095	
<b>Group 548</b>	<b>RGB Video (1035i)</b>				
0	Total Dots		2200	0 ~ 4095	
1	Disp Dots		1868	0 ~ 4095	
2	H Back Porch		258	0 ~ 4095	
3	V Back Porch		92	0 ~ 4095	
4	Disp Line		1012	0 ~ 4095	
<b>Group 549</b>	<b>RGB Video (1080P-60)</b>				
0	Total Dots		2200	0 ~ 4095	
1	Disp Dots		1872	0 ~ 4095	
2	H Back Porch		254	0 ~ 4095	
3	V Back Porch		56	0 ~ 4095	
4	Disp Line		1052	0 ~ 4095	
<b>Group 550</b>	<b>RGB Video (1080P-50)</b>				
0	Total Dots		2640	0 ~ 4095	
1	Disp Dots		1868	0 ~ 4095	
2	H Back Porch		258	0 ~ 4095	
3	V Back Porch		54	0 ~ 4095	
4	Disp Line		1052	0 ~ 4095	
<b>Group 551</b>	<b>RGB Video (1080p-30)</b>				
0	Total Dots		2200	0 ~ 4095	
1	Disp Dots		1868	0 ~ 4095	
2	H Back Porch		260	0 ~ 4095	
3	V Back Porch		46	0 ~ 4095	
4	Disp Line		1066	0 ~ 4095	
<b>Group 552</b>	<b>RGB Video (1080p-25)</b>				
0	Total Dots		2640	0 ~ 4095	
1	Disp Dots		1872	0 ~ 4095	
2	H Back Porch		258	0 ~ 4095	
3	V Back Porch		48	0 ~ 4095	
4	Disp Line		1064	0 ~ 4095	

## Electrical Adjustments

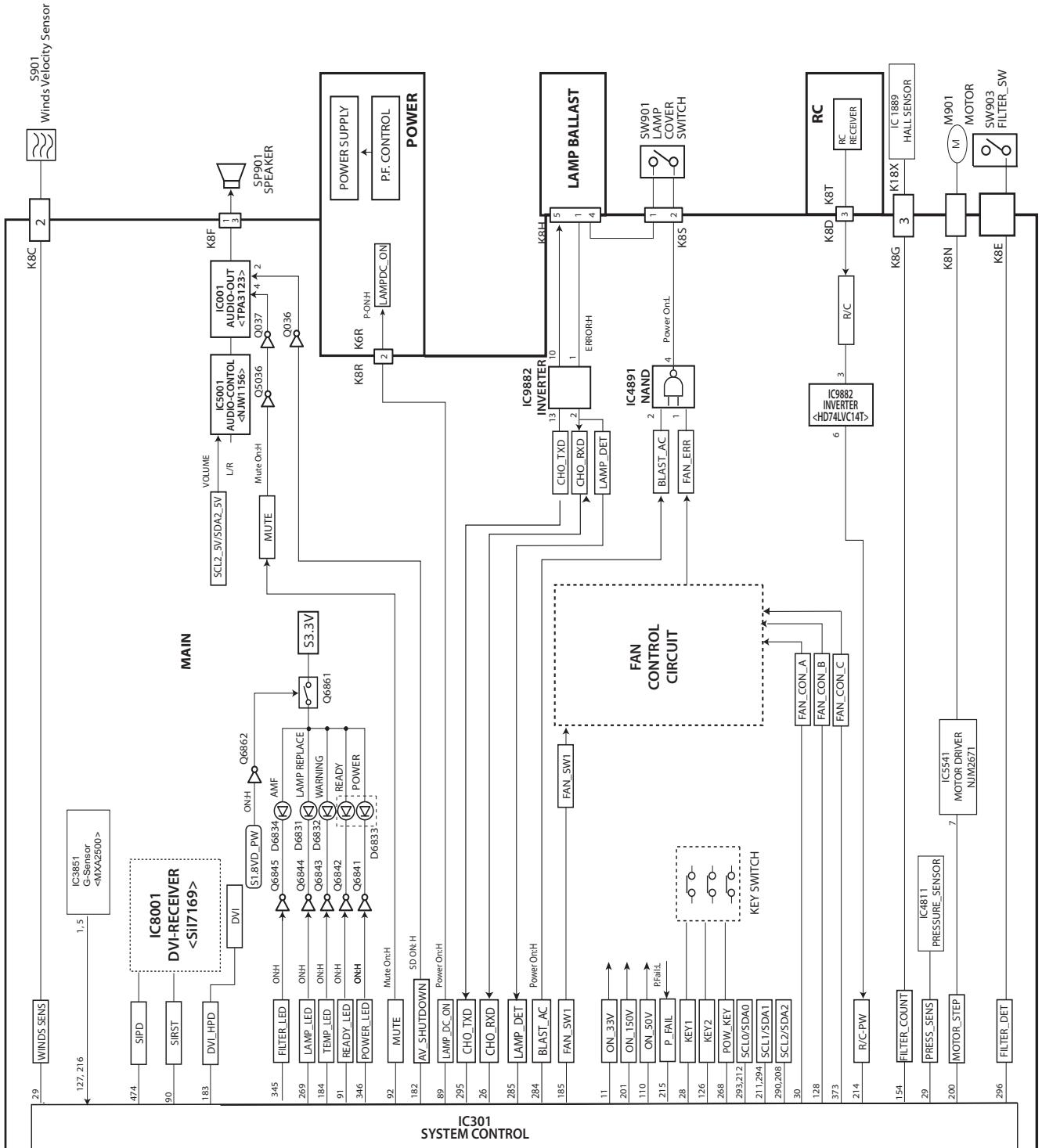
Group/Item	Item Name	Function	Initial	Range	Note
<b>Group 553</b>	<b>RGB Video (1080p-24)</b>				
0	Total Dots		2750	0 ~ 4095	
1	Disp Dots		1878	0 ~ 4095	
2	H Back Porch		214	0 ~ 4095	
3	V Back Porch		46	0 ~ 4095	
4	Disp Line		1070	0 ~ 4095	
<b>Group 560</b>	<b>HDCP (480P)</b>				
7	Over Scan	Over Scan Rate (0 ~ 25.5% at 0.1% steps)	0	0 - 255	
8	VSBEGB		2	0 - 15	
<b>Group 561</b>	<b>HDCP (575P)</b>				
7	Over Scan	Over Scan Rate (0 ~ 25.5% at 0.1% steps)	0	0 - 255	
8	VSBEGB		2	0 - 15	
<b>Group 562</b>	<b>HDCP (720P-60)</b>				
7	Over Scan	Over Scan Rate (0 ~ 25.5% at 0.1% steps)		0 - 255	
8	VSBEGB		2	0 - 15	
<b>Group 563</b>	<b>HDCP (720P-50)</b>				
7	Over Scan	Over Scan Rate (0 ~ 25.5% at 0.1% steps)	0	0 - 255	
8	VSBEGB		2	0 - 15	
<b>Group 564</b>	<b>HDCP (1080i-60)</b>				
7	Over Scan	Over Scan Rate (0 ~ 25.5% at 0.1% steps)	0	0 - 255	
8	VSBEGB		2	0 - 15	
<b>Group 565</b>	<b>HDCP (1080i-50)</b>				
7	Over Scan	Over Scan Rate (0 ~ 25.5% at 0.1% steps)	0	0 - 255	
8	VSBEGB		2	0 - 15	
<b>Group 566</b>	<b>HDCP (1035i)</b>				
7	Over Scan	Over Scan Rate (0 ~ 25.5% at 0.1% steps)	0	0 - 255	
8	VSBEGB		2	0 - 15	
<b>Group 981</b>	<b>Color Shading Adj Offset</b>				
0	R-Max		128	0-255	
1	R-Mid1		128	0-255	
2	R-Mid2	128	128	0-255	
3	R-Min		128	0-255	
4	G-Max		128	0-255	
5	G-Mid1		128	0-255	
6	G-Mid2		128	0-255	
7	G-Min		128	0-255	
8	B-Max		128	0-255	
9	B-Mid1		128	0-255	
10	B-Mid2		128	0-255	
11	B-Min		128	0-255	

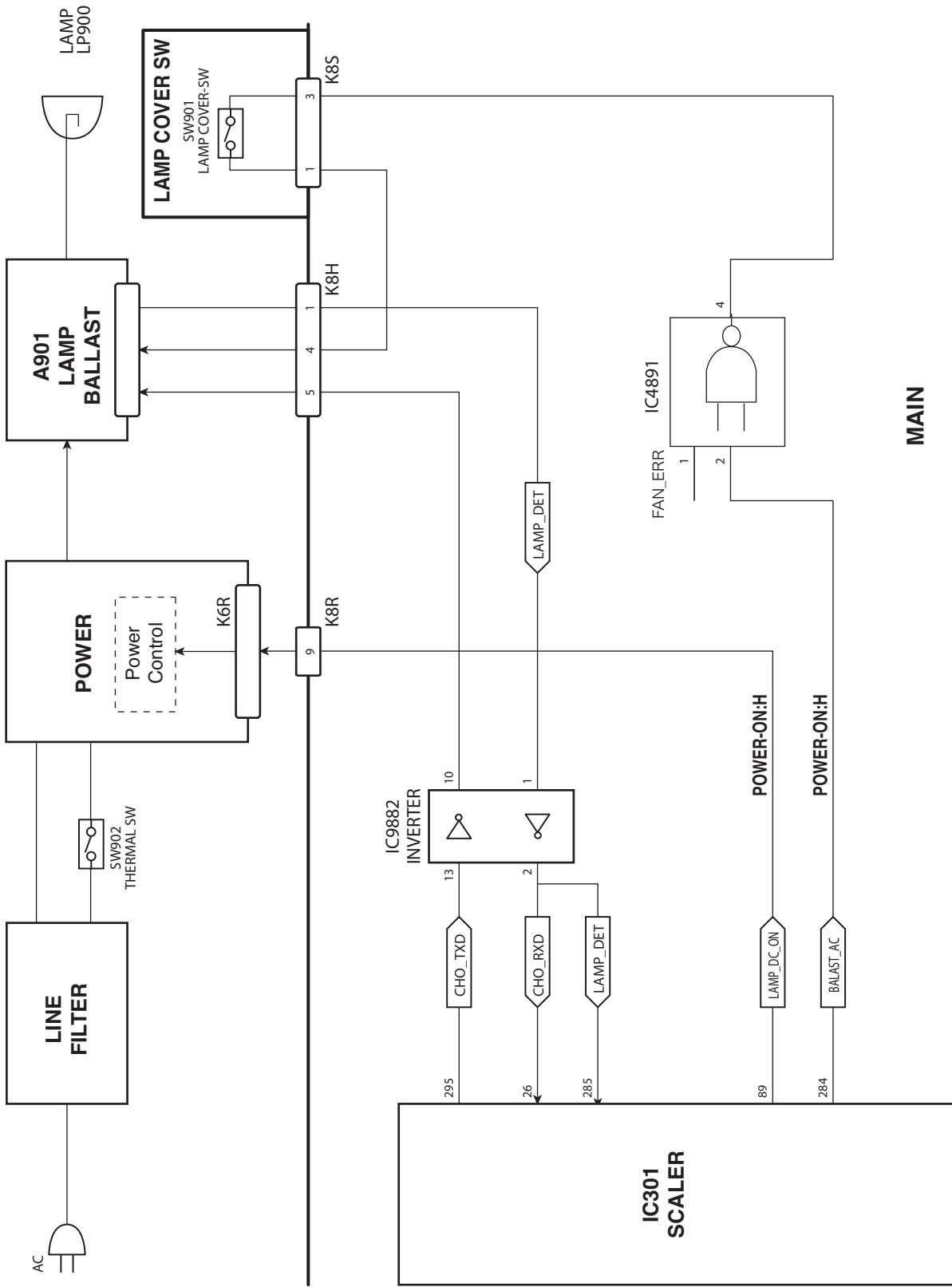
# Chassis Block Diagrams

## Chassis over view

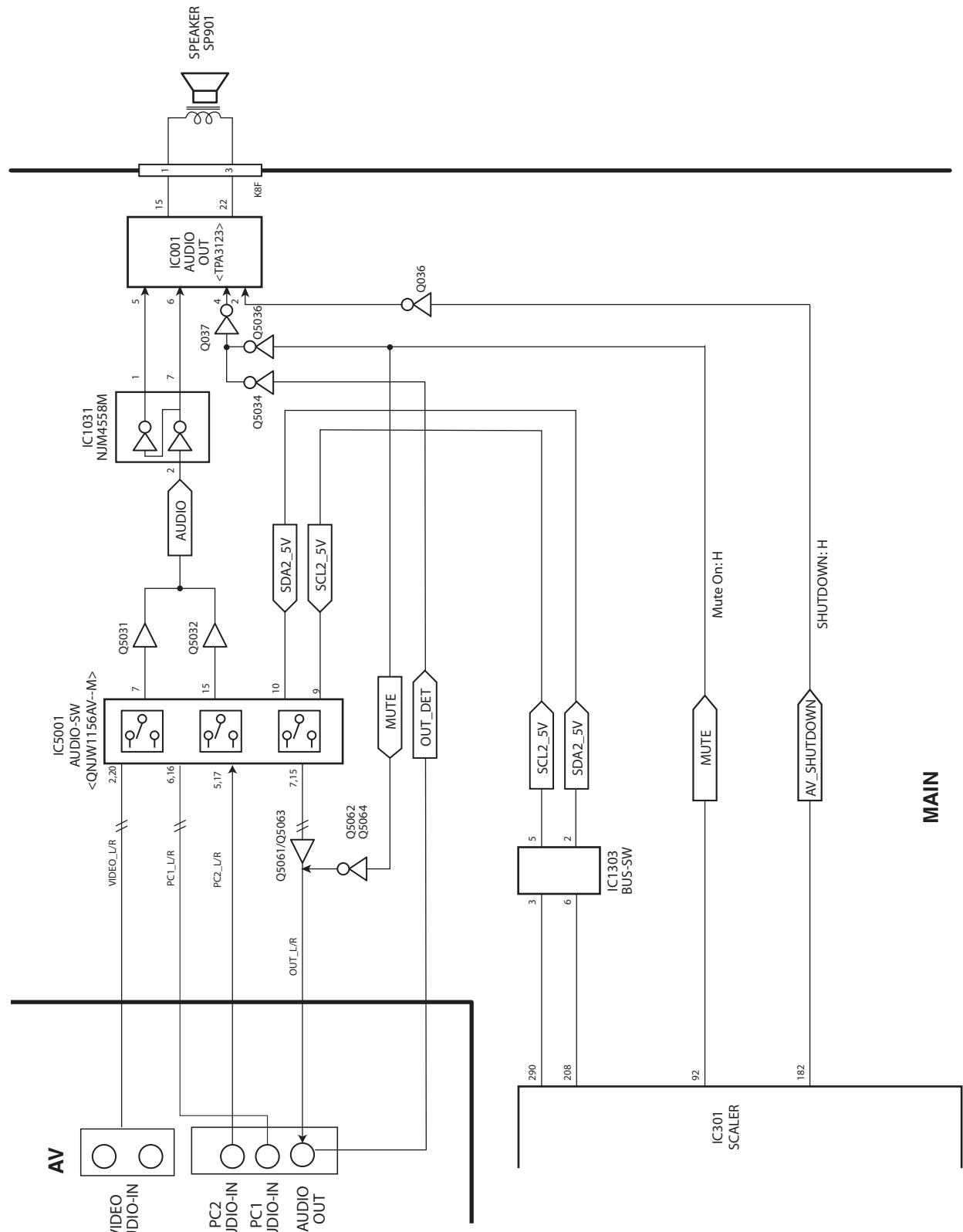


## System control

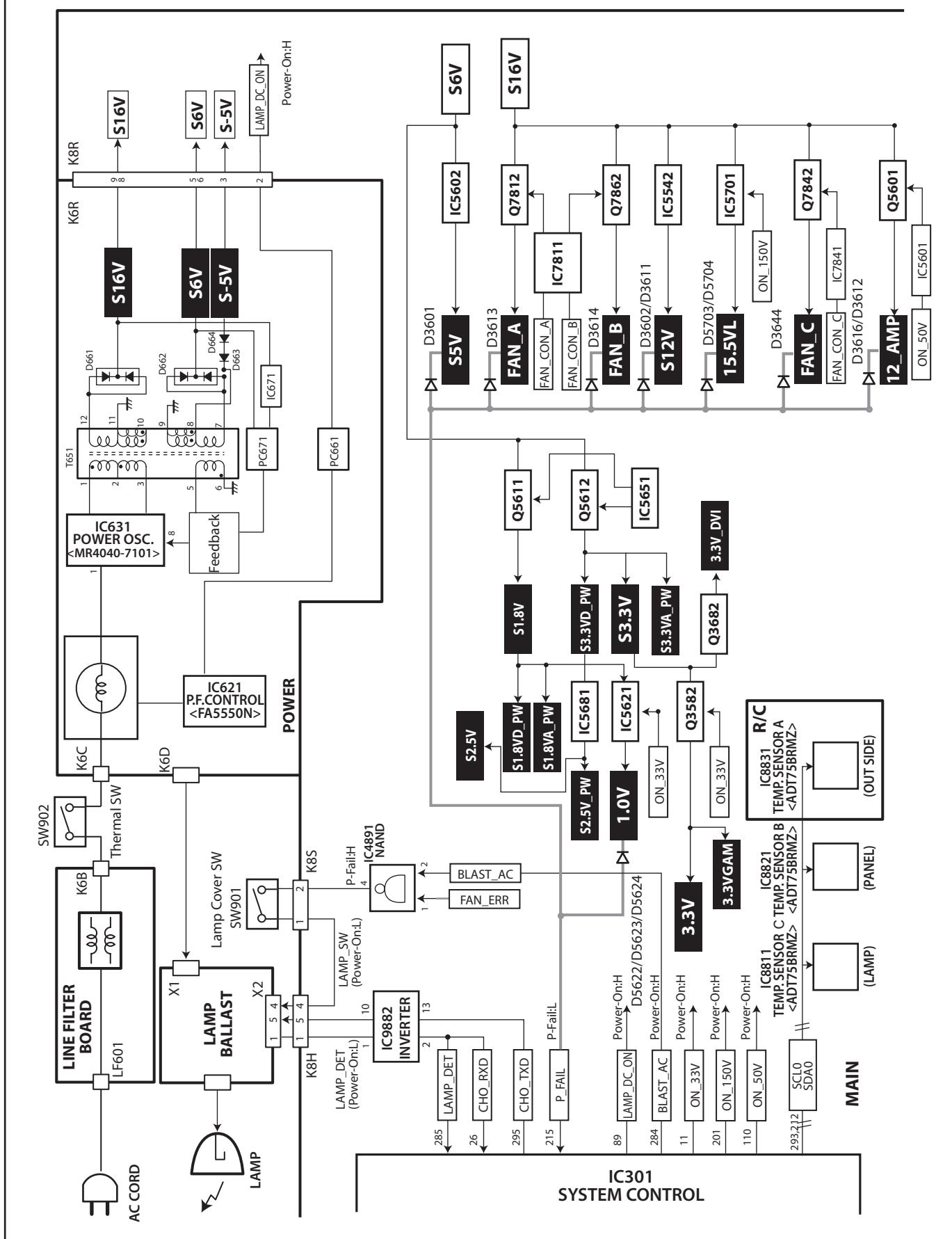


**Lamp control**

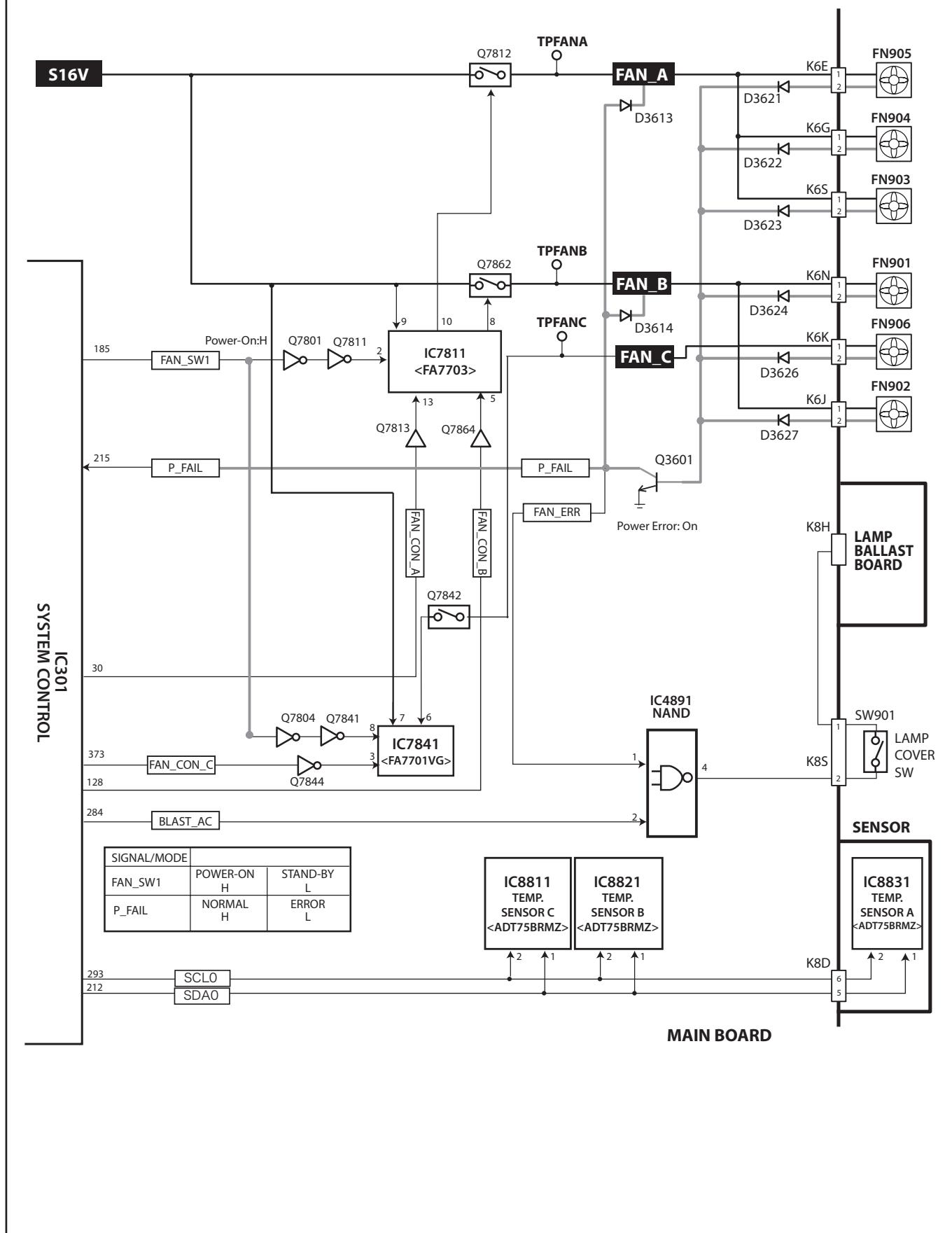
## Audio circuit

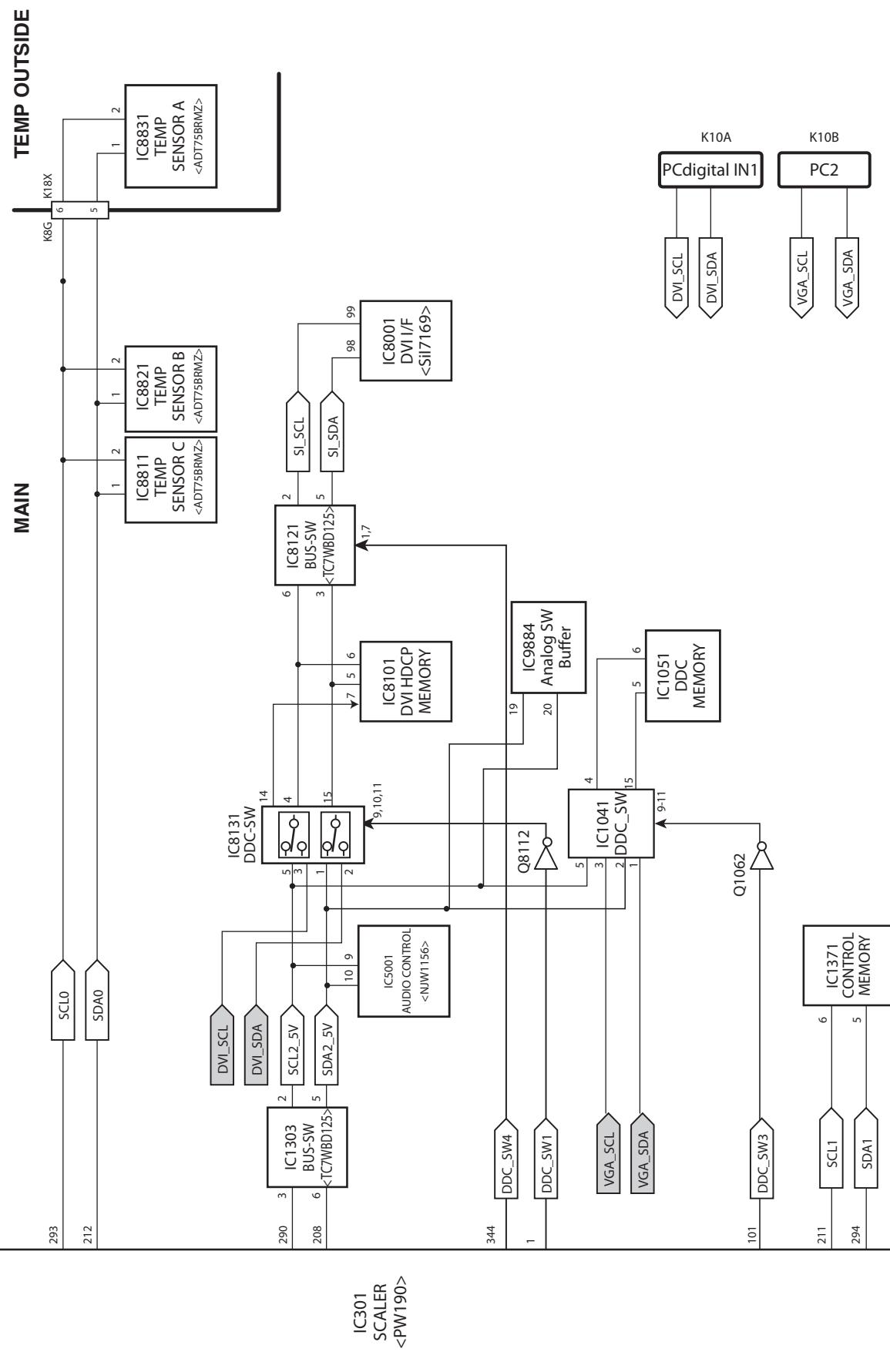


## Power supply & protection circuit



## Fan control circuit



**IIC bus control circuit**

# Troubleshooting

## Indicators and Projector Condition

Check the indicators for projector condition.

Indicators				Projector Condition
POWER red/green	WARNING TEMP. red	WARNING FILTER orange	LAMP REPLACE yellow	
				The projector is off. (The AC power cord is unplugged.)
		*		The projector is in stand-by mode. Press the POWER ON/STAND-BY button to turn on the projector.
		*		The projector is operating normally.
		*		The projector is preparing for stand-by or the projection lamp is being cooling down. The projector cannot be turned on until cooling is completed.
		*		The projector is in the Power management mode.
				<p>The filter is scrolled using the Filter control function in the setting menu.  When the filter is being scrolled, the Filter replacement icon and "Please wait..." message (Fig. 1) appear on the screen for about 30 seconds.</p> <div style="display: flex; align-items: center;"> <div style="border: 1px solid #ccc; padding: 2px; border-radius: 5px; display: inline-block;">           Please wait...         </div> </div>
<div style="border: 1px solid #ccc; padding: 2px; border-radius: 5px; display: inline-block;">           Please wait...         </div>				

Fig.1 Filter replacement icon and "Please wait..."

The projector is detecting abnormal condition.

Indicators				Projector Condition
POWER red/green	WARNING TEMP. red	WARNING FILTER orange	LAMP REPLACE yellow	
		*		The temperature inside the projector is elevated close to the abnormally high level.
		*		The temperature inside the projector is abnormally high. The projector cannot be turned on. When the projector is cooled down enough and the temperature returns to normal, the POWER indicator lights red and the projector can be turned on. (The WARNING TEMP. indicator keeps blinking.) Check and replace the filter.

... green / orange / yellow

... off

... red

... blinking slow  
(approx. 2 seconds ON, 2 seconds OFF)

... blinking fast  
(approx. 0.5 seconds ON, 0.5 seconds OFF)

Indicators				Projector Condition
POWER red/green	WARNING TEMP. red	WARNING FILTER orange	LAMP REPLACE yellow	
red		*		The projector has been cooled down enough and the temperature returns to normal. When turning on the projector, the WARNING TEMP. indicator stops blinking. Check and replace the filter.
Any		*		The lamp has been used overtime. Replace the lamp immediately and then reset the lamp counter. The indicator will be turned off after resetting the counter.
Any				If the Filter counter reached a time set in the timer setting, a Filter replacement icon (Fig.2) appears on the screen and the WARNING FILTER indicator on the top control lights up. Replace the filter as soon as possible. If the filter is out of scroll and the projector reaches a time set in the timer setting, Fig. 3 appears on the screen and the WARNING FILTER indicator lights up. Replace the filter cartridge as soon as possible. If the filter is clogged and no scroll is left in the filter cartridge, a Filter cartridge replacement icon (Fig.4) appears on the screen and the WARNING FILTER indicator lights up. Replace the filter cartridge as soon as possible. <b>Note:</b> • Fig.2, Fig.3 and Fig.4 icon will not appear when the Display function is set to "Off", during "Freeze" or "No show".
	Fig.2 Filter replacement icon			
	Fig.3			
	Fig.4 Filter cartridge replacement icon			
				The filter cartridge is not installed in the projector. Check the filter compartment to see if the filter cartridge is installed in the projector. When the filter cartridge is installed and the indicators continue to light and blink, read the column below.
		*		The projector detects an abnormal condition and cannot be turned on. Unplug the AC power cord and plug it again to turn on the projector. If the projector is turned off again, unplug the AC power cord and contact the dealer or the service center. Do not leave the projector on. It may cause an electric shock or a fire hazard.

- \* When the filter detects clogging, reaches a time set in the timer setting or runs out of the filter scroll, the WARNING FILTER indicator lights orange. When this indicator lights orange, replace the filter or the filter cartridge with a new one promptly. Reset the Filter counter after replacing the filter. Reset the Filter counter and Scroll counter after replacing the filter cartridge .
- ❖ When the projection lamp reaches its end of life, the LAMP REPLACE indicator lights yellow. When this indicator lights yellow, replace the projection lamp with a new one promptly. Reset the lamp counter after replacing the lamp.

## No Power

This projector provides a function which can be specified a defective area simply by indicating the LEDs. Connect the AC cord and press the Power button once and then check the LED indication.

- **When all of LED indicators are not lighting**, the symptom indicates that the primary power supply circuit does not operate properly. Check the power primary circuit and parts as follow;

AC cord, F601 (Fuse), Power board,

SW902 (Thermal sw.) short in normal

SW902 opens when the surrounding temperature of the switch exceeds 80°C.

- **When the WARNING (red) and POWER (red) indicators are flashing**, the symptom indicates that the projector detected an abnormal temperature risen inside the projector. Check the air filters and remove the object near the intake and exhaust fan openings, and wait until the POWER indicator stops flashing, and then try to turn on the projector.

The internal temperature is monitored by sensor ICs, IC8811, IC8821 and IC8831.

- **When the WARNING indicator lights red**, the symptom indicates that the projector detected an abnormality in the cooling fan operation or in the power supply secondary circuits. Check fan operation and power supply lines, and the driving signal status.

The P\_FAIL signal (Error: L) is sent to pin 215 of IC301<SYSTEM CONTROL> when the abnormality occurred inside the projector, and then the IC301 sends the shutdown signal, LAMP\_DC\_ON, to the power supply circuit to stop its operation, and signal BLAST\_AC to the lamp ballast board via IC4891 and SW901<lamp cover switch> to stop operation of the lamp circuit.

An abnormality occurs on the secondary power supply;

Check power supplies S16V, S6V, S-5V. P\_FAIL signal becomes "Low" when the abnormality occurs on any of the power supply lines.

An abnormality occurs on the fan control circuit;

Check FN901, FN902, FN903, FN904, FN905, FN906 and peripheral circuit.

If any of the fans has an error, the fan lock signal drives Q3601 becomes on. As the result, signal FAN\_ERR becomes Low and is sent to lamp ballast board to stop lamp circuit.

An abnormality occurs on the drive signals;

ON\_150V signal (Power-on: H) is output from pin 201 of IC301 and switches IC5701,15.5VL supply circuit, ON\_50V signal (Power-on: H) is outut from pin 110 of IC301, and IC5601,12\_AMP supply circuit. IC5603,5V\_AMF supply circuit, ON\_33V signal (Power-on: H) is output from pin 11 of IC301 and switches IC5621, 1.0V and Q3582 3.3V supply circuit.

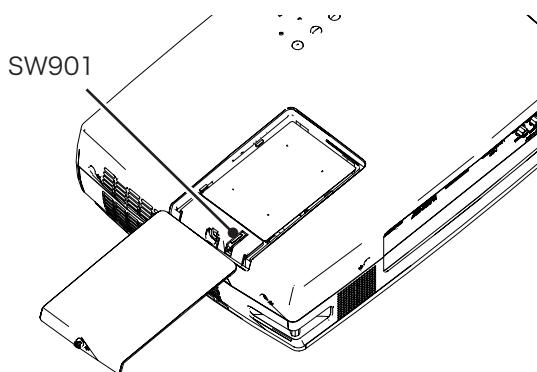
LAMP\_DC\_ON signal (Power-on: H) is output from pin 89 of IC301 and supplied to the P.F Control IC, IC621, on the power supply board through Q651, and PC661.

BLAST\_AC signal (Power-on: H) is output from pin 284 of IC301 and applied to pin 2 of IC4891 and output pin 4 and then supplied to the lamp ballast board through SW901<Lamp Cover SW>.

LAMP\_DET signal at the pin 285 of IC301 is applied from the lamp ballast unit. If the abnormality occurred on the lamp ballast unit, LAMP\_DET signal becomes "High" and then IC301 shuts down the power supply circuit.

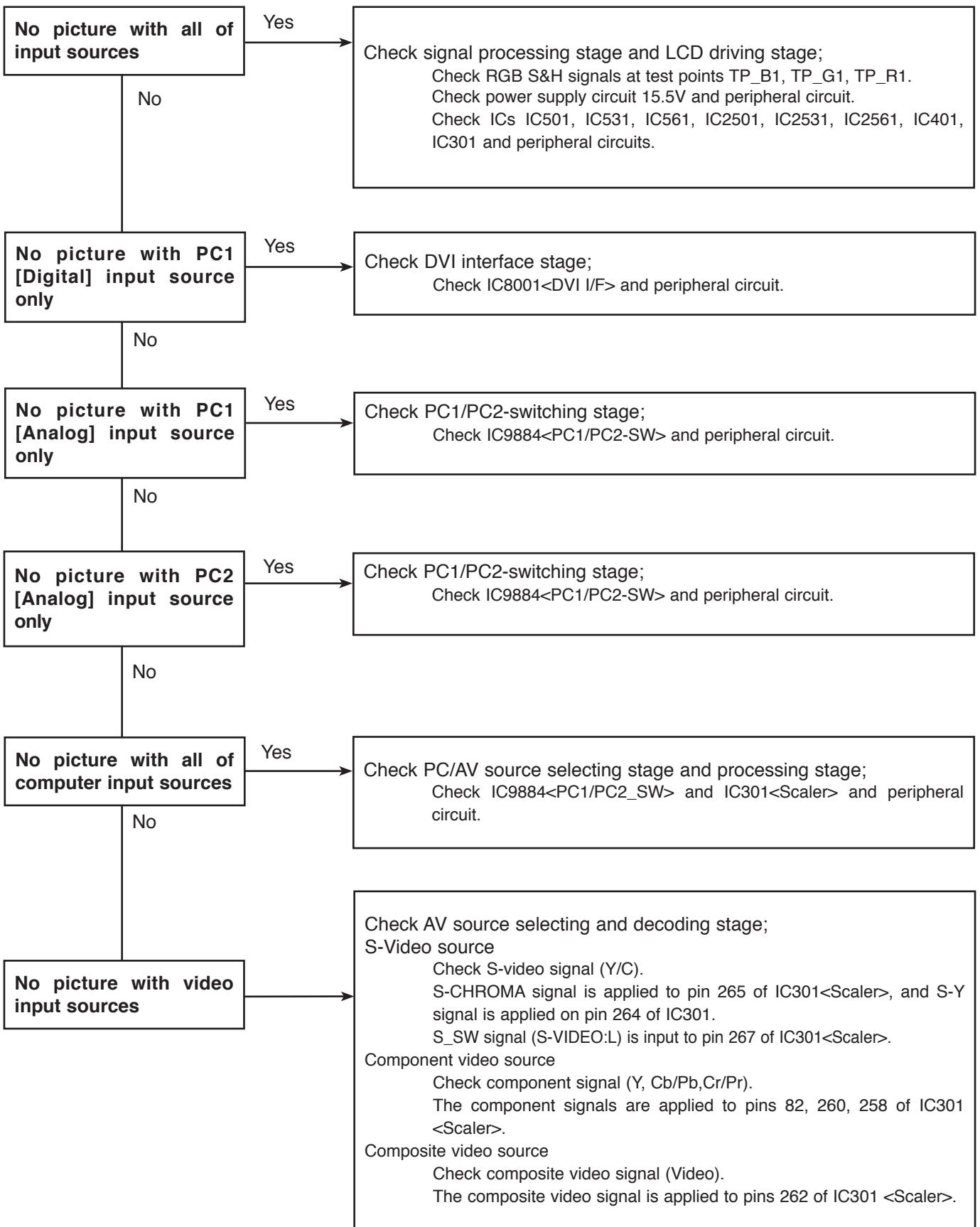
### Lamp Cover switch

Make sure that the lamp cover is mounted correctly. If not or the lamp cover removed, the lamp does not light on for the safety. Check the lamp cover and lamp cover switch (SW901).



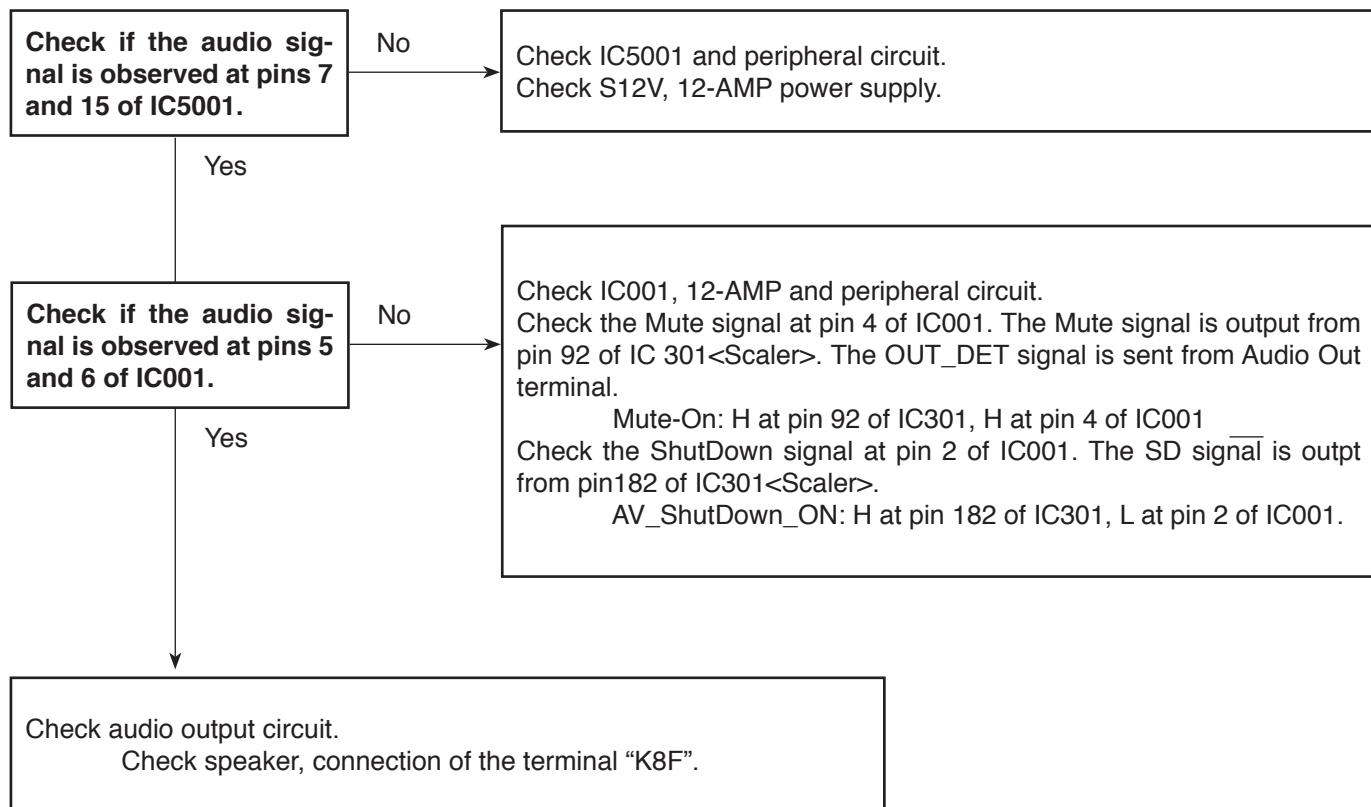
## No Picture

Check following steps.



## No Sound

Check following steps.



# Control Port Functions

## Scaler I/O Port Functions (PW190)

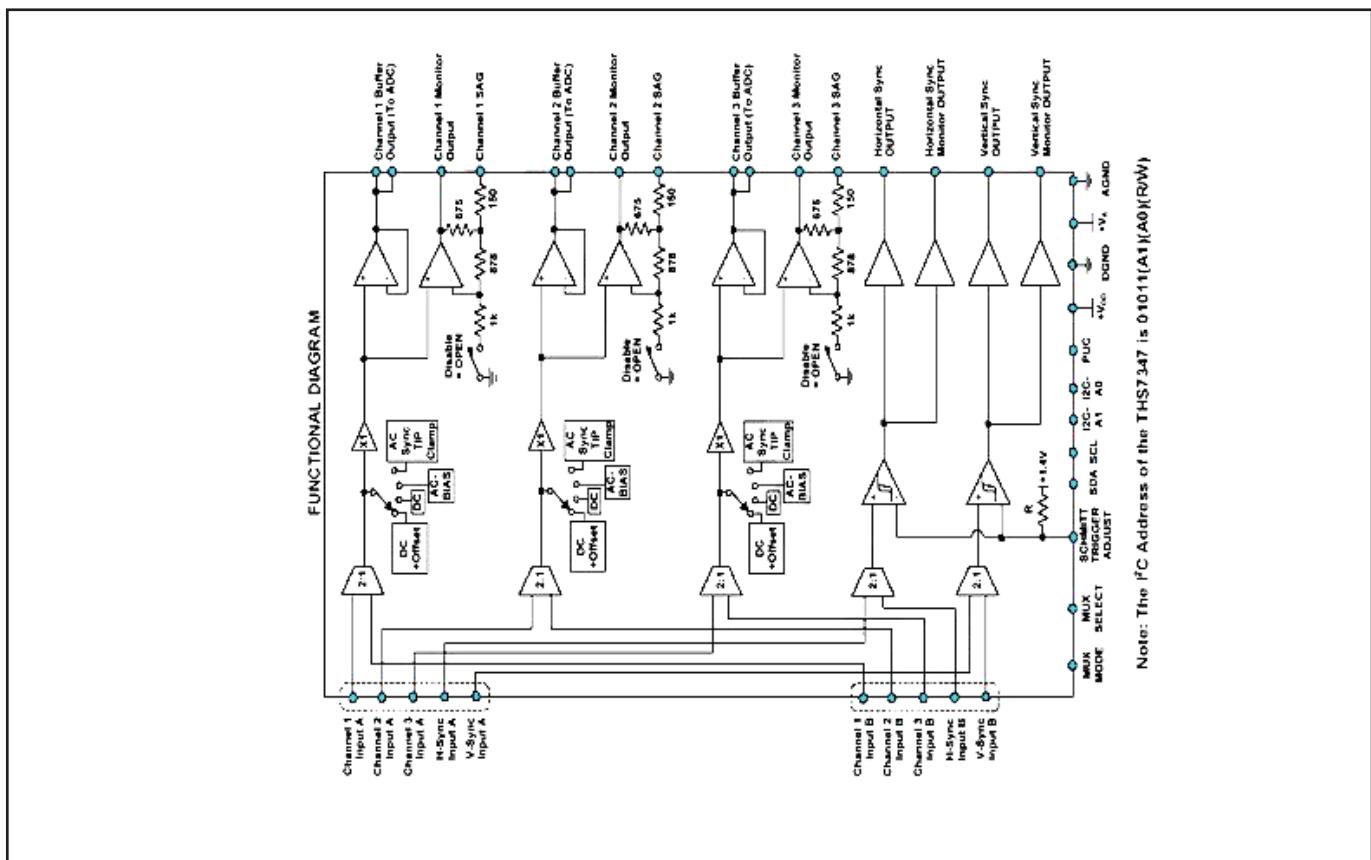
PIN NO.	PORT NO.	PORT NAME	FUNCTION	SIGNAL NAME	DESCRIPTION	I/O
1	A1	PORTD7	DDC_SW1	DDC_SW1	DDC_SW1[DVI]	O
11	A11	PORTC5		ON_33V	33V Power Drive, Power On: H	O
	B10	PWM2				
101	B2	PORTD6	DDC_SW3	DDC_SW3	DDC_SW3 [AnalogPC]	O
110	B11	PORTC6		ON_50V	5V Drive On/Off, On: H	O
111	B12	PORTC1		SCS_PW	3-Wired Serial Control	O
124	B25	TXD_PW		TXD_PW	Serial Control TXD	O
200	C10	PWM3	MOTOR STEP[AMF]	MOTOR_STEP[AMF]	Contol MOTORSTEP	O
201	C11	PORTC7		ON_150V	15.5V Power Driver, Power On: H	O
202	C12	PORTC2		SDATA_PW	3-Wired Serial Control Data	O
205	C15	PORTI7		PJNET_ON		O
208	C18	TWOWSD2	2-Wire Serial Data 2	SDA2	IIC Bus Control Data	O
211	C21	TWOWSC1	2-Wire Serial Clock 1	SCL1	IIC Bus Control Clock	O
284	C22	TWOWSD0	2-Wire Serial Data 0	SDA0	IIC Bus Control Data	O
28	C26	ADC1	ADC1	KEY1	Key Control Input	I
278	D5	PORTD5		SIHS	H-Sync. Input fro DVI	I
284	D11	PWM1		BLAST-AC	Lamp Control,Lamp On: H	O
285	D12	PORTC3		LAMP_DET	LAMP detect	O
288	D15	DHS	DHS	DHS	H-Sync. Output	O
290	D17	TWOWSC2	2-Wire Serial Clock 2	SCL2	IIC Bus Control Clock	O
293	D20	TWOWSC0	2-Wire Serial Clock 0	SCL0	IIC Bus Control Clock	O
294	D21	TWOWSD1	2-Wire Serial Data 1	SDA1	IIC Bus Control Data	O
296	D23	PORTI6		FILTER_DET	FILTER detect	O
215	D24	ADC0	ADC0	P_FAIL	Power Failure Signal Input, Failure:L	I
126	D25	ADC2	ADC2	KEY2	Key Control Input	I
29	D26	ADC6	ADC6	PRESS_SENS[AMF]	RRESS SENSOR	I
354	E6	SIVS		SIVS	V-Sync. Input for DVI	I
362	E14	PORTC4		IRM_RST		O
363	E15	PORTC0		MODEL_OPTION	MODEL_OPTION	O
367	E19	THRWSC	3-Wire Serial Clock	SCLK-PW	3-Wired Serial Control Clock	O
368	E20	RXD_PW		RXD_PW	Serial Control RXD	I
370	E22	ADC5		WINDS_SENS[AMF]	WINDS SENSOR	I
216	E24	ADC3	ADC3	SENSOR_Temp		I
127	E25	ADC7	ADC7	SENSOR_X_Axis	SENSOR_X_Axis	I
30	E26	DAC1	DAC1	FAN_CON_A	Fan A Voltage Control	O
298	F23	ADC4	ADC4	BRAND Option	Option Switch BRAND	I
128	F25	DAC2	DAC2	FAN_CON_B	Fan B Voltage Control	O
373	H22	DAC0	DAC0	FAN_CON_C	FAN C Voltage Control	O
92	K1	PORTB3		MUTE	Sound Mute Drive, Mute On: H	O
185	K2	PORTB1		FAN_SW1	Fan Control Switch	O
347	K4	SIDEN		SIDEN	SIDEN for DVI	I
91	L1	PORTB5		READY_LED	READY LED Drive, On: H	O
184	L2	PORTB6		TEMP_LED	Temp Driver On: H	O
269	L3	PORTB7		LAMP_LED	LAMP REPLACE LED Drive, On: H	O
346	L4	PORTB4		POWER_LED	POWER LED Drive, On: H	O
90	M1	PORTA0		SIRST[DVI]	RESET FOR SIL7169	O
183	M2	PORTA1		DVI	HPD[DVI]	O
196	M3	PORTB0	POWER KEY	POW_KEY	KEY Control power	I
345	M4	PORTB2		FILTER_LED	FILTER LED DRIVER On:H	O
89	N1	PORTA3		LAMP_DC_ON	Power Control, Power On: H	O
182	N2	PORTA5		AV_ShutDown	AC_ShutDown, On: H	O
267	N3	PORTA6		S_SW	S-Video Input Switch	I
344	N4	PORTA7	DDC_SW4[DVI]	DDC_SW4	DDC_SW4[DVI]	O
413	N5	PORTA4	IO_TXD0	IO_TXD0	IO_TXD0	O
474	N6	PORTA2		SIPD	SIPD for DVI	O
249	AD10	PORTD3		PJNET_DET		I
329	AC9	PORTD2		A[22]		I
65	AF12	PORTD1		A[21]		I
160	AE12	PORTD0		A[20]		I

# Waveform

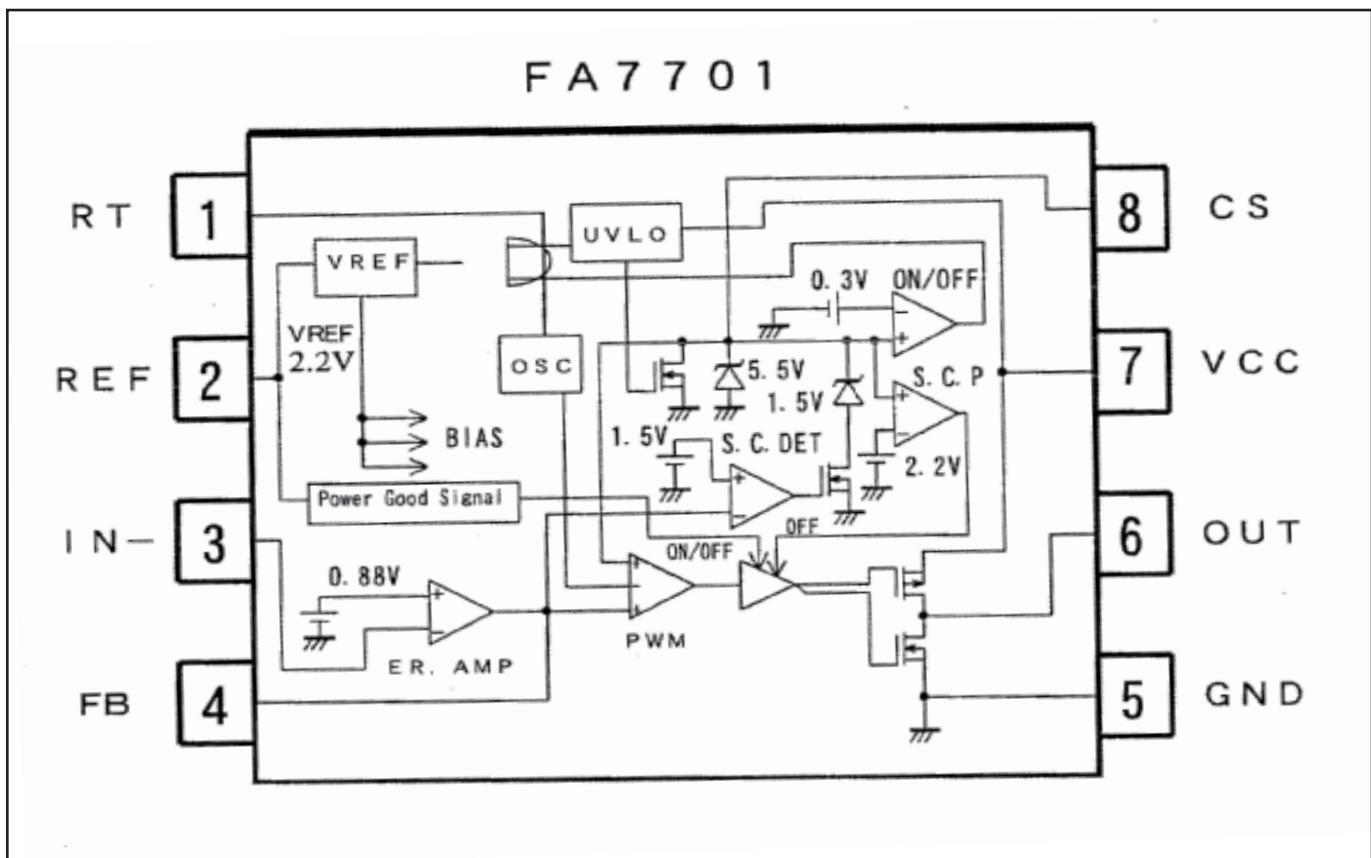
VIDEO signal <VIDEO>	HSYNC signal	VSYNC signal
<p>VIDEO</p> <p>CH1=200mV DC 10:1 CH2=5V DC 10:1 20μs/div (20μs/div) NORM:50MS/s</p> <p>#Trace1# P-P 744.0mV #Trace2# P-P 3.600V</p> <p>GHS</p>	<p>HSYNC</p> <p>CH1=1V DC 10:1 20μs/div (20μs/div) NORM:50MS/s</p> <p>#Trace1# P-P 3.320V</p> <p>GHS</p>	<p>VSYNC</p> <p>CH2=1V DC 10:1 5μs/div (5μs/div) NORM:200KS/s</p> <p>#Trace2# P-P 3.280V</p> <p>HVS</p>
HSYNC signal <TPDHS>	VSYNC signal <TPDVS>	
<p>DHS</p> <p>CH1=1V DC 10:1 20μs/div (20μs/div) NORM:50MS/s</p> <p>#Trace1# P-P 3.400V</p>	<p>DVS</p> <p>CH2=1V DC 10:1 5μs/div (5μs/div) NORM:200KS/s</p> <p>#Trace1# P-P 3.480V</p>	
R-S&H signal <TP_R1>	G-S&H signal <TP_G1>	B-S&H signal <TP_B1>
<p>B-OUT</p> <p>DHS</p> <p>CH1=5V DC 10:1 CH2=5V DC 10:1 10μs/div (10μs/div) NORM:100MS/s</p> <p>#Trace1# P-P 9.800V #Trace2# P-P 3.600V</p>	<p>G-OUT</p> <p>DHS</p> <p>CH1=5V DC 10:1 CH2=5V DC 10:1 10μs/div (10μs/div) NORM:100MS/s</p> <p>#Trace1# P-P 9.800V #Trace2# P-P 3.600V</p>	<p>R-OUT</p> <p>DHS</p> <p>CH1=5V DC 10:1 CH2=5V DC 10:1 10μs/div (10μs/div) NORM:100MS/s</p> <p>#Trace1# P-P 9.800V #Trace2# P-P 3.600V</p>

## IC Block Diagrams

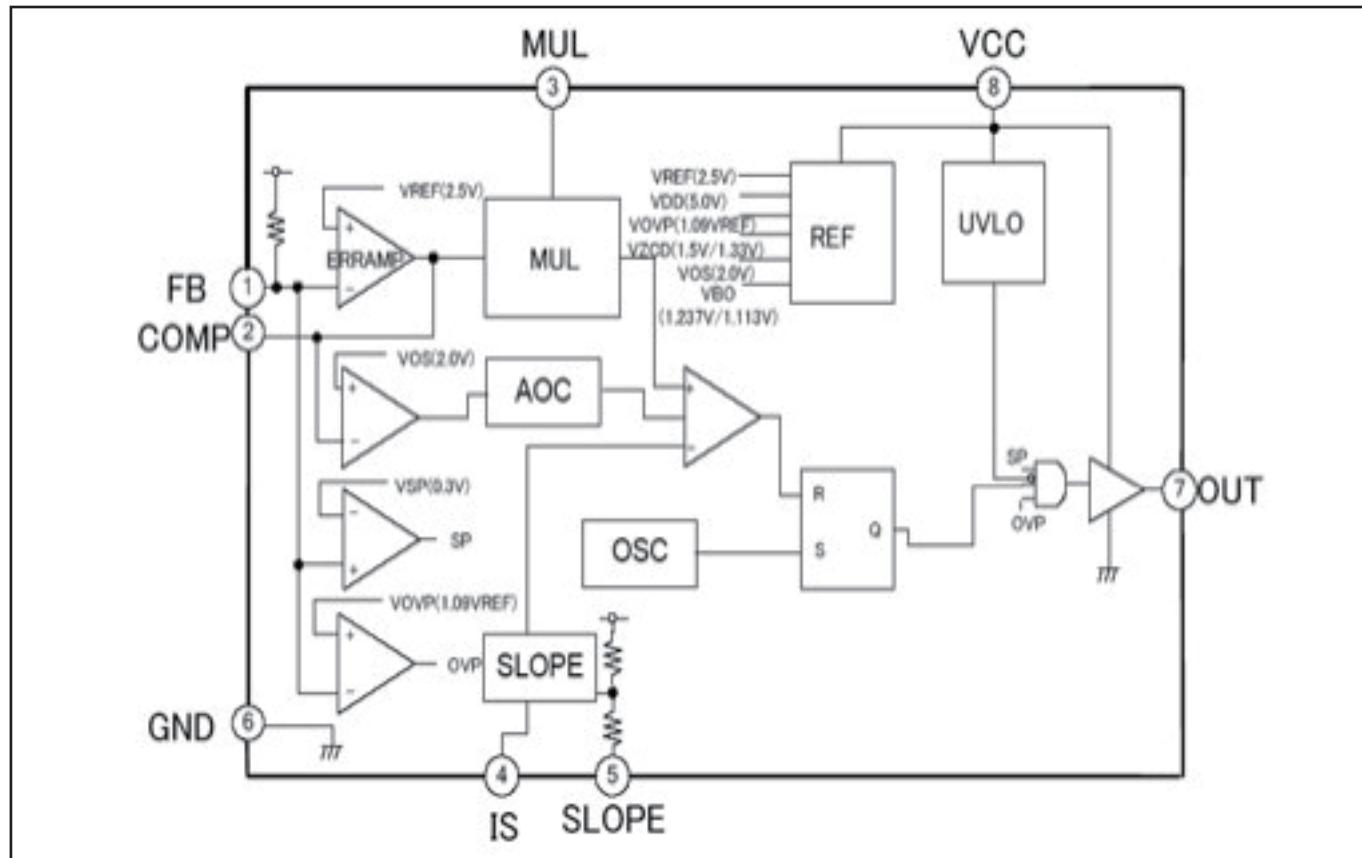
### ● TH7347 <Signal Switch, IC9884>



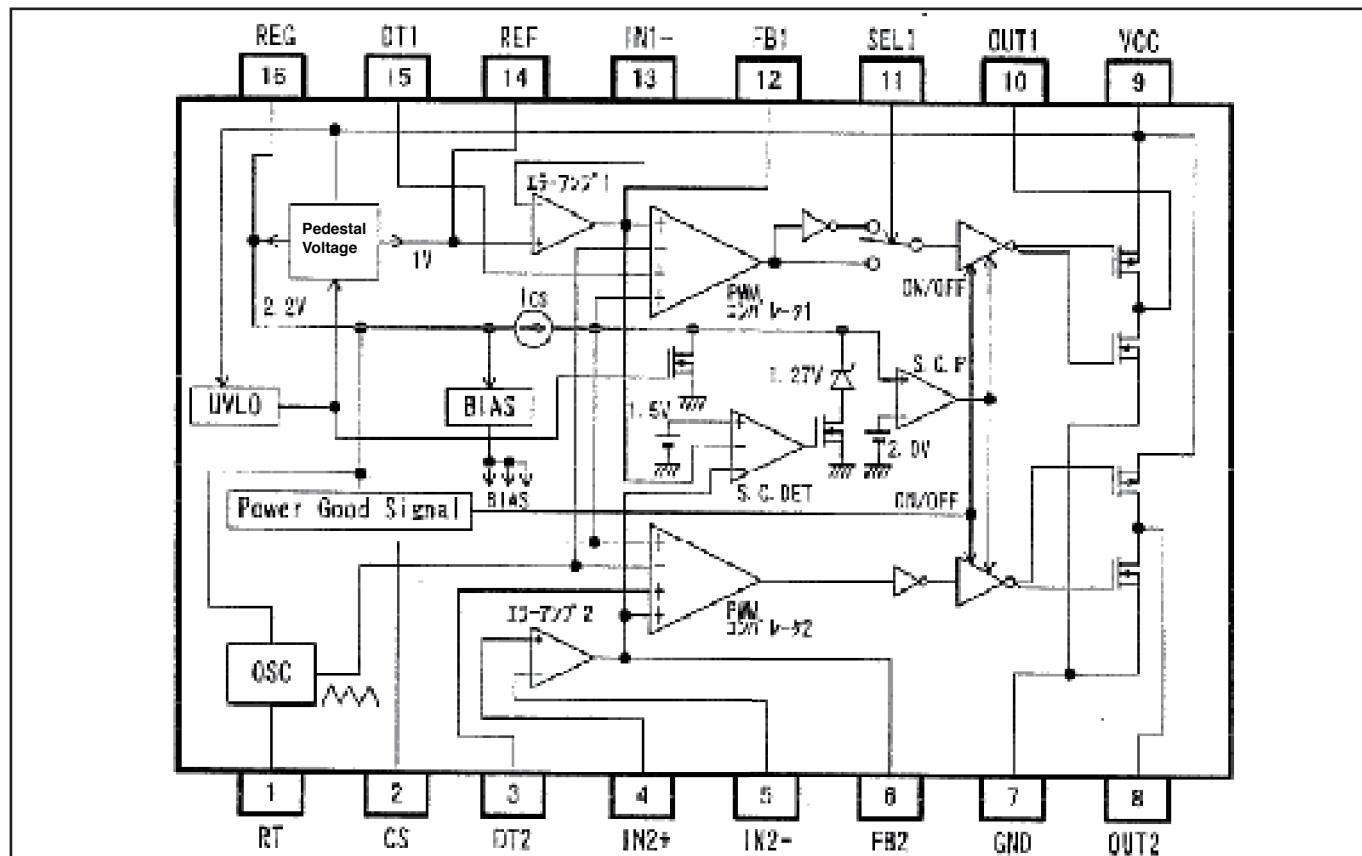
### ● FA7701<DDC Control, IC7841, IC5601>



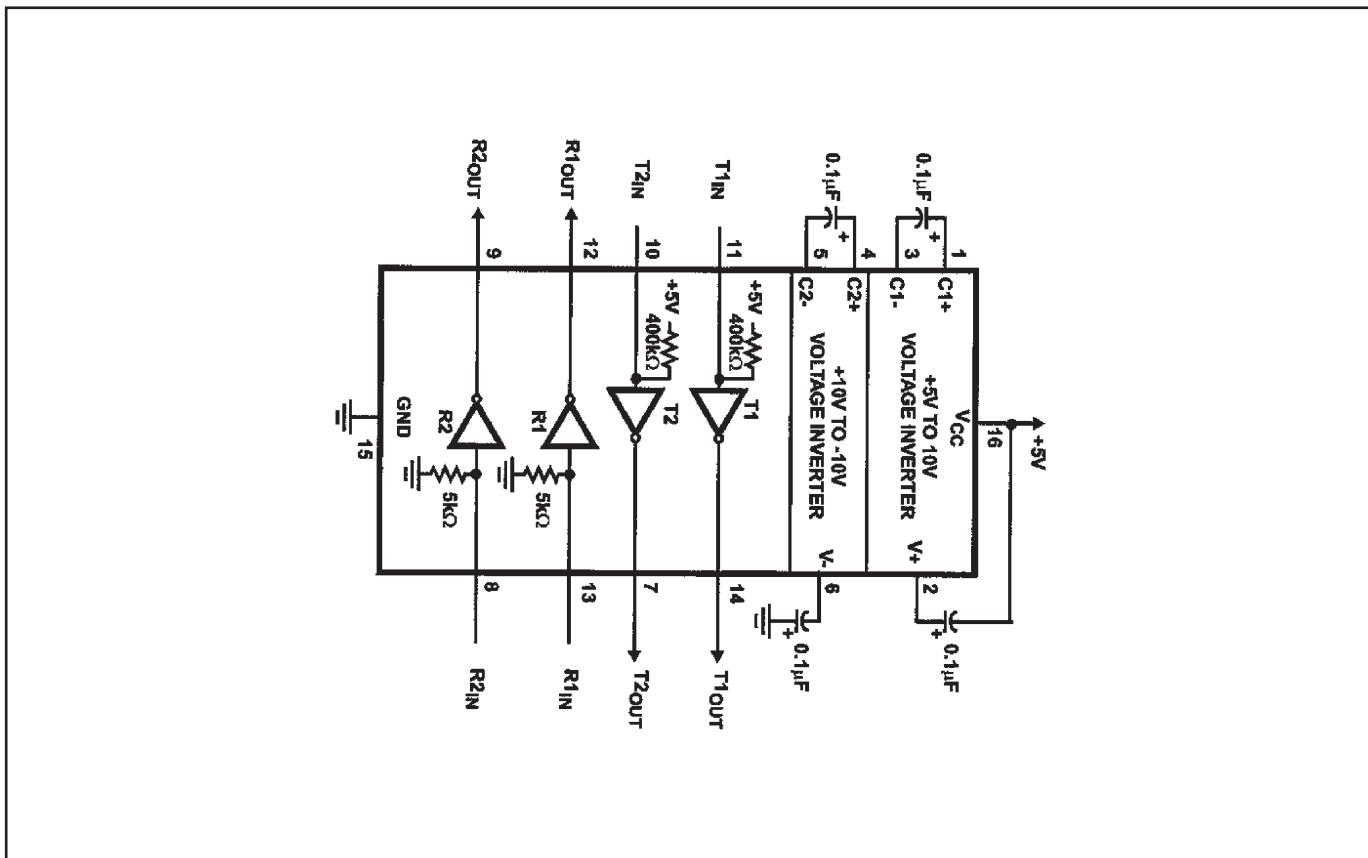
## ● FA5550 &lt;P.F. Control, IC621&gt;



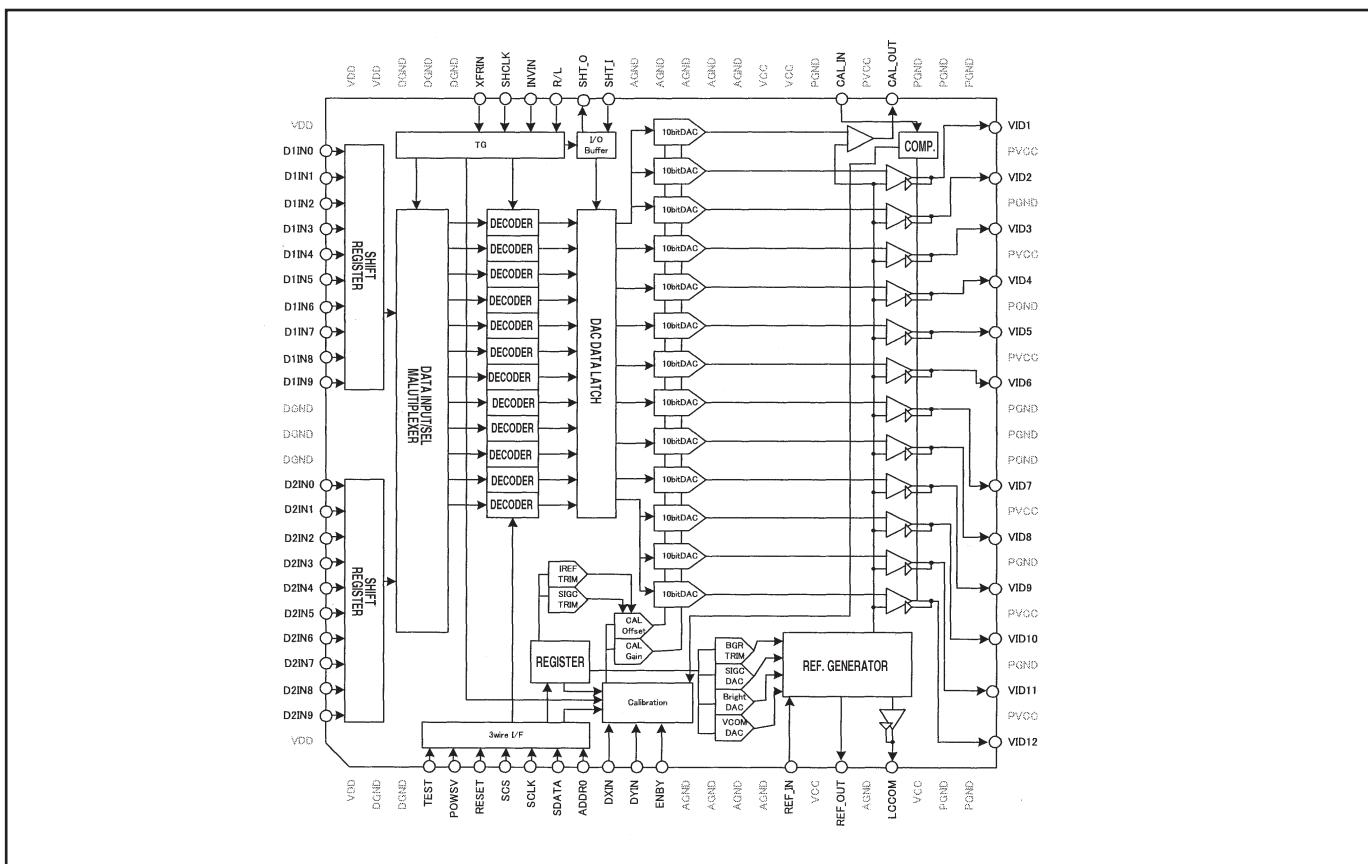
## ● FA7703 &lt;DC-DC Converter, IC7811&gt;



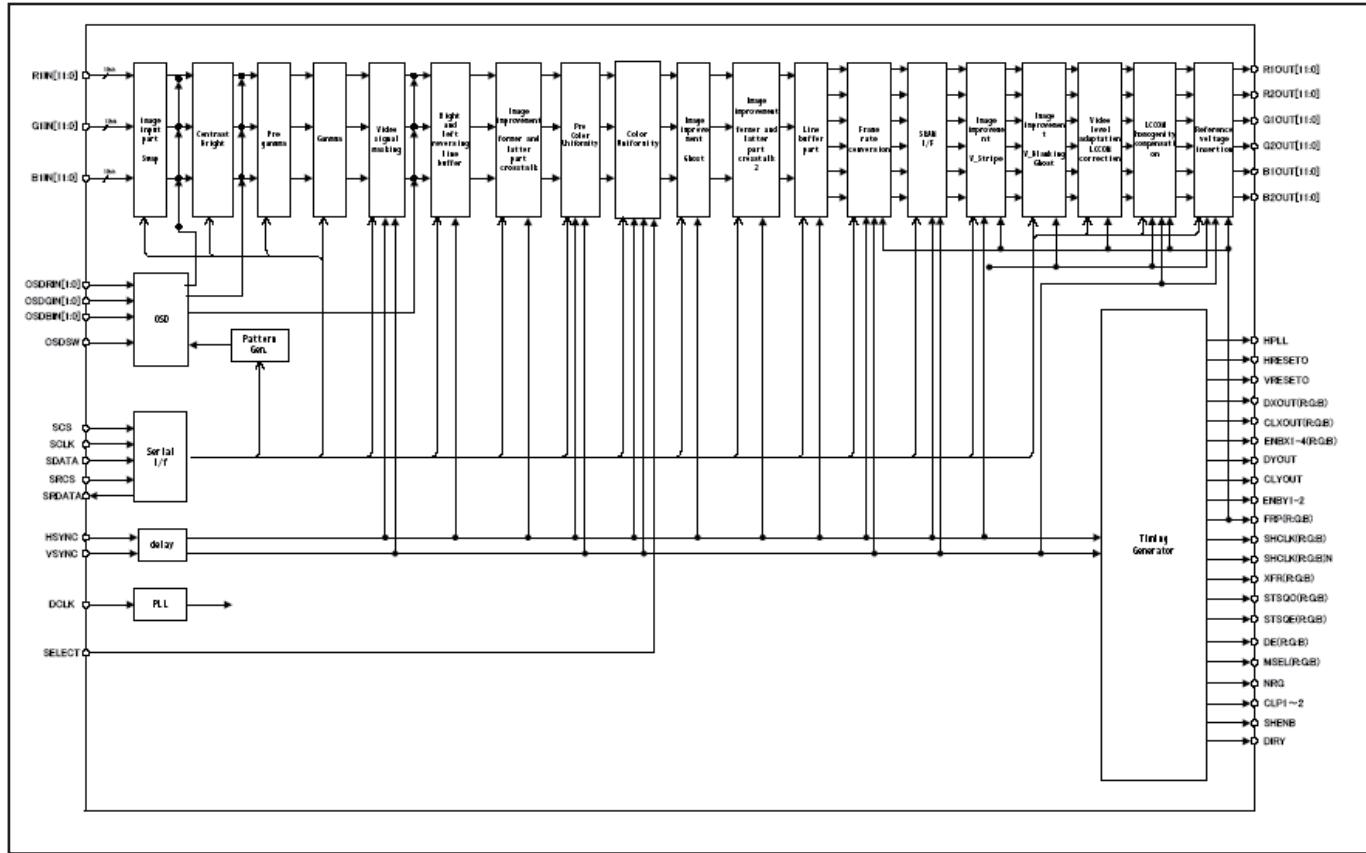
## ● HIN202EIB &lt;RS-232C Driver, IC3801&gt;



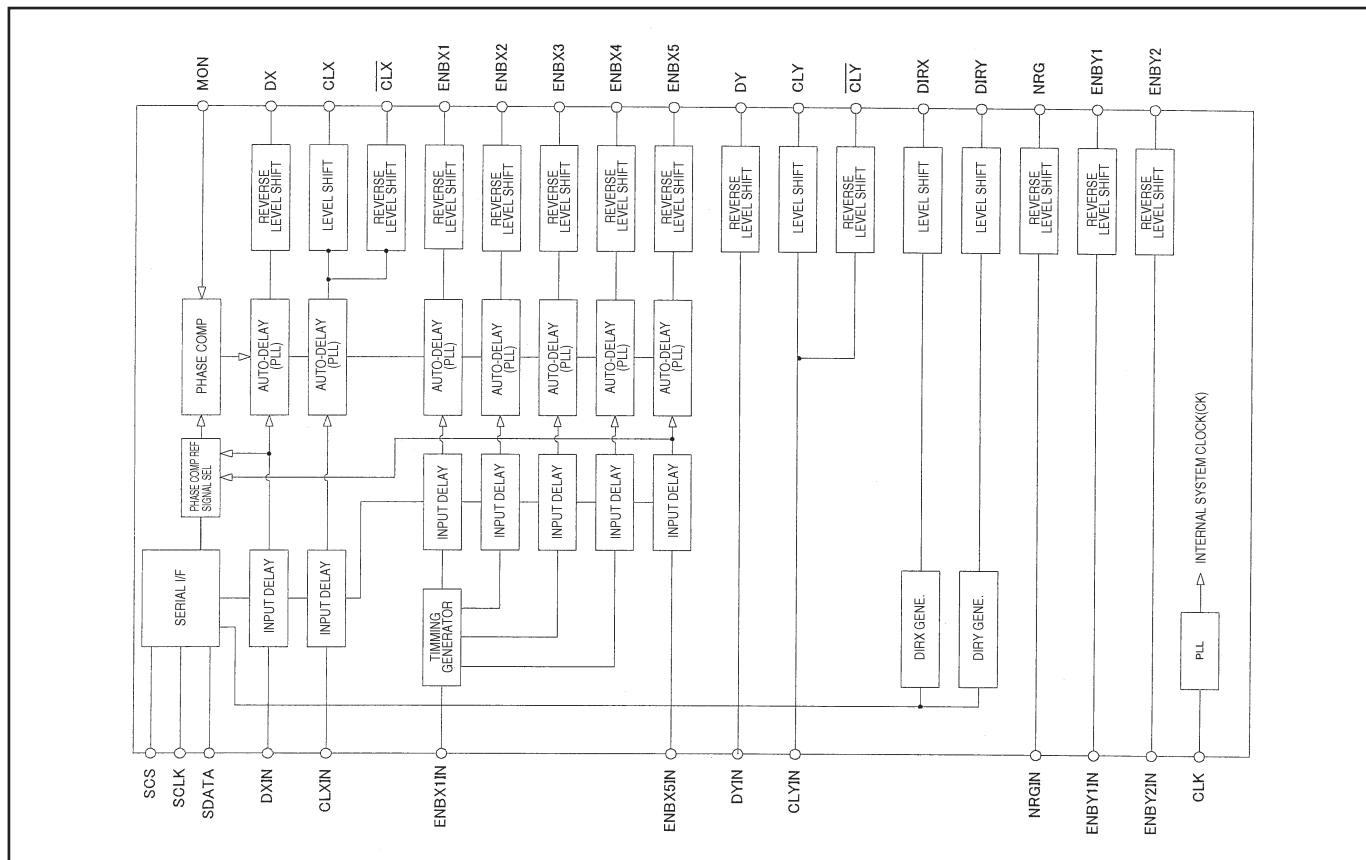
## ● L3E06150 &lt;D/A, S/H-LCD Driver, IC501, IC531, IC561&gt;



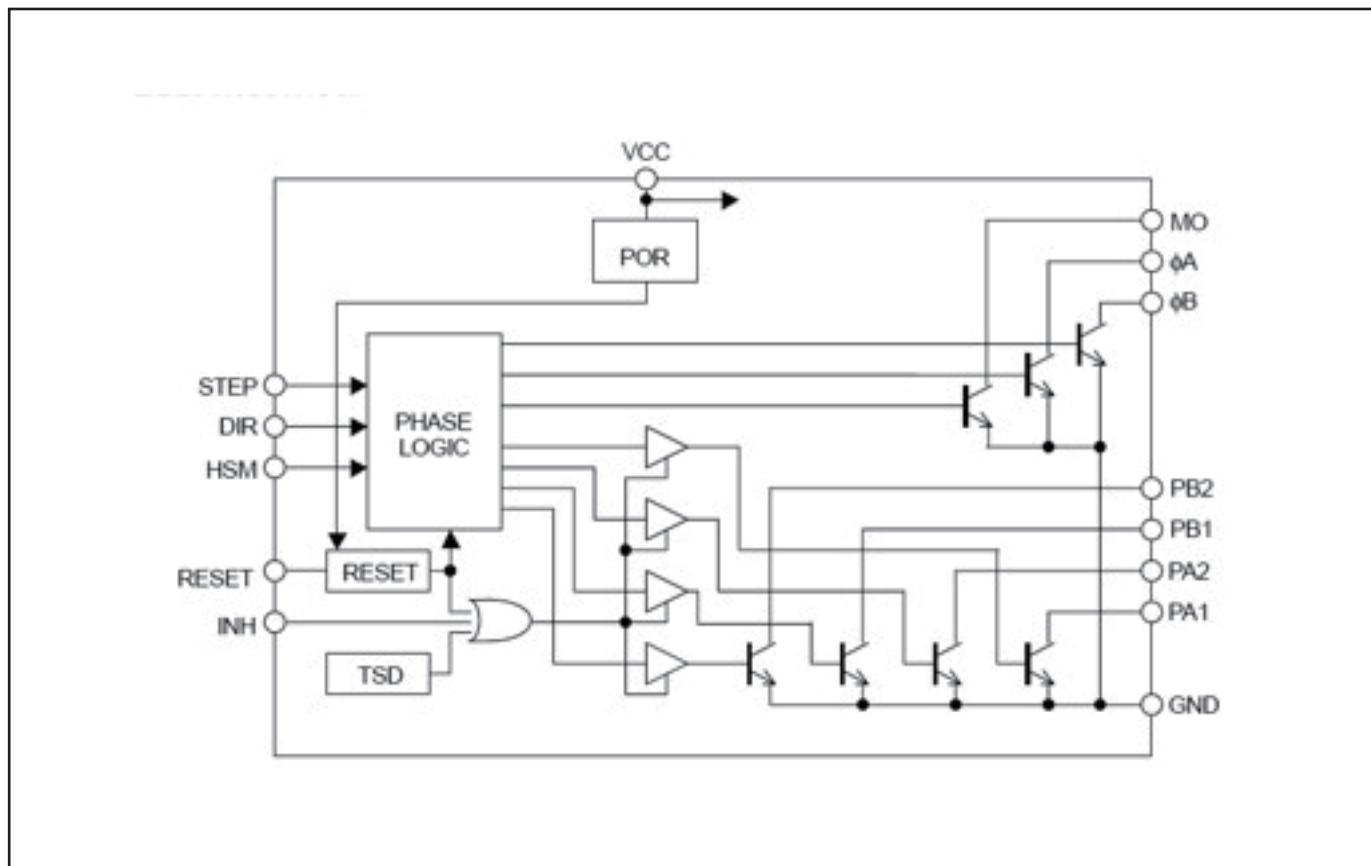
## ● L3E07111 &lt;LCD Driver &amp; Gamma Correction, IC401&gt;



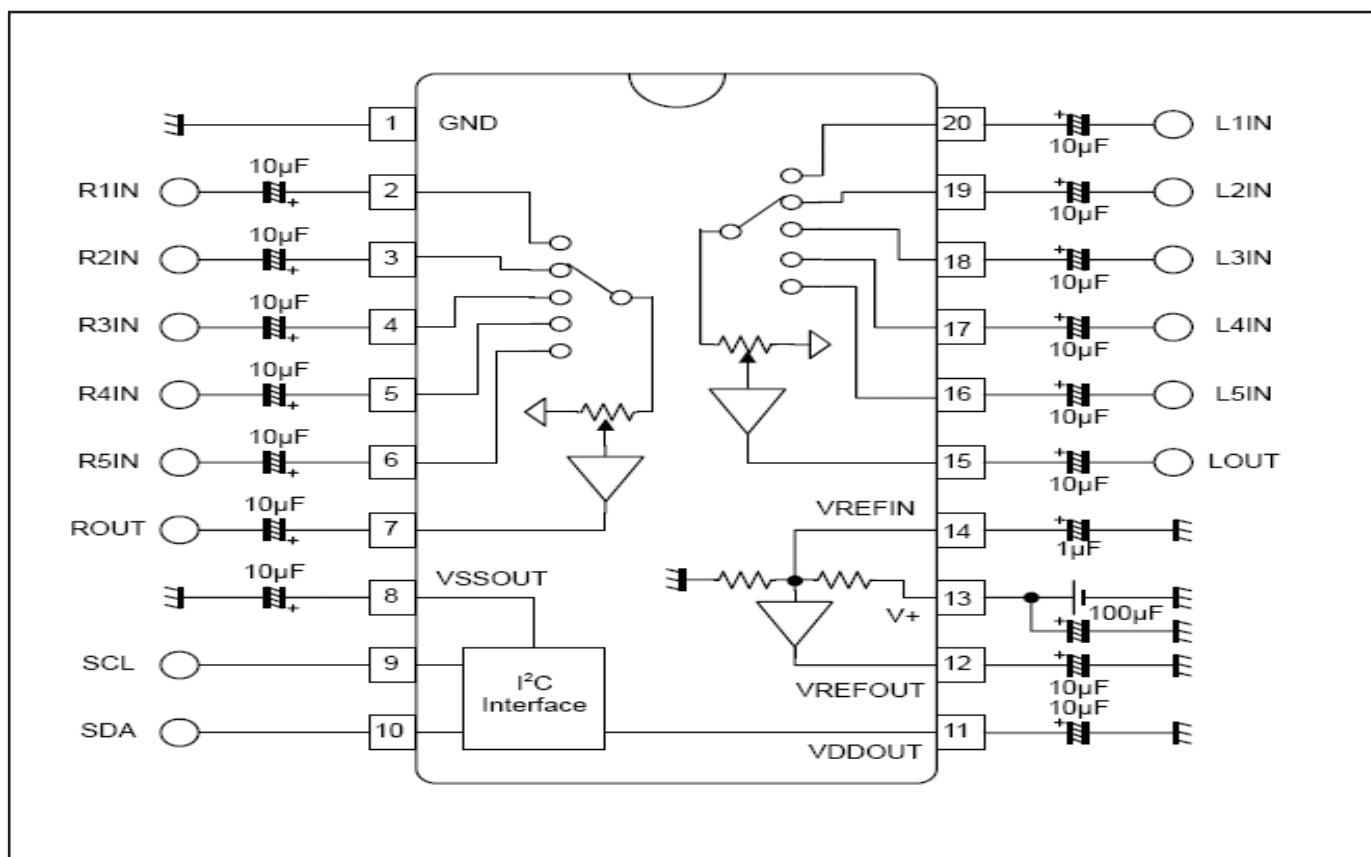
## ● L3E01060 &lt;Level Shift, IC2501, IC2531, IC2561&gt;



## ● NJM2671 &lt;Motor Driver , IC5541 &gt;

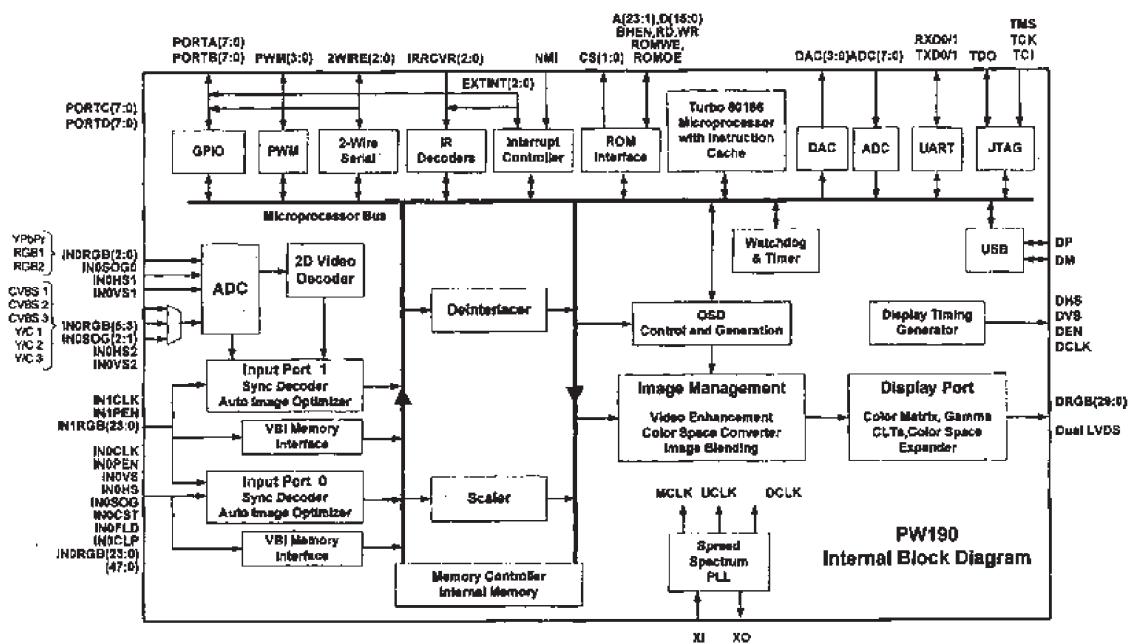


## ● NJW1156 &lt;Audio Control, IC5001&gt;

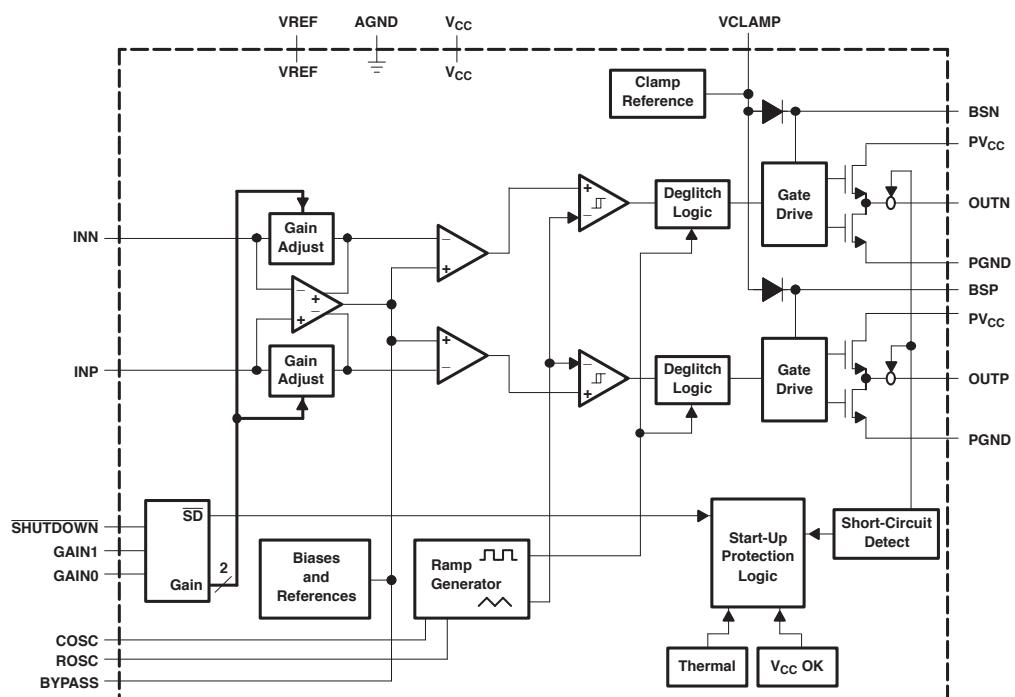


## IC Block Diagrams

### ● PW190 <Scaler, IC301>



### ● IC001 <AMP TPA3123>

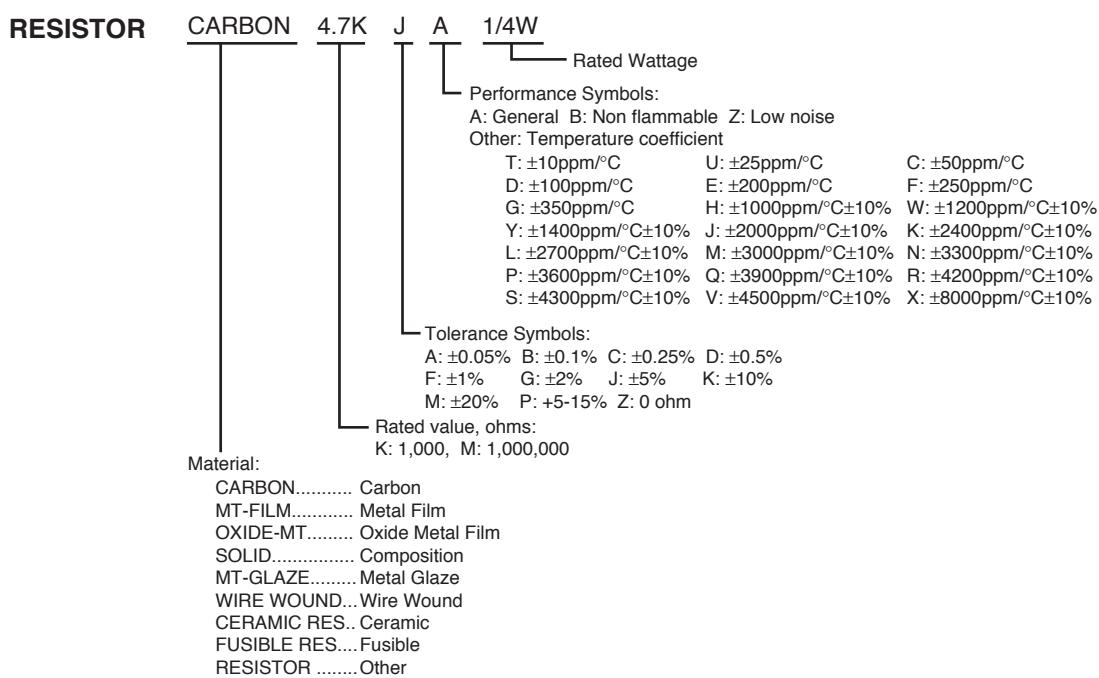
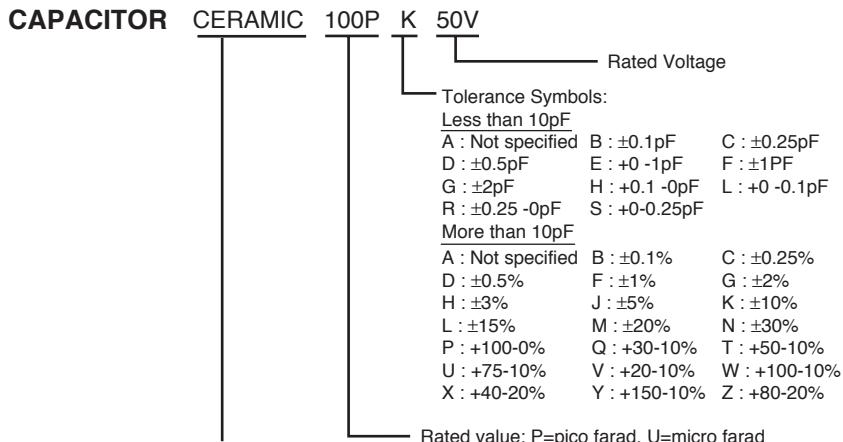


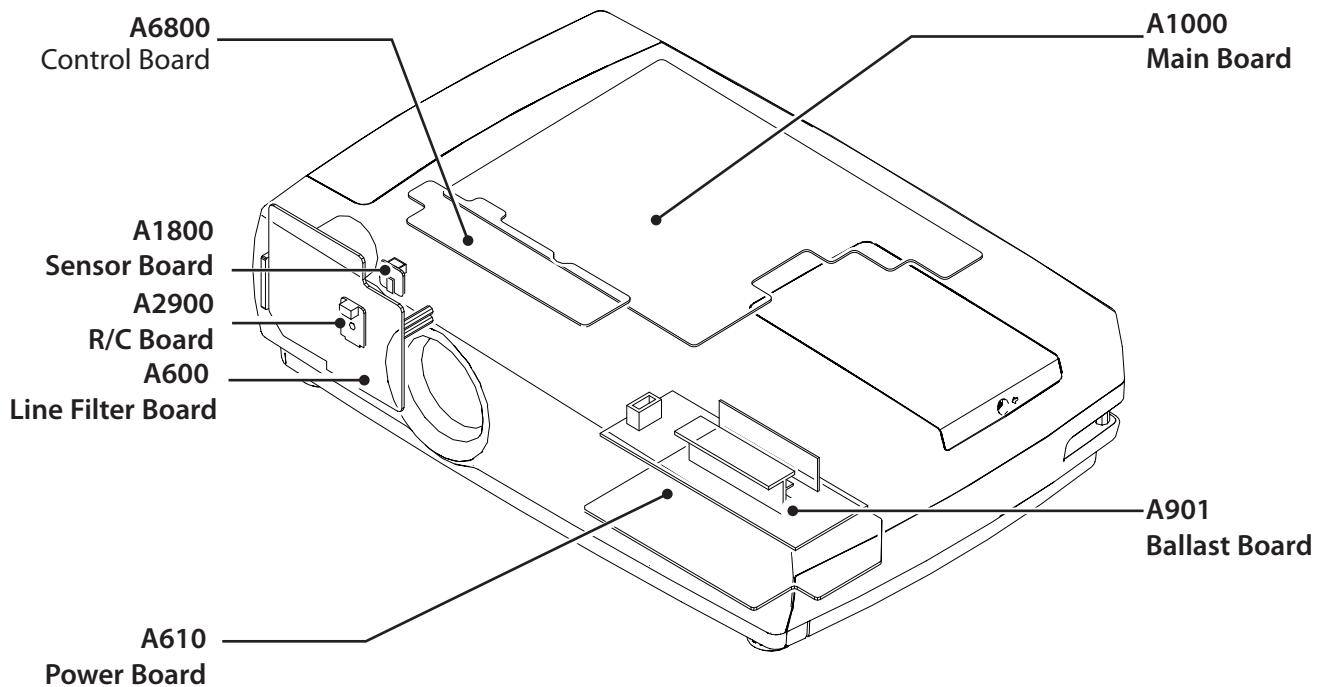
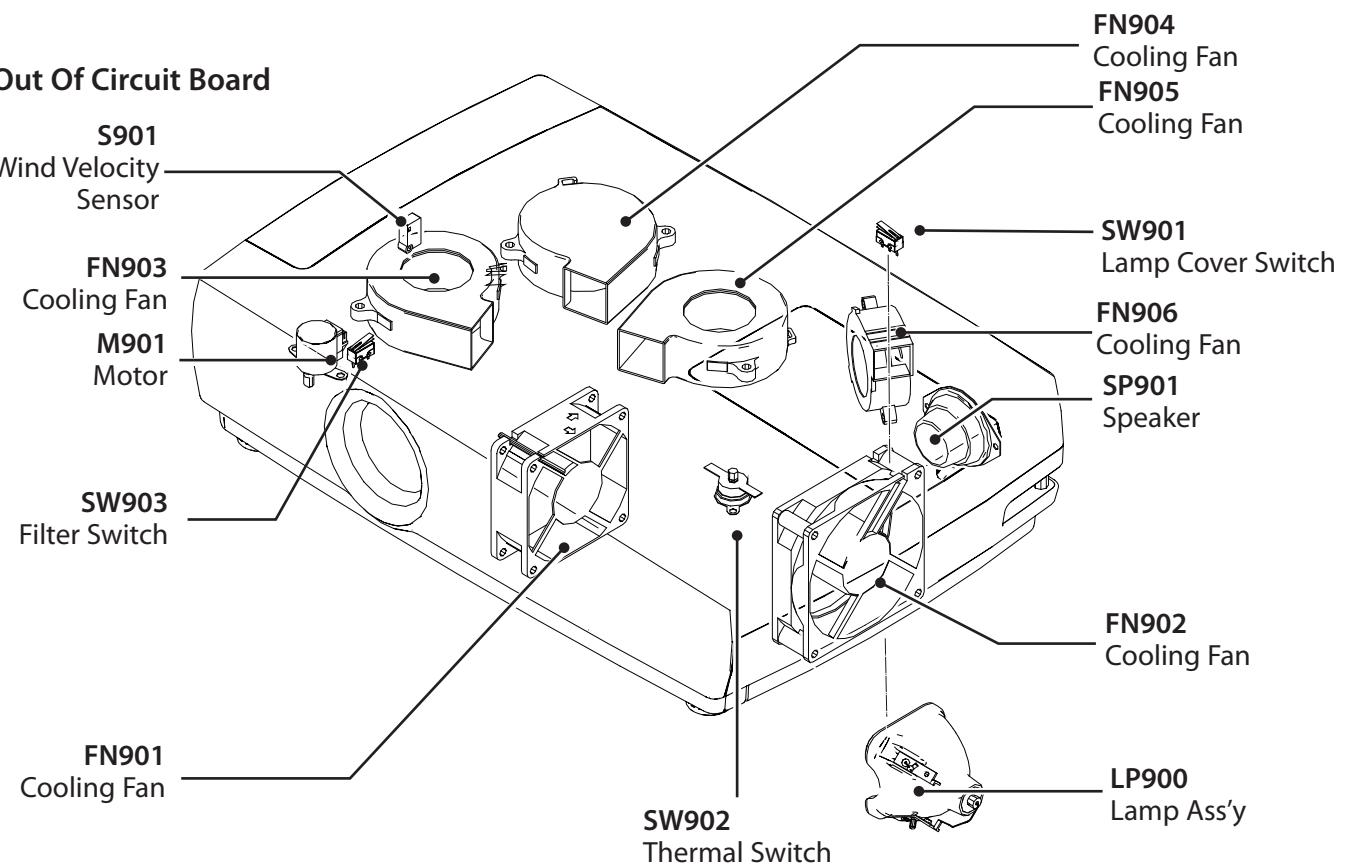
# Electrical Parts List

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:



**Electrical Parts List****Electrical Parts Location****● Assembled Boards****● Out Of Circuit Board**

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

<b>Key No. Part No.</b>	<b>Description</b>	<b>Key No. Part No.</b>	<b>Description</b>
<b>ASSEMBLED BOARD</b>			
<b>FOR KK7-XC5000</b>			
△A1000 655 002 4701	ASSY,PWB,MAIN KK7AC	Q1011 406 021 7804	TR 2SC4617
△A2900 655 002 4695	ASSY,PWB,R/C KK7AC	Q1062 406 021 7804	TR 2SC4617
△A6800 655 002 4688	ASSY,PWB,CONTROL KK7AC	Q2011 406 021 7804	TR 2SC4617
△A1800 655 002 4671	ASSY,PWB,SENSOR KK7AC	Q2021 406 021 7804	TR 2SC4617
△A610 655 002 4657	ASSY,PWB,POWER KK7AC	Q2031 406 021 7804	TR 2SC4617
△A600 655 002 4640	ASSY,PWB,LINE FILTER KK7AC	Q3051 406 021 7804	TR 2SC4617
<b>FOR KL7-XC5500</b>			
△A1000 655 002 4701	ASSY,PWB,MAIN KL7AC	Q3582 305 217 6917	TR TPC6107 TE85L
△A2900 655 002 4695	ASSY,PWB,R/C KK7AC	Q3583 406 021 7804	TR 2SC4617
△A6800 655 002 4688	ASSY,PWB,CONTROL KK7AC	Q3601 406 021 7804	TR 2SC4617
△A1800 655 002 4671	ASSY,PWB,SENSOR KK7AC	Q3682 305 217 6917	TR TPC6107 TE85L
△A610 655 002 4657	ASSY,PWB,POWER KK7AC	Q3683 406 021 7804	TR 2SC4617
△A600 655 002 4640	ASSY,PWB,LINE FILTER KK7AC	Q3801 305 191 5814	TR 3LN01C-TB-E
<b>OUT OF CIRCUIT BOARD</b>			
L601 945 033 2228	CORE,FERRITE	Q5031 406 021 7804	TR 2SC4617
L602 945 033 2228	CORE,FERRITE	Q5032 406 021 7804	TR 2SC4617
L6BC1 945 003 3835	CORE,FERRITE	Q5034 406 021 7804	TR 2SC4617
△LP900 610 339 8600	COM,LAMP-KL7AC	Q5036 406 021 7804	TR 2SC4617
△A901 645 092 6563	UNIT,BALLAST	Q5061 406 021 7804	TR 2SC4617
A901A 610 340 3472	CABLE,BALLAST KL7AC	Q5062 406 021 7804	TR 2SC4617
△FN901 645 097 4090	MOTOR,FAN DC	Q5063 406 021 7804	TR 2SC4617
△FN902 645 097 4106	MOTOR,FAN DC	Q5064 406 021 7804	TR 2SC4617
△FN903 645 097 4113	MOTOR,FAN DC	Q5301 305 217 7815	TR HN1B04FE-Y TE85L
△FN904 645 097 4113	MOTOR,FAN DC	Q5302 305 217 7815	TR HN1B04FE-Y TE85L
△FN905 645 097 4113	MOTOR,FAN DC	Q5306 406 021 7804	TR 2SC4617
△FN906 645 097 4083	MOTOR,BLW DC 1.92W	Q5331 305 217 7815	TR HN1B04FE-Y TE85L
△M901 645 093 2571	MOTOR,DC 12V	Q5332 305 217 7815	TR HN1B04FE-Y TE85L
△S901 645 093 2533	UNIT,WIND VELOCITY SENSOR	Q5336 305 134 5928	TR 2SA1037AK-T146-R
△SP901 652 002 6445	SPEAKER,8	305 147 2218	TR 2SA1037AK-S-T146
△SW901 645 097 3925	SWITCH,MICRO 1P-2T	305 173 9618	TR 2SA1235A1E
△SW902 945 068 3313	SWITCH,THERMAL(80DEG)	305 173 9717	TR 2SA1235A1F
△SW903 645 097 3925	SWITCH,MICRO 1P-2T	405 220 3115	TR ISA1235AC1E
WK8D&8T 652 002 6858	CORD,ID-CONNECTOR	405 220 3016	TR ISA1235AC1F
Z8G&18X 652 002 1426	CORD,ID-CONNECTOR	Q5601 305 217 8515	TR RSQ025P03-TR
ZPE1 610 332 6818	GROUNDING STRAPS	Q5611 305 217 6917	TR TPC6107 TE85L
652 002 1976	GROUNDING STRAPS	Q5612 305 217 6917	TR TPC6107 TE85L
ZPE2 610 332 6818	GROUNDING STRAPS	Q591 406 021 7804	TR 2SC4617
652 002 1976	GROUNDING STRAPS	Q592 406 021 7804	TR 2SC4617
<b>FOR KK7-XC5000</b>			
<b>655 002 4701 ASSY,PWB,MAIN KK7AC</b>			
<b>FOR KL7-XC5500</b>			
<b>655 002 5104 ASSY,PWB,MAIN KL7AC</b>			
<b>TRANSISTOR</b>			
Q013 406 021 7804	TR 2SC4617	IC001 409 691 0413	IC TPA3123D2PWPR
Q014 406 021 7804	TR 2SC4617	IC1031 309 039 7817	IC NJM4558M-TE2
Q036 406 021 7804	TR 2SC4617	IC1041 310 517 6809	IC TC74LVX4053FT
Q037 406 021 7804	TR 2SC4617	IC1051 309 462 0327	IC 24LC21AT/SN
Q1007 406 021 7804	TR 2SC4617	IC1303 310 479 4004	IC TC7WBD125AFK
		IC1371 410 656 8600	IC 24AA64T-I/MS
		IC301 309 670 8419	IC PW190-10L
		IC3801 309 652 0714	IC HIN202EIBNZ-T
		IC3851 309 644 3310	IC MXA2500EL
		IC4891 309 395 5915	IC TC7SH00FU-(TE85L)
		IC5001 409 683 5716	IC NJW1156AV
		IC5303 309 439 8919	IC TC7WH125FU
		IC5541 409 684 3919	IC NJM2671E2(TE1)
		IC5542 410 666 0700	IC LM29150RS-12

**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>		
IC5601	309 531 6229	IC FA7701V-TE1				303 409 3426	CERAMIC	0.1U K	16V
IC5602	410 666 0809	IC LM39101D-5.0V			C1050	303 433 1112	CERAMIC	1U K	10V
IC5603	410 666 0809	IC LM39101D-5.0V			C1051	303 453 8917	CERAMIC	0.1U K	16V
IC5621	410 651 0104	IC R1131D101B-TR-F				303 453 8610	CERAMIC	0.1U K	16V
IC5651	309 675 1316	IC FA7703V-H1				303 409 3426	CERAMIC	0.1U K	16V
IC5681	409 694 5316	IC TJ3965D-2.5V-8L			C1052	303 433 1112	CERAMIC	1U K	10V
IC5701	309 461 7822	IC PQ20WZ11			C1053	303 433 1112	CERAMIC	1U K	10V
IC7811	309 675 1316	IC FA7703V-H1			C1092	303 358 3215	CERAMIC	10U K	6.3V
IC7841	309 531 6229	IC FA7701V-TE1				303 368 7319	CERAMIC	10U K	6.3V
IC8001	410 641 3801	IC SII17169CTU			C1301	303 453 8917	CERAMIC	0.1U K	16V
IC801	410 660 1802	IC S29GL032A90TFIR30KK7AC				303 453 8610	CERAMIC	0.1U K	16V
IC8101	309 675 3815	IC 24LCS22AT-I/SN				303 409 3426	CERAMIC	0.1U K	16V
IC8121	310 479 4004	IC TC7WBD125AFK			C1331	403 455 5713	CERAMIC	15P J	50V
IC8131	310 517 6809	IC TC74LVX4053FT				403 455 5218	CERAMIC	15P J	50V
IC841	310 616 3402	IC PST413A300NR				303 305 8515	CERAMIC	15P J	50V
	410 647 7902	IC MCP103T-300			C1332	403 455 5713	CERAMIC	15P J	50V
IC9882	310 337 0605	IC HD74LVC14T				403 455 5218	CERAMIC	15P J	50V
IC9883	309 487 5727	IC TC7SZ125FU				303 305 8515	CERAMIC	15P J	50V
<b>CAPACITOR</b>									
C001	303 396 5516	ELECT	470U M	16V		303 453 8917	CERAMIC	0.1U K	16V
C002	303 378 1611	ELECT	470U M	16V		303 453 8610	CERAMIC	0.1U K	16V
C003	303 336 3510	CERAMIC	0.47U K	16V	C1371	303 453 8917	CERAMIC	0.1U K	16V
	304 110 9800	CERAMIC	0.47U K	16V		303 453 8610	CERAMIC	0.1U K	16V
C004	303 396 9613	CERAMIC	1U K	25V		303 409 3426	CERAMIC	0.1U K	16V
C005	303 396 9613	CERAMIC	1U K	25V	C1833	303 394 9318	ELECT	220U M	6.3V
C006	303 396 9613	CERAMIC	1U K	25V		303 387 5112	ELECT	220U M	6.3V
C007	303 336 3510	CERAMIC	0.47U K	16V	C1834	403 467 0911	CERAMIC	0.1U K	25V
	304 110 9800	CERAMIC	0.47U K	16V		303 454 0514	CERAMIC	0.1U Z	25V
C008	303 396 9613	CERAMIC	1U K	25V	C1835	403 467 0911	CERAMIC	0.1U K	25V
C010	303 281 2415	CERAMIC	0.22U K	16V		303 454 0514	CERAMIC	0.1U Z	25V
	304 103 6601	CERAMIC	0.22U K	16V	C1836	403 467 0911	CERAMIC	0.1U K	25V
C011	403 455 1616	CERAMIC	10U K	16V		303 454 0514	CERAMIC	0.1U Z	25V
C012	303 336 3510	CERAMIC	0.47U K	16V	C1871	403 455 1012	CERAMIC	1U K	10V
	304 110 9800	CERAMIC	0.47U K	16V		303 433 1112	CERAMIC	1U K	10V
C013	303 396 9613	CERAMIC	1U K	25V	C2001	303 453 8917	CERAMIC	0.1U K	16V
C014	303 396 9613	CERAMIC	1U K	25V		303 453 8610	CERAMIC	0.1U K	16V
C015	303 281 2415	CERAMIC	0.22U K	16V		303 409 3426	CERAMIC	0.1U K	16V
	304 103 6601	CERAMIC	0.22U K	16V	C2002	303 453 8917	CERAMIC	0.1U K	16V
C039	303 454 0613	CERAMIC	0.01U K	50V		303 453 8610	CERAMIC	0.1U K	16V
C041	303 454 0613	CERAMIC	0.01U K	50V	C2003	303 230 3616	TA-SOLID	47U M	6.3V
C1001	303 453 8917	CERAMIC	0.1U K	16V		303 384 4712	TA-SOLID	47U M	6.3V
	303 453 8610	CERAMIC	0.1U K	16V	C2004	303 358 3215	CERAMIC	10U K	6.3V
	303 409 3426	CERAMIC	0.1U K	16V		303 368 7319	CERAMIC	10U K	6.3V
C1002	403 467 0911	CERAMIC	0.1U K	25V	C2011	303 453 8917	CERAMIC	0.1U K	16V
	303 454 0514	CERAMIC	0.1U Z	25V		303 453 8610	CERAMIC	0.1U K	16V
C1003	303 381 5316	ELECT	100U M	16V	C2012	303 409 3426	CERAMIC	0.1U K	16V
C1005	303 396 9613	CERAMIC	1U K	25V		303 453 8917	CERAMIC	0.1U K	16V
C1008	303 453 8917	CERAMIC	0.1U K	16V		303 453 8610	CERAMIC	0.1U K	16V
	303 453 8610	CERAMIC	0.1U K	16V	C2021	303 358 3215	CERAMIC	10U K	6.3V
	303 409 3426	CERAMIC	0.1U K	16V		303 368 7319	CERAMIC	10U K	6.3V
C1009	303 453 8917	CERAMIC	0.1U K	16V	C2022	303 453 8917	CERAMIC	0.1U K	16V
	303 453 8610	CERAMIC	0.1U K	16V		303 453 8610	CERAMIC	0.1U K	16V
	303 409 3426	CERAMIC	0.1U K	16V	C2021	303 409 3426	CERAMIC	0.1U K	16V
C1010	303 453 8917	CERAMIC	0.1U K	16V		303 453 8917	CERAMIC	0.1U K	16V
	303 453 8610	CERAMIC	0.1U K	16V		303 453 8610	CERAMIC	0.1U K	16V
	303 409 3426	CERAMIC	0.1U K	16V	C2504	303 453 8917	CERAMIC	0.1U K	16V
C1011	303 454 0415	CERAMIC	0.068U K	16V		303 453 8610	CERAMIC	0.1U K	16V
	303 442 0519	CERAMIC	0.068U K	16V		303 409 3426	CERAMIC	0.1U K	16V
C1014	303 454 0415	CERAMIC	0.068U K	16V	C2505	303 376 3112	ELECT	100U M	25V
	303 442 0519	CERAMIC	0.068U K	16V	C2506	303 396 9613	CERAMIC	1U K	25V
C1031	303 433 1112	CERAMIC	1U K	10V	C2507	303 396 9613	CERAMIC	1U K	25V
C1032	303 433 1112	CERAMIC	1U K	10V	C2509	303 453 8917	CERAMIC	0.1U K	16V
C1033	303 433 1112	CERAMIC	1U K	10V		303 453 8610	CERAMIC	0.1U K	16V
C1034	303 194 5312	ELECT	33U M	16V		303 409 3426	CERAMIC	0.1U K	16V
C1042	303 453 8917	CERAMIC	0.1U K	16V	C2511	303 453 8917	CERAMIC	0.1U K	16V
	303 453 8610	CERAMIC	0.1U K	16V		303 453 8610	CERAMIC	0.1U K	16V
	303 409 3426	CERAMIC	0.1U K	16V		303 409 3426	CERAMIC	0.1U K	16V

**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>				
C2512	303 453 8917	CERAMIC	0.1U	K	16V	C306	303 433 1112	CERAMIC	1U	K	10V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 8917	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
C2513	303 396 9613	CERAMIC	1U	K	25V		303 409 3426	CERAMIC	0.1U	K	16V
C2514	303 358 3215	CERAMIC	10U	K	6.3V	C3061	303 453 6319	CERAMIC	100P	J	50V
	303 370 0018	CERAMIC	10U	K	6.3V		303 454 0910	CERAMIC	100P	J	50V
	303 368 7319	CERAMIC	10U	K	6.3V		303 294 6110	CERAMIC	100P	J	50V
C2534	303 453 8917	CERAMIC	0.1U	K	16V	C307	303 453 8719	CERAMIC	470P	K	50V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 9211	CERAMIC	470P	K	50V
	303 409 3426	CERAMIC	0.1U	K	16V		303 282 5118	CERAMIC	470P	K	50V
C2535	303 376 3112	ELECT	100U	M	25V	C308	303 453 8917	CERAMIC	0.1U	K	16V
C2536	303 396 9613	CERAMIC	1U	K	25V		303 453 8610	CERAMIC	0.1U	K	16V
C2537	303 396 9613	CERAMIC	1U	K	25V		303 409 3426	CERAMIC	0.1U	K	16V
C2539	303 453 8917	CERAMIC	0.1U	K	16V	C309	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
C2541	303 453 8917	CERAMIC	0.1U	K	16V	C310	303 230 3616	TA-SOLID	47U	M	6.3V
	303 453 8610	CERAMIC	0.1U	K	16V		303 384 4712	TA-SOLID	47U	M	6.3V
	303 409 3426	CERAMIC	0.1U	K	16V	C311	303 453 8719	CERAMIC	470P	K	50V
C2542	303 453 8917	CERAMIC	0.1U	K	16V		303 453 9211	CERAMIC	470P	K	50V
	303 453 8610	CERAMIC	0.1U	K	16V		303 282 5118	CERAMIC	470P	K	50V
	303 409 3426	CERAMIC	0.1U	K	16V	C312	303 453 8917	CERAMIC	0.1U	K	16V
C2543	303 396 9613	CERAMIC	1U	K	25V		303 453 8610	CERAMIC	0.1U	K	16V
C2544	303 358 3215	CERAMIC	10U	K	6.3V		303 409 3426	CERAMIC	0.1U	K	16V
	303 370 0018	CERAMIC	10U	K	6.3V	C313	303 453 8917	CERAMIC	0.1U	K	16V
	303 368 7319	CERAMIC	10U	K	6.3V		303 453 8610	CERAMIC	0.1U	K	16V
C2564	303 453 8917	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V	C314	303 453 8719	CERAMIC	470P	K	50V
	303 409 3426	CERAMIC	0.1U	K	16V		303 453 9211	CERAMIC	470P	K	50V
C2565	303 376 3112	ELECT	100U	M	25V		303 282 5118	CERAMIC	470P	K	50V
C2566	303 396 9613	CERAMIC	1U	K	25V	C315	303 230 3616	TA-SOLID	47U	M	6.3V
C2567	303 396 9613	CERAMIC	1U	K	25V		303 384 4712	TA-SOLID	47U	M	6.3V
C2569	303 453 8917	CERAMIC	0.1U	K	16V	C316	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
C2571	303 453 8917	CERAMIC	0.1U	K	16V	C317	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
C2572	303 453 8917	CERAMIC	0.1U	K	16V	C318	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
C2573	303 396 9613	CERAMIC	1U	K	25V	C319	303 453 8719	CERAMIC	470P	K	50V
C2574	303 358 3215	CERAMIC	10U	K	6.3V		303 453 9211	CERAMIC	470P	K	50V
	303 370 0018	CERAMIC	10U	K	6.3V		303 282 5118	CERAMIC	470P	K	50V
	303 368 7319	CERAMIC	10U	K	6.3V	C320	303 230 3616	TA-SOLID	47U	M	6.3V
C2891	303 453 8917	CERAMIC	0.1U	K	16V		303 384 4712	TA-SOLID	47U	M	6.3V
	303 453 8610	CERAMIC	0.1U	K	16V	C321	303 453 8917	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
C2892	303 453 7217	CERAMIC	47P	J	50V		303 409 3426	CERAMIC	0.1U	K	16V
	303 454 1610	CERAMIC	47P	J	50V	C322	303 453 8917	CERAMIC	0.1U	K	16V
C301	303 453 8917	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V	C323	303 453 8719	CERAMIC	470P	K	50V
C302	303 230 3616	TA-SOLID	47U	M	6.3V		303 453 9211	CERAMIC	470P	K	50V
	303 384 4712	TA-SOLID	47U	M	6.3V		303 282 5118	CERAMIC	470P	K	50V
C303	303 453 8719	CERAMIC	470P	K	50V	C324	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 9211	CERAMIC	470P	K	50V		303 453 8610	CERAMIC	0.1U	K	16V
	303 282 5118	CERAMIC	470P	K	50V		303 409 3426	CERAMIC	0.1U	K	16V
C304	303 453 8917	CERAMIC	0.1U	K	16V	C326	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
C3051	303 453 6319	CERAMIC	100P	J	50V	C327	303 453 8917	CERAMIC	0.1U	K	16V
	303 454 0910	CERAMIC	100P	J	50V		303 453 8610	CERAMIC	0.1U	K	16V
	303 294 6110	CERAMIC	100P	J	50V		303 409 3426	CERAMIC	0.1U	K	16V
C3052	303 372 7510	CERAMIC	2.2U	K	6.3V	C328	303 453 8917	CERAMIC	0.1U	K	16V
	303 370 0216	CERAMIC	2.2U	K	6.3V		303 453 8610	CERAMIC	0.1U	K	16V
C3053	403 455 1012	CERAMIC	1U	K	10V		303 409 3426	CERAMIC	0.1U	K	16V

**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>		
C329	303 453 8719	CERAMIC	470P	K	50V		303 409 3426	CERAMIC	0.1U K 16V
	303 453 9211	CERAMIC	470P	K	50V	C3531	303 396 9613	CERAMIC	1U K 25V
	303 282 5118	CERAMIC	470P	K	50V	C3532	303 396 9613	CERAMIC	1U K 25V
C330	403 457 2512	CERAMIC	0.47U	K	10V	C3533	303 381 5316	ELECT	100U M 16V
	303 376 6311	CERAMIC	0.47U	K	10V	C3534	303 396 9613	CERAMIC	1U K 25V
C331	303 453 8917	CERAMIC	0.1U	K	16V	C3535	303 398 4418	ELECT	10U M 25V
	303 453 8610	CERAMIC	0.1U	K	16V	C3536	303 396 9613	CERAMIC	1U K 25V
	303 409 3426	CERAMIC	0.1U	K	16V	C354	303 453 8917	CERAMIC	0.1U K 16V
C332	303 453 8719	CERAMIC	470P	K	50V		303 453 8610	CERAMIC	0.1U K 16V
	303 453 9211	CERAMIC	470P	K	50V		303 409 3426	CERAMIC	0.1U K 16V
	303 282 5118	CERAMIC	470P	K	50V	C355	303 453 8917	CERAMIC	0.1U K 16V
C333	303 453 8917	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U K 16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U K 16V
	303 409 3426	CERAMIC	0.1U	K	16V	C3554	303 396 9613	CERAMIC	1U K 25V
C334	303 453 8917	CERAMIC	0.1U	K	16V	C3555	303 398 4418	ELECT	10U M 25V
	303 453 8610	CERAMIC	0.1U	K	16V	C3556	303 396 9613	CERAMIC	1U K 25V
	303 409 3426	CERAMIC	0.1U	K	16V	C356	303 453 8917	CERAMIC	0.1U K 16V
C335	303 453 8917	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U K 16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U K 16V
	303 409 3426	CERAMIC	0.1U	K	16V	C3561	303 396 9613	CERAMIC	1U K 25V
C336	303 453 8719	CERAMIC	470P	K	50V	C3562	303 396 9613	CERAMIC	1U K 25V
	303 453 9211	CERAMIC	470P	K	50V	C3563	303 381 5316	ELECT	100U M 16V
	303 282 5118	CERAMIC	470P	K	50V	C357	303 453 8917	CERAMIC	0.1U K 16V
C337	303 453 8917	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U K 16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U K 16V
	303 409 3426	CERAMIC	0.1U	K	16V	C358	303 453 8917	CERAMIC	0.1U K 16V
C338	303 453 8917	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U K 16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U K 16V
	303 409 3426	CERAMIC	0.1U	K	16V	C3588	403 455 1012	CERAMIC	1U K 10V
C339	303 453 8917	CERAMIC	0.1U	K	16V		303 433 1112	CERAMIC	1U K 10V
	303 453 8610	CERAMIC	0.1U	K	16V	C361	403 455 1012	CERAMIC	1U K 10V
	303 409 3426	CERAMIC	0.1U	K	16V		303 433 1112	CERAMIC	1U K 10V
C341	303 453 8917	CERAMIC	0.1U	K	16V	C362	403 455 1012	CERAMIC	1U K 10V
	303 453 8610	CERAMIC	0.1U	K	16V		303 433 1112	CERAMIC	1U K 10V
	303 409 3426	CERAMIC	0.1U	K	16V	C363	403 455 1012	CERAMIC	1U K 10V
C342	303 453 8917	CERAMIC	0.1U	K	16V		303 433 1112	CERAMIC	1U K 10V
	303 453 8610	CERAMIC	0.1U	K	16V	C364	303 454 0613	CERAMIC	0.01U K 50V
	303 409 3426	CERAMIC	0.1U	K	16V	C365	303 454 0415	CERAMIC	0.068U K 16V
C343	303 453 8917	CERAMIC	0.1U	K	16V		303 442 0519	CERAMIC	0.068U K 16V
	303 453 8610	CERAMIC	0.1U	K	16V	C366	303 453 8917	CERAMIC	0.1U K 16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U K 16V
C344	303 453 8917	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U K 16V
	303 453 8610	CERAMIC	0.1U	K	16V	C367	303 453 8917	CERAMIC	0.1U K 16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U K 16V
C346	303 453 8917	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U K 16V
	303 453 8610	CERAMIC	0.1U	K	16V	C368	303 453 8917	CERAMIC	0.1U K 16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U K 16V
C347	303 453 8917	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U K 16V
	303 453 8610	CERAMIC	0.1U	K	16V	C3688	403 455 1012	CERAMIC	1U K 10V
	303 409 3426	CERAMIC	0.1U	K	16V		303 433 1112	CERAMIC	1U K 10V
C348	303 453 8917	CERAMIC	0.1U	K	16V	C369	303 453 8917	CERAMIC	0.1U K 16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U K 16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U K 16V
C3501	303 396 9613	CERAMIC	1U	K	25V	C370	303 453 8917	CERAMIC	0.1U K 16V
C3502	303 396 9613	CERAMIC	1U	K	25V		303 453 8610	CERAMIC	0.1U K 16V
C3503	303 381 5316	ELECT	100U	M	16V		303 409 3426	CERAMIC	0.1U K 16V
C3504	303 396 9613	CERAMIC	1U	K	25V	C371	303 453 8917	CERAMIC	0.1U K 16V
C3505	303 398 4418	ELECT	10U	M	25V		303 453 8610	CERAMIC	0.1U K 16V
C3506	303 396 9613	CERAMIC	1U	K	25V		303 409 3426	CERAMIC	0.1U K 16V
C351	303 453 8917	CERAMIC	0.1U	K	16V	C372	403 457 2512	CERAMIC	0.47U K 10V
	303 453 8610	CERAMIC	0.1U	K	16V		303 376 6311	CERAMIC	0.47U K 10V
	303 409 3426	CERAMIC	0.1U	K	16V	C373	403 457 2512	CERAMIC	0.47U K 10V
C352	303 453 8917	CERAMIC	0.1U	K	16V		303 376 6311	CERAMIC	0.47U K 10V
	303 453 8610	CERAMIC	0.1U	K	16V	C374	403 457 2512	CERAMIC	0.47U K 10V
	303 409 3426	CERAMIC	0.1U	K	16V		303 376 6311	CERAMIC	0.47U K 10V
C353	303 453 8917	CERAMIC	0.1U	K	16V	C377	303 453 8917	CERAMIC	0.1U K 16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U K 16V

**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>				
C378	303 409 3426	CERAMIC	0.1U	K	16V	C411	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 8917	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
C379	303 409 3426	CERAMIC	0.1U	K	16V	C412	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 8917	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
C380	303 409 3426	CERAMIC	0.1U	K	16V	C413	303 453 8719	CERAMIC	470P	K	50V
	303 453 8917	CERAMIC	0.1U	K	16V		303 453 9211	CERAMIC	470P	K	50V
	303 453 8610	CERAMIC	0.1U	K	16V	C414	303 282 5118	CERAMIC	470P	K	50V
C3801	303 409 3426	CERAMIC	0.1U	K	16V		303 453 8917	CERAMIC	0.1U	K	16V
	303 453 8917	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
C3802	303 409 3426	CERAMIC	0.1U	K	16V	C416	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 8917	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
C3803	303 409 3426	CERAMIC	0.1U	K	16V	C417	303 372 7510	CERAMIC	2.2U	K	6.3V
	303 453 8917	CERAMIC	0.1U	K	16V	C421	303 453 8719	CERAMIC	470P	K	50V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 9211	CERAMIC	470P	K	50V
C3804	303 409 3426	CERAMIC	0.1U	K	16V		303 282 5118	CERAMIC	470P	K	50V
	303 453 8917	CERAMIC	0.1U	K	16V	C422	403 455 1012	CERAMIC	1U	K	10V
	303 453 8610	CERAMIC	0.1U	K	16V		303 433 1112	CERAMIC	1U	K	10V
C3806	303 409 3426	CERAMIC	0.1U	K	16V	C423	403 453 8719	CERAMIC	470P	K	50V
	403 455 1012	CERAMIC	1U	K	10V		303 453 9211	CERAMIC	470P	K	50V
	303 433 1112	CERAMIC	1U	K	10V		303 282 5118	CERAMIC	470P	K	50V
C381	303 409 3426	CERAMIC	0.1U	K	16V	C424	403 455 1012	CERAMIC	1U	K	10V
	303 453 8917	CERAMIC	0.1U	K	16V		303 433 1112	CERAMIC	1U	K	10V
	303 453 8610	CERAMIC	0.1U	K	16V	C426	403 455 1012	CERAMIC	1U	K	10V
C382	303 409 3426	CERAMIC	0.1U	K	16V		303 433 1112	CERAMIC	1U	K	10V
	303 453 8917	CERAMIC	0.1U	K	16V	C427	303 453 8719	CERAMIC	470P	K	50V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 9211	CERAMIC	470P	K	50V
C383	303 409 3426	CERAMIC	0.1U	K	16V		303 282 5118	CERAMIC	470P	K	50V
	303 453 8719	CERAMIC	470P	K	50V	C428	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 9211	CERAMIC	470P	K	50V		303 453 8610	CERAMIC	0.1U	K	16V
C384	303 409 3426	CERAMIC	470P	K	50V		303 409 3426	CERAMIC	0.1U	K	16V
	303 453 8719	CERAMIC	470P	K	50V	C431	303 453 8719	CERAMIC	470P	K	50V
	303 453 9211	CERAMIC	470P	K	50V		303 453 9211	CERAMIC	470P	K	50V
C385	303 409 3426	CERAMIC	470P	K	50V		303 282 5118	CERAMIC	470P	K	50V
	303 453 8719	CERAMIC	470P	K	50V	C432	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 9211	CERAMIC	470P	K	50V		303 453 8610	CERAMIC	0.1U	K	16V
C3851	303 282 5118	CERAMIC	470P	K	50V		303 409 3426	CERAMIC	0.1U	K	16V
	303 453 8917	CERAMIC	0.1U	K	16V	C433	303 453 8719	CERAMIC	470P	K	50V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 9211	CERAMIC	470P	K	50V
C3852	303 409 3426	CERAMIC	0.1U	K	16V		303 282 5118	CERAMIC	470P	K	50V
	303 453 8917	CERAMIC	0.1U	K	16V	C434	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
C3853	303 409 3426	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
	303 453 8719	CERAMIC	470P	K	50V	C436	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 9211	CERAMIC	470P	K	50V		303 453 8610	CERAMIC	0.1U	K	16V
C3854	303 409 3426	CERAMIC	470P	K	50V		303 409 3426	CERAMIC	0.1U	K	16V
	303 453 8719	CERAMIC	470P	K	50V	C437	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 9211	CERAMIC	470P	K	50V		303 453 8610	CERAMIC	0.1U	K	16V
C401	303 409 3426	CERAMIC	470P	K	50V		303 409 3426	CERAMIC	0.1U	K	16V
	303 453 8719	CERAMIC	470P	K	50V	C438	303 368 7319	CERAMIC	10U	K	6.3V
	303 453 9211	CERAMIC	470P	K	50V	C439	303 368 7319	CERAMIC	10U	K	6.3V
C402	303 409 3426	CERAMIC	470P	K	50V	C441	303 391 5511	ELECT	10U	M	16V
	303 453 8719	CERAMIC	0.1U	K	16V		303 175 7212	ELECT	10U	M	16V
	303 453 8610	CERAMIC	0.1U	K	16V	C442	403 455 1012	CERAMIC	1U	K	10V
C403	303 409 3426	CERAMIC	0.1U	K	16V		303 433 1112	CERAMIC	1U	K	10V
	303 453 8719	CERAMIC	470P	K	50V	C443	303 453 8719	CERAMIC	470P	K	50V
	303 453 9211	CERAMIC	470P	K	50V		303 453 9211	CERAMIC	470P	K	50V
C404	303 409 3426	CERAMIC	0.1U	K	16V		303 282 5118	CERAMIC	470P	K	50V
	303 453 8917	CERAMIC	0.1U	K	16V	C444	303 358 3215	CERAMIC	10U	K	6.3V
	303 453 8610	CERAMIC	0.1U	K	16V		303 368 7319	CERAMIC	10U	K	6.3V
C406	303 409 3426	CERAMIC	0.1U	K	16V	C480	303 358 3215	CERAMIC	10U	K	6.3V
	303 453 8917	CERAMIC	0.1U	K	16V		303 370 0018	CERAMIC	10U	K	6.3V
	303 453 8610	CERAMIC	0.1U	K	16V		303 368 7319	CERAMIC	10U	K	6.3V
C407	303 409 3426	CERAMIC	0.1U	K	16V	C4808	303 358 3215	CERAMIC	10U	K	6.3V
	303 453 8719	CERAMIC	470P	K	50V		303 370 0018	CERAMIC	10U	K	6.3V
	303 453 9211	CERAMIC	470P	K	50V		303 368 7319	CERAMIC	10U	K	6.3V
	303 282 5118	CERAMIC	470P	K	50V		303 368 7319	CERAMIC	10U	K	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>				
C481	303 358 3215	CERAMIC	10U K	6.3V		C506	303 396 9613	CERAMIC	1U K	25V		
	303 370 0018	CERAMIC	10U K	6.3V		C5061	403 455 1616	CERAMIC	10U K	16V		
	303 368 7319	CERAMIC	10U K	6.3V		C5069	403 455 1616	CERAMIC	10U K	16V		
C4812	303 453 8917	CERAMIC	0.1U K	16V		C507	303 396 9613	CERAMIC	1U K	25V		
	303 453 8610	CERAMIC	0.1U K	16V		C508	303 396 9613	CERAMIC	1U K	25V		
	303 409 3426	CERAMIC	0.1U K	16V		C509	303 396 9613	CERAMIC	1U K	25V		
C4817	303 453 8719	CERAMIC	470P K	50V		C510	303 396 9613	CERAMIC	1U K	25V		
	303 453 9211	CERAMIC	470P K	50V		C511	303 396 9613	CERAMIC	1U K	25V		
	303 282 5118	CERAMIC	470P K	50V		C512	303 396 9613	CERAMIC	1U K	25V		
C482	303 358 3215	CERAMIC	10U K	6.3V		C513	303 396 9613	CERAMIC	1U K	25V		
	303 370 0018	CERAMIC	10U K	6.3V		C515	303 396 9613	CERAMIC	1U K	25V		
	303 368 7319	CERAMIC	10U K	6.3V		C516	303 453 8511	CERAMIC	1000P K	50V		
C4822	303 409 3426	CERAMIC	0.1U K	16V			303 454 1214	CERAMIC	1000P K	50V		
C4823	303 409 3426	CERAMIC	0.1U K	16V		C517	303 396 9613	CERAMIC	1U K	25V		
C4824	303 409 3426	CERAMIC	0.1U K	16V		C519	303 453 8917	CERAMIC	0.1U K	16V		
C4826	303 409 3426	CERAMIC	0.1U K	16V			303 453 8610	CERAMIC	0.1U K	16V		
C4827	303 409 3426	CERAMIC	0.1U K	16V			303 409 3426	CERAMIC	0.1U K	16V		
C4828	303 409 3426	CERAMIC	0.1U K	16V		C5201	303 381 9918	ELECT	470U M	16V		
C483	303 358 3215	CERAMIC	10U K	6.3V			303 407 3517	ELECT	470U M	16V		
	303 370 0018	CERAMIC	10U K	6.3V		C5203	303 381 9918	ELECT	470U M	16V		
	303 368 7319	CERAMIC	10U K	6.3V			303 407 3517	ELECT	470U M	16V		
C4891	303 453 8917	CERAMIC	0.1U K	16V		C5206	303 381 9918	ELECT	470U M	16V		
	303 453 8610	CERAMIC	0.1U K	16V			303 407 3517	ELECT	470U M	16V		
	303 409 3426	CERAMIC	0.1U K	16V		C5211	303 409 3426	CERAMIC	0.1U K	16V		
C5001	303 396 9613	CERAMIC	1U K	25V		C5213	303 409 3426	CERAMIC	0.1U K	16V		
	303 397 7618	CERAMIC	1U K	25V		C5216	303 409 3426	CERAMIC	0.1U K	16V		
C5002	303 396 9613	CERAMIC	1U K	25V		C5221	303 394 1312	ELECT	100U M	6.3V		
	303 397 7618	CERAMIC	1U K	25V			303 387 4917	ELECT	100U M	6.3V		
C5004	303 396 9613	CERAMIC	1U K	25V		C5222	303 433 1112	CERAMIC	1U K	10V		
	303 397 7618	CERAMIC	1U K	25V		C5223	303 433 1112	CERAMIC	1U K	10V		
C5007	403 467 0911	CERAMIC	0.1U K	25V		C5224	303 276 1317	CERAMIC	1000P K	50V		
C5008	303 453 8917	CERAMIC	0.1U K	16V		C5226	303 409 3426	CERAMIC	0.1U K	16V		
	303 453 8610	CERAMIC	0.1U K	16V		C5227	303 394 1312	ELECT	100U M	6.3V		
	303 409 3426	CERAMIC	0.1U K	16V			303 387 4917	ELECT	100U M	6.3V		
C5009	303 396 9613	CERAMIC	1U K	25V		C5228	303 409 3426	CERAMIC	0.1U K	16V		
	303 397 7618	CERAMIC	1U K	25V		C5229	303 409 3426	CERAMIC	0.1U K	16V		
C501	303 453 8917	CERAMIC	0.1U K	16V		C524	303 358 3215	CERAMIC	10U K	6.3V		
	303 453 8610	CERAMIC	0.1U K	16V			303 370 0018	CERAMIC	10U K	6.3V		
	303 409 3426	CERAMIC	0.1U K	16V			303 368 7319	CERAMIC	10U K	6.3V		
C5011	303 394 5815	CERAMIC	4.7U K	16V		C529	303 453 8917	CERAMIC	0.1U K	16V		
C5012	303 394 5815	CERAMIC	4.7U K	16V			303 453 8610	CERAMIC	0.1U K	16V		
C5013	303 394 5815	CERAMIC	4.7U K	16V			303 409 3426	CERAMIC	0.1U K	16V		
C5014	303 396 9613	CERAMIC	1U K	25V		C5303	303 382 7814	CERAMIC	2.2U K	10V		
	303 397 7618	CERAMIC	1U K	25V		C5304	303 454 0613	CERAMIC	0.01U K	50V		
C502	303 453 8917	CERAMIC	0.1U K	16V			303 441 9810	CERAMIC	0.01U K	50V		
	303 453 8610	CERAMIC	0.1U K	16V		C531	303 453 8917	CERAMIC	0.1U K	16V		
	303 409 3426	CERAMIC	0.1U K	16V			303 453 8610	CERAMIC	0.1U K	16V		
C5021	303 396 9613	CERAMIC	1U K	25V			303 409 3426	CERAMIC	0.1U K	16V		
	303 397 7618	CERAMIC	1U K	25V		C5318	403 455 1012	CERAMIC	1U K	10V		
C5022	303 396 9613	CERAMIC	1U K	25V			303 433 1112	CERAMIC	1U K	10V		
	303 397 7618	CERAMIC	1U K	25V		C532	303 453 8917	CERAMIC	0.1U K	16V		
C5024	403 455 1616	CERAMIC	10U K	16V			303 453 8610	CERAMIC	0.1U K	16V		
C5025	403 455 1616	CERAMIC	10U K	16V			303 409 3426	CERAMIC	0.1U K	16V		
C5026	403 455 1616	CERAMIC	10U K	16V		C533	303 453 8917	CERAMIC	0.1U K	16V		
C5027	403 455 1616	CERAMIC	10U K	16V			303 453 8610	CERAMIC	0.1U K	16V		
C5028	403 455 1616	CERAMIC	10U K	16V			303 409 3426	CERAMIC	0.1U K	16V		
C503	303 453 8917	CERAMIC	0.1U K	16V		C5331	303 372 7510	CERAMIC	2.2U K	6.3V		
	303 453 8610	CERAMIC	0.1U K	16V			303 370 0216	CERAMIC	2.2U K	6.3V		
	303 409 3426	CERAMIC	0.1U K	16V		C5332	303 453 8917	CERAMIC	0.1U K	16V		
C5038	303 454 0613	CERAMIC	0.01U K	50V			303 453 8610	CERAMIC	0.1U K	16V		
C5039	303 454 0613	CERAMIC	0.01U K	50V			303 409 3426	CERAMIC	0.1U K	16V		
C504	303 453 8917	CERAMIC	0.1U K	16V		C5334	303 453 6814	CERAMIC	68P J	50V		
	303 453 8610	CERAMIC	0.1U K	16V			303 454 0019	CERAMIC	68P J	50V		
	303 409 3426	CERAMIC	0.1U K	16V		C5336	403 456 4616	CERAMIC	27P J	50V		
C5041	303 454 0613	CERAMIC	0.01U K	50V			303 309 2519	CERAMIC	27P J	50V		
C505	303 396 9613	CERAMIC	1U K	25V		C5337	303 453 6319	CERAMIC	100P J	50V		
	303 397 7618	CERAMIC	1U K	25V			303 454 0910	CERAMIC	100P 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>				
C534	303 294 6110	CERAMIC	100P	J	50V	C5614	303 387 5310	ELECT	47U M	6.3V	
	303 453 8917	CERAMIC	0.1U	K	16V		303 453 8917	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
C5341	303 299 1615	CERAMIC	1U	K	16V	C5615	303 453 8917	CERAMIC	0.1U	K	16V
C535	303 396 9613	CERAMIC	1U	K	25V		303 453 8610	CERAMIC	0.1U	K	16V
	303 397 7618	CERAMIC	1U	K	25V		303 409 3426	CERAMIC	0.1U	K	16V
C536	303 396 9613	CERAMIC	1U	K	25V	C5616	303 453 8917	CERAMIC	0.1U	K	16V
C537	303 396 9613	CERAMIC	1U	K	25V		303 453 8610	CERAMIC	0.1U	K	16V
C538	303 396 9613	CERAMIC	1U	K	25V		303 409 3426	CERAMIC	0.1U	K	16V
C539	303 396 9613	CERAMIC	1U	K	25V	C562	303 453 8917	CERAMIC	0.1U	K	16V
C540	303 396 9613	CERAMIC	1U	K	25V		303 453 8610	CERAMIC	0.1U	K	16V
C541	303 396 9613	CERAMIC	1U	K	25V		303 409 3426	CERAMIC	0.1U	K	16V
C542	303 396 9613	CERAMIC	1U	K	25V	C5621	303 383 5215	CERAMIC	4.7U	K	6.3V
C543	303 396 9613	CERAMIC	1U	K	25V		304 103 4904	CERAMIC	4.7U	K	6.3V
C545	303 396 9613	CERAMIC	1U	K	25V	C5622	303 392 1215	ELECT	47U	M	6.3V
C546	303 453 8511	CERAMIC	1000P	K	50V		303 387 5310	ELECT	47U	M	6.3V
	303 454 1214	CERAMIC	1000P	K	50V	C5623	303 383 5215	CERAMIC	4.7U	K	6.3V
C547	303 396 9613	CERAMIC	1U	K	25V		304 103 4904	CERAMIC	4.7U	K	6.3V
C549	303 453 8917	CERAMIC	0.1U	K	16V	C563	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
C5511	303 398 3312	ELECT	47U	M	10V	C564	303 453 8917	CERAMIC	0.1U	K	16V
	303 387 6119	ELECT	47U	M	10V		303 453 8610	CERAMIC	0.1U	K	16V
C5512	303 453 8917	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V	C565	303 396 9613	CERAMIC	1U	K	25V
	303 409 3426	CERAMIC	0.1U	K	16V		303 397 7618	CERAMIC	1U	K	25V
C5513	303 398 3312	ELECT	47U	M	10V	C5651	303 454 1917	CERAMIC	4700P	K	50V
	303 387 6119	ELECT	47U	M	10V		303 379 7315	CERAMIC	4700P	K	50V
C5514	303 453 8917	CERAMIC	0.1U	K	16V	C5652	303 454 1917	CERAMIC	4700P	K	50V
	303 453 8610	CERAMIC	0.1U	K	16V		303 379 7315	CERAMIC	4700P	K	50V
	303 409 3426	CERAMIC	0.1U	K	16V	C5653	303 396 9613	CERAMIC	1U	K	25V
C554	303 358 3215	CERAMIC	10U	K	6.3V	C5655	303 453 8917	CERAMIC	0.1U	K	16V
	303 370 0018	CERAMIC	10U	K	6.3V		303 453 8610	CERAMIC	0.1U	K	16V
	303 368 7319	CERAMIC	10U	K	6.3V		303 409 3426	CERAMIC	0.1U	K	16V
C5541	403 455 1616	CERAMIC	10U	K	16V	C5659	303 453 8917	CERAMIC	0.1U	K	16V
C5542	303 401 3810	ELECT	10U	M	25V		303 453 8610	CERAMIC	0.1U	K	16V
C5543	303 376 3112	ELECT	100U	M	25V		303 409 3426	CERAMIC	0.1U	K	16V
	303 374 7815	ELECT	100U	M	25V	C566	303 396 9613	CERAMIC	1U	K	25V
C559	303 453 8917	CERAMIC	0.1U	K	16V	C5661	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
C5601	303 453 8917	CERAMIC	0.1U	K	16V	C5664	303 392 1215	ELECT	47U	M	6.3V
	303 453 8610	CERAMIC	0.1U	K	16V		303 387 5310	ELECT	47U	M	6.3V
	303 409 3426	CERAMIC	0.1U	K	16V	C5666	403 462 2910	EP-ELECT	330U	M	4V
C5602	303 454 1917	CERAMIC	4700P	K	50V	C5667	303 401 3414	ELECT	330U	M	16V
	303 379 7315	CERAMIC	4700P	K	50V		303 423 7810	ELECT	330U	M	16V
C5603	303 453 8917	CERAMIC	0.1U	K	16V	C5669	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
C5604	303 454 0514	CERAMIC	0.1U	Z	25V	C567	303 396 9613	CERAMIC	1U	K	25V
C5605	303 376 3112	ELECT	100U	M	25V	C5670	303 392 1215	ELECT	47U	M	6.3V
C5606	303 381 5613	ELECT	220U	M	16V		303 387 5310	ELECT	47U	M	6.3V
	303 423 8916	ELECT	220U	M	16V	C5671	303 401 3414	ELECT	330U	M	16V
C5607	303 453 8917	CERAMIC	0.1U	K	16V		303 423 7810	ELECT	330U	M	16V
	303 453 8610	CERAMIC	0.1U	K	16V	C568	303 396 9613	CERAMIC	1U	K	25V
	303 409 3426	CERAMIC	0.1U	K	16V	C5680	403 467 0911	CERAMIC	0.1U	K	25V
C5608	303 306 6510	CERAMIC	8200P	K	50V		303 454 0514	CERAMIC	0.1U	Z	25V
C561	303 453 8917	CERAMIC	0.1U	K	16V	C5681	403 462 2910	EP-ELECT	330U	M	4V
	303 453 8610	CERAMIC	0.1U	K	16V	C5682	303 453 8917	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
C5611	303 398 3312	ELECT	47U	M	10V		303 409 3426	CERAMIC	0.1U	K	16V
	303 387 6119	ELECT	47U	M	10V	C569	303 396 9613	CERAMIC	1U	K	25V
C5612	303 453 8917	CERAMIC	0.1U	K	16V	C570	303 396 9613	CERAMIC	1U	K	25V
	303 453 8610	CERAMIC	0.1U	K	16V	C5703	303 376 3112	ELECT	100U	M	25V
	303 409 3426	CERAMIC	0.1U	K	16V	C5704	403 467 0911	CERAMIC	0.1U	K	25V
C5613	303 392 1215	ELECT	47U	M	6.3V		303 454 0514	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>				
C5709	303 376 3112	ELECT	100U	M	25V	C8014	303 358 3215	CERAMIC	10U	K	6.3V
C571	303 396 9613	CERAMIC	1U	K	25V		303 370 0018	CERAMIC	10U	K	6.3V
C5710	403 467 0911	CERAMIC	0.1U	K	25V		303 368 7319	CERAMIC	10U	K	6.3V
	303 454 0514	CERAMIC	0.1U	Z	25V	C8015	303 358 3215	CERAMIC	10U	K	6.3V
C572	303 396 9613	CERAMIC	1U	K	25V		303 370 0018	CERAMIC	10U	K	6.3V
C573	303 396 9613	CERAMIC	1U	K	25V		303 368 7319	CERAMIC	10U	K	6.3V
C575	303 396 9613	CERAMIC	1U	K	25V	C8016	303 453 8917	CERAMIC	0.1U	K	16V
C576	303 453 8511	CERAMIC	1000P	K	50V		303 453 8610	CERAMIC	0.1U	K	16V
	303 454 1214	CERAMIC	1000P	K	50V		303 409 3426	CERAMIC	0.1U	K	16V
C577	303 396 9613	CERAMIC	1U	K	25V	C8017	303 453 8917	CERAMIC	0.1U	K	16V
C5782	303 453 8917	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V	C8018	303 453 8917	CERAMIC	0.1U	K	16V
C579	303 453 8917	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V	C8019	303 453 8917	CERAMIC	0.1U	K	16V
C584	303 358 3215	CERAMIC	10U	K	6.3V		303 453 8610	CERAMIC	0.1U	K	16V
	303 370 0018	CERAMIC	10U	K	6.3V		303 409 3426	CERAMIC	0.1U	K	16V
	303 368 7319	CERAMIC	10U	K	6.3V	C8020	303 453 8917	CERAMIC	0.1U	K	16V
C589	303 453 8917	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V	C8021	303 358 3215	CERAMIC	10U	K	6.3V
C7811	303 397 8219	CERAMIC	2.2U	K	25V		303 370 0018	CERAMIC	10U	K	6.3V
C7812	303 453 8917	CERAMIC	0.1U	K	16V		303 368 7319	CERAMIC	10U	K	6.3V
	303 453 8610	CERAMIC	0.1U	K	16V	C8022	303 453 8917	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
C7813	303 381 5613	ELECT	220U	M	16V		303 409 3426	CERAMIC	0.1U	K	16V
	303 423 8916	ELECT	220U	M	16V	C8023	303 453 8917	CERAMIC	0.1U	K	16V
C7817	303 453 8917	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V	C8024	303 453 8917	CERAMIC	0.1U	K	16V
C7818	303 454 1917	CERAMIC	4700P	K	50V		303 453 8610	CERAMIC	0.1U	K	16V
	303 379 7315	CERAMIC	4700P	K	50V		303 409 3426	CERAMIC	0.1U	K	16V
C7841	303 397 8219	CERAMIC	2.2U	K	25V	C8025	303 453 8917	CERAMIC	0.1U	K	16V
C7843	303 381 5613	ELECT	220U	M	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 423 8916	ELECT	220U	M	16V		303 409 3426	CERAMIC	0.1U	K	16V
C7847	303 453 8917	CERAMIC	0.1U	K	16V	C8026	303 454 0613	CERAMIC	0.01U	K	50V
	303 453 8610	CERAMIC	0.1U	K	16V	C8027	303 454 0613	CERAMIC	0.01U	K	50V
	303 409 3426	CERAMIC	0.1U	K	16V	C8028	303 454 0613	CERAMIC	0.01U	K	50V
C7848	303 454 1917	CERAMIC	4700P	K	50V	C8029	303 453 6319	CERAMIC	100P	J	50V
	303 379 7315	CERAMIC	4700P	K	50V		303 454 0910	CERAMIC	100P	J	50V
C7863	303 381 5613	ELECT	220U	M	16V		303 294 6110	CERAMIC	100P	J	50V
	303 423 8916	ELECT	220U	M	16V	C8032	303 454 0613	CERAMIC	0.01U	K	50V
C7868	303 454 1917	CERAMIC	4700P	K	50V	C8033	303 453 8917	CERAMIC	0.1U	K	16V
	303 379 7315	CERAMIC	4700P	K	50V		303 453 8610	CERAMIC	0.1U	K	16V
C7870	303 401 4312	ELECT	47U	M	25V		303 409 3426	CERAMIC	0.1U	K	16V
C8006	303 358 3215	CERAMIC	10U	K	6.3V	C8034	303 453 8917	CERAMIC	0.1U	K	16V
	303 370 0018	CERAMIC	10U	K	6.3V		303 453 8610	CERAMIC	0.1U	K	16V
	303 368 7319	CERAMIC	10U	K	6.3V		303 409 3426	CERAMIC	0.1U	K	16V
C8007	303 358 3215	CERAMIC	10U	K	6.3V	C8036	303 453 6319	CERAMIC	100P	J	50V
	303 370 0018	CERAMIC	10U	K	6.3V		303 454 0910	CERAMIC	100P	J	50V
	303 368 7319	CERAMIC	10U	K	6.3V		303 294 6110	CERAMIC	100P	J	50V
C8008	303 454 0613	CERAMIC	0.01U	K	50V	C8043	303 453 8917	CERAMIC	0.1U	K	16V
C8009	303 454 0613	CERAMIC	0.01U	K	50V		303 453 8610	CERAMIC	0.1U	K	16V
C801	303 453 8917	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V	C8097	403 467 0911	CERAMIC	0.1U	K	25V
	303 409 3426	CERAMIC	0.1U	K	16V		303 454 0514	CERAMIC	0.1U	Z	25V
C8010	303 454 0613	CERAMIC	0.01U	K	50V	C8101	303 453 8917	CERAMIC	0.1U	K	16V
C8011	303 453 8917	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
C8012	303 453 8917	CERAMIC	0.1U	K	16V	C8106	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
C8013	303 453 8917	CERAMIC	0.1U	K	16V	C8121	303 453 8917	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V	C8121	303 409 3426	CERAMIC	0.1U	K	16V
	303 453 8917	CERAMIC	0.1U	K	16V		303 453 8610	CERAMIC	0.1U	K	16V
	303 453 8610	CERAMIC	0.1U	K	16V		303 409 3426	CERAMIC	0.1U	K	16V
	303 409 3426	CERAMIC	0.1U	K	16V	C8161	303 358 3215	CERAMIC	10U	K	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>			
C841	303 368 7319	CERAMIC	10U	K	6.3V	R1069	301 224 9316	MT-GLAZE	1K	JA	1/16W
	403 455 1012	CERAMIC	1U	K	10V	R1070	301 263 7420	MT-GLAZE	75	JA	1/16W
	303 433 1112	CERAMIC	1U	K	10V	R1077	301 263 7420	MT-GLAZE	75	JA	1/16W
C842	303 392 1215	ELECT	47U	M	6.3V	R1079	301 263 7420	MT-GLAZE	75	JA	1/16W
	303 387 5310	ELECT	47U	M	6.3V	R1309	301 225 1210	MT-GLAZE	4.7K	JA	1/16W
C843	303 454 0613	CERAMIC	0.01U	K	50V	R1311	301 225 1210	MT-GLAZE	4.7K	JA	1/16W
C844	303 453 8511	CERAMIC	1000P	K	50V	R1331	301 224 9415	MT-GLAZE	1M	JA	1/16W
	303 454 1214	CERAMIC	1000P	K	50V	R1812	301 294 3016	MT-GLAZE	10K	FA	1/16W
	303 453 8917	CERAMIC	0.1U	K	16V	R2000	301 150 6014	MT-GLAZE	0.000	ZA	1/10W
C8813	303 453 8610	CERAMIC	0.1U	K	16V	R2002	301 224 8814	MT-GLAZE	100	JA	1/16W
	303 409 3426	CERAMIC	0.1U	K	16V	R2003	301 225 0718	MT-GLAZE	56K	JA	1/16W
	303 453 8917	CERAMIC	0.1U	K	16V	R2004	301 225 1319	MT-GLAZE	470	JA	1/16W
C8823	303 453 8610	CERAMIC	0.1U	K	16V	R2005	301 037 5017	MT-GLAZE	0.000	ZA	1/10W
	303 409 3426	CERAMIC	0.1U	K	16V	R2006	301 224 9316	MT-GLAZE	1K	JA	1/16W
C9882	303 453 8917	CERAMIC	0.1U	K	16V	R2012	301 260 4115	MT-GLAZE	75	JA	1/3W
	303 453 8610	CERAMIC	0.1U	K	16V	R2013	301 225 0718	MT-GLAZE	56K	JA	1/16W
	303 409 3426	CERAMIC	0.1U	K	16V	R2014	301 225 1319	MT-GLAZE	470	JA	1/16W
RESISTOR	301 224 9316	MT-GLAZE	100	JA	1/16W	R2016	301 224 9316	MT-GLAZE	1K	JA	1/16W
	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	R2017	301 225 1418	MT-GLAZE	47K	JA	1/16W
	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	R2022	301 260 4115	MT-GLAZE	75	JA	1/3W
R002	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	R2023	301 225 0718	MT-GLAZE	56K	JA	1/16W
R007	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	R2024	301 225 1319	MT-GLAZE	470	JA	1/16W
R008	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	R2026	301 224 9316	MT-GLAZE	1K	JA	1/16W
R009	301 224 9019	MT-GLAZE	10K	JA	1/16W	R2027	301 225 1418	MT-GLAZE	47K	JA	1/16W
R010	301 224 9019	MT-GLAZE	10K	JA	1/16W	R2032	301 260 4115	MT-GLAZE	75	JA	1/3W
R011	301 276 4710	MT-GLAZE	0.000	ZA	1/3W	R2036	301 225 8110	MT-GLAZE	10	JA	1/16W
R012	301 276 4710	MT-GLAZE	0.000	ZA	1/3W	R2037	301 225 8110	MT-GLAZE	10	JA	1/16W
R040	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	R2038	301 225 8110	MT-GLAZE	10	JA	1/16W
R041	301 235 1415	MT-GLAZE	1.2K	JA	1/16W	R2043	301 224 8814	MT-GLAZE	100	JA	1/16W
R042	301 235 1415	MT-GLAZE	1.2K	JA	1/16W	R2053	301 224 8814	MT-GLAZE	100	JA	1/16W
R043	301 224 9514	MT-GLAZE	2.2K	JA	1/16W	R2062	301 225 1418	MT-GLAZE	47K	JA	1/16W
R044	301 224 9019	MT-GLAZE	10K	JA	1/16W	R2501	945 086 5368	IMPEDANCE, 220 OHM P			
R047	301 224 9316	MT-GLAZE	1K	JA	1/16W	R2502	301 226 1516	MT-GLAZE	0.000	ZA	1/16W
R049	301 224 9019	MT-GLAZE	10K	JA	1/16W	R2503	301 226 1516	MT-GLAZE	0.000	ZA	1/16W
R1000	301 238 4512	MT-GLAZE	47	JA	1/3W	R2504	301 226 1516	MT-GLAZE	0.000	ZA	1/16W
R1005	301 224 9019	MT-GLAZE	10K	JA	1/16W	R2509	301 224 9712	MT-GLAZE	22	JA	1/16W
R1010	301 224 9019	MT-GLAZE	10K	JA	1/16W	R2510	301 224 9712	MT-GLAZE	22	JA	1/16W
R1011	301 225 8110	MT-GLAZE	10	JA	1/16W	R2511	301 224 9712	MT-GLAZE	22	JA	1/16W
R1013	301 224 9514	MT-GLAZE	2.2K	JA	1/16W	R2513	301 224 9712	MT-GLAZE	22	JA	1/16W
R1014	301 225 1418	MT-GLAZE	47K	JA	1/16W	R2514	301 224 9712	MT-GLAZE	22	JA	1/16W
R1015	301 224 9019	MT-GLAZE	10K	JA	1/16W	R2515	301 224 9712	MT-GLAZE	22	JA	1/16W
R1016	301 224 9316	MT-GLAZE	1K	JA	1/16W	R2517	301 224 9712	MT-GLAZE	22	JA	1/16W
R1017	301 224 9019	MT-GLAZE	10K	JA	1/16W	R2518	301 224 9712	MT-GLAZE	22	JA	1/16W
R1018	301 150 5918	MT-GLAZE	10K	JA	1/10W	R2519	301 224 9712	MT-GLAZE	22	JA	1/16W
R1019	301 224 9019	MT-GLAZE	10K	JA	1/16W	R2521	301 224 8913	MT-GLAZE	100K	JA	1/16W
R1020	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	R2522	301 224 9712	MT-GLAZE	22	JA	1/16W
R1021	301 260 4115	MT-GLAZE	75	JA	1/3W	R2523	301 224 9712	MT-GLAZE	22	JA	1/16W
R1022	301 260 4115	MT-GLAZE	75	JA	1/3W	R2524	301 224 9712	MT-GLAZE	22	JA	1/16W
R1023	301 260 4115	MT-GLAZE	75	JA	1/3W	R2525	301 224 9712	MT-GLAZE	22	JA	1/16W
R1024	301 225 1418	MT-GLAZE	47K	JA	1/16W	R2531	945 086 5368	IMPEDANCE, 220 OHM P			
R1026	301 225 1418	MT-GLAZE	47K	JA	1/16W	R2532	301 226 1516	MT-GLAZE	0.000	ZA	1/16W
R1027	301 150 6014	MT-GLAZE	0.000	ZA	1/10W	R2533	301 226 1516	MT-GLAZE	0.000	ZA	1/16W
R1031	301 260 4115	MT-GLAZE	75	JA	1/3W	R2534	301 226 1516	MT-GLAZE	0.000	ZA	1/16W
R1032	301 260 4115	MT-GLAZE	75	JA	1/3W	R2535	301 224 9712	MT-GLAZE	22	JA	1/16W
R1033	301 260 4115	MT-GLAZE	75	JA	1/3W	R2537	301 224 9712	MT-GLAZE	22	JA	1/16W
R1034	301 225 1418	MT-GLAZE	47K	JA	1/16W	R2540	301 224 9712	MT-GLAZE	22	JA	1/16W
R1036	301 225 1418	MT-GLAZE	47K	JA	1/16W	R2551	301 224 8913	MT-GLAZE	100K	JA	1/16W
R1043	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	R2561	945 086 5368	IMPEDANCE, 220 OHM P			
R1044	301 224 9019	MT-GLAZE	10K	JA	1/16W	R2562	301 226 1516	MT-GLAZE	0.000	ZA	1/16W
R1045	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	R2563	301 226 1516	MT-GLAZE	0.000	ZA	1/16W
R1046	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	R2564	301 226 1516	MT-GLAZE	0.000	ZA	1/16W
R1047	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	R2581	301 224 8913	MT-GLAZE	100K	JA	1/16W
R1049	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	R2890	301 224 9712	MT-GLAZE	22	JA	1/16W
R1055	301 225 1210	MT-GLAZE	4.7K	JA	1/16W	R2892	301 224 8814	MT-GLAZE	100	JA	1/16W
R1057	301 225 1210	MT-GLAZE	4.7K	JA	1/16W	R300	301 224 9019	MT-GLAZE	10K	JA	1/16W
R1067	301 224 9019	MT-GLAZE	10K	JA	1/16W	R3002	301 224 8814	MT-GLAZE	100	JA	1/16W
R1068	301 224 9019	MT-GLAZE	10K	JA	1/16W	R3012	301 224 8814	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>	
R302	301 227 5612	MT-GLAZE	8.2K JA 1/16W	R3622	301 224 9019	MT-GLAZE	10K JA 1/16W
R3022	301 224 8814	MT-GLAZE	100 JA 1/16W	R3623	301 224 9019	MT-GLAZE	10K JA 1/16W
R303	301 224 9316	MT-GLAZE	1K JA 1/16W	R3624	301 224 9019	MT-GLAZE	10K JA 1/16W
R3032	301 224 8814	MT-GLAZE	100 JA 1/16W	R3626	301 224 9019	MT-GLAZE	10K JA 1/16W
R304	301 224 9316	MT-GLAZE	1K JA 1/16W	R3627	301 224 9019	MT-GLAZE	10K JA 1/16W
R3051	301 224 8913	MT-GLAZE	100K JA 1/16W	R363	301 224 9316	MT-GLAZE	1K JA 1/16W
R3052	301 224 8814	MT-GLAZE	100 JA 1/16W	R364	301 224 9316	MT-GLAZE	1K JA 1/16W
R3053	301 224 8913	MT-GLAZE	100K JA 1/16W	R366	301 224 9316	MT-GLAZE	1K JA 1/16W
R3054	301 224 8913	MT-GLAZE	100K JA 1/16W	R367	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R3056	301 224 9415	MT-GLAZE	1M JA 1/16W	R3685	301 224 9019	MT-GLAZE	10K JA 1/16W
R3057	301 224 9910	MT-GLAZE	22K JA 1/16W	R3686	301 224 9316	MT-GLAZE	1K JA 1/16W
R306	401 342 7314	MT-GLAZE	23.2K FA 1/16W	R3687	301 224 9019	MT-GLAZE	10K JA 1/16W
R3061	301 224 8913	MT-GLAZE	100K JA 1/16W	R372	301 225 8110	MT-GLAZE	10 JA 1/16W
R3062	301 224 8814	MT-GLAZE	100 JA 1/16W	R373	301 225 8110	MT-GLAZE	10 JA 1/16W
R307	301 224 9712	MT-GLAZE	22 JA 1/16W	R377	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R308	301 224 9712	MT-GLAZE	22 JA 1/16W	R378	301 224 9019	MT-GLAZE	10K JA 1/16W
R309	301 224 9316	MT-GLAZE	1K JA 1/16W	R380	301 224 9019	MT-GLAZE	10K JA 1/16W
R311	301 224 9316	MT-GLAZE	1K JA 1/16W	R3801	301 225 8110	MT-GLAZE	10 JA 1/16W
R312	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R3802	301 225 8110	MT-GLAZE	10 JA 1/16W
R313	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R3803	301 225 8110	MT-GLAZE	10 JA 1/16W
R314	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R3804	301 225 8110	MT-GLAZE	10 JA 1/16W
R316	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R3806	301 225 0213	MT-GLAZE	3.3K JA 1/16W
R318	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R382	301 263 7420	MT-GLAZE	75 JA 1/16W
R319	301 224 9019	MT-GLAZE	10K JA 1/16W	R383	301 224 8814	MT-GLAZE	100 JA 1/16W
R321	301 225 0213	MT-GLAZE	3.3K JA 1/16W	R384	301 224 8814	MT-GLAZE	100 JA 1/16W
R322	301 225 0213	MT-GLAZE	3.3K JA 1/16W	R3851	301 227 5612	MT-GLAZE	8.2K JA 1/16W
<b>FOR KK7-XC5000</b>							
R325	301 225 8110	MT-GLAZE	10 JA 1/16W	R3853	301 256 6215	MT-GLAZE	270 JA 1/10W
<b>FOR KL7-XC5500</b>							
R324	301 225 8110	MT-GLAZE	10K JA 1/16W	R3854	301 227 5612	MT-GLAZE	8.2K JA 1/16W
R329	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R389	301 225 0817	MT-GLAZE	68K JA 1/16W
R339	301 225 0213	MT-GLAZE	3.3K JA 1/16W	R391	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R340	301 224 8814	MT-GLAZE	100 JA 1/16W	R392	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R341	301 225 0213	MT-GLAZE	3.3K JA 1/16W	R396	301 224 9019	MT-GLAZE	10K JA 1/16W
R342	301 225 0213	MT-GLAZE	3.3K JA 1/16W	R397	301 224 8814	MT-GLAZE	100 JA 1/16W
R343	301 225 0213	MT-GLAZE	3.3K JA 1/16W	R4001	301 256 7410	MT-GLAZE	39 JA 1/10W
R347	301 224 8814	MT-GLAZE	100 JA 1/16W	R4002	301 256 7410	MT-GLAZE	39 JA 1/10W
R348	301 224 8814	MT-GLAZE	100 JA 1/16W	R4003	301 256 7410	MT-GLAZE	39 JA 1/10W
R350	301 263 7420	MT-GLAZE	75 JA 1/16W	R4004	301 265 4912	MT-GLAZE	75 FA 1/10W
R3502	301 225 1418	MT-GLAZE	47K JA 1/16W	R4006	301 265 4912	MT-GLAZE	75 FA 1/10W
R3503	301 224 8913	MT-GLAZE	100K JA 1/16W	R401	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R351	301 224 8814	MT-GLAZE	100 JA 1/16W	R402	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R352	301 224 8814	MT-GLAZE	100 JA 1/16W	R403	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R353	301 263 7420	MT-GLAZE	75 JA 1/16W	R406	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R3532	301 225 1418	MT-GLAZE	47K JA 1/16W	R407	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R3533	301 224 8913	MT-GLAZE	100K JA 1/16W	R408	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R354	301 224 8814	MT-GLAZE	100 JA 1/16W	R410	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R355	301 224 8814	MT-GLAZE	100 JA 1/16W	R412	301 225 1814	MT-GLAZE	47 JA 1/16W
R356	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R414	301 225 1814	MT-GLAZE	47 JA 1/16W
R3562	301 225 1418	MT-GLAZE	47K JA 1/16W	R416	301 225 1814	MT-GLAZE	47 JA 1/16W
R3563	301 224 8913	MT-GLAZE	100K JA 1/16W	R418	301 225 1814	MT-GLAZE	47 JA 1/16W
R357	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R419	301 225 1814	MT-GLAZE	47 JA 1/16W
R3580	301 037 5017	MT-GLAZE	0.000 ZA 1/10W	R422	301 225 1814	MT-GLAZE	47 JA 1/16W
R3585	301 224 9019	MT-GLAZE	10K JA 1/16W	R423	301 225 1814	MT-GLAZE	47 JA 1/16W
R3586	301 224 9316	MT-GLAZE	1K JA 1/16W	R424	301 225 1210	MT-GLAZE	4.7K JA 1/16W
R3587	301 224 9019	MT-GLAZE	10K JA 1/16W	R425	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R359	301 225 0015	MT-GLAZE	270 JA 1/16W	R426	301 224 9019	MT-GLAZE	10K JA 1/16W
R360	301 225 0015	MT-GLAZE	270 JA 1/16W	R427	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R3601	301 225 0213	MT-GLAZE	3.3K JA 1/16W	R4834	301 225 1210	MT-GLAZE	4.7K JA 1/16W
R3602	301 224 9019	MT-GLAZE	10K JA 1/16W	R4861	301 150 6014	MT-GLAZE	0.000 ZA 1/10W
R3603	301 224 9019	MT-GLAZE	10K JA 1/16W	R4862	301 229 3913	MT-GLAZE	180 JA 1/16W
R361	301 256 1517	MT-GLAZE	13K JA 1/10W	R4863	301 229 3913	MT-GLAZE	180 JA 1/16W
	301 113 6914	MT-GLAZE	13K JA 1/16W	R4867	301 229 7218	MT-GLAZE	18K JA 1/16W
R3621	301 224 9019	MT-GLAZE	10K JA 1/16W	R4868	301 225 2118	MT-GLAZE	12K JA 1/16W
				R5001	301 037 5017	MT-GLAZE	0.000 ZA 1/10W
				R5002	301 225 8110	MT-GLAZE	10 JA 1/16W
				R5003	301 225 8110	MT-GLAZE	10 JA 1/16W
				R5004	301 224 8913	MT-GLAZE	100K JA 1/16W
				R5005	301 224 8913	MT-GLAZE	100K 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>	
R5006	301 224 8913	MT-GLAZE	100K JA 1/16W	R5555	301 224 9316	MT-GLAZE	1K JA 1/16W
R5007	301 224 8913	MT-GLAZE	100K JA 1/16W	R5556	301 224 8913	MT-GLAZE	100K JA 1/16W
R5021	301 224 8913	MT-GLAZE	100K JA 1/16W	R5557	301 276 4710	MT-GLAZE	0.000 ZA 1/3W
R5022	301 224 8913	MT-GLAZE	100K JA 1/16W	R5565	301 224 9316	MT-GLAZE	1K JA 1/16W
R5031	301 224 8814	MT-GLAZE	100 JA 1/16W	R5566	301 224 8913	MT-GLAZE	100K JA 1/16W
R5032	301 224 8814	MT-GLAZE	100 JA 1/16W	R5601	301 224 9019	MT-GLAZE	10K JA 1/16W
R5033	301 225 0213	MT-GLAZE	3.3K JA 1/16W	R5602	301 224 8913	MT-GLAZE	100K JA 1/16W
R5034	301 224 9316	MT-GLAZE	1K JA 1/16W	R5604	301 224 9415	MT-GLAZE	1M JA 1/16W
R5036	301 225 0213	MT-GLAZE	3.3K JA 1/16W	R5606	301 225 8110	MT-GLAZE	10 JA 1/16W
R5037	301 224 9316	MT-GLAZE	1K JA 1/16W	R5607	301 225 0213	MT-GLAZE	3.3K JA 1/16W
R5044	301 224 9019	MT-GLAZE	10K JA 1/16W	R5610	301 225 0114	MT-GLAZE	27K JA 1/16W
R5046	301 224 9019	MT-GLAZE	10K JA 1/16W	R5611	301 224 8814	MT-GLAZE	100 JA 1/16W
R5047	301 224 9613	MT-GLAZE	2.7K JA 1/16W	R5612	301 150 6014	MT-GLAZE	0.000 ZA 1/10W
R5048	301 224 9316	MT-GLAZE	1K JA 1/16W	R5613	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R506	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R5614	301 225 7915	MT-GLAZE	220 JA 1/16W
R5061	301 224 9316	MT-GLAZE	1K JA 1/16W	R5615	301 224 9514	MT-GLAZE	2.2K JA 1/16W
R5062	301 225 0213	MT-GLAZE	3.3K JA 1/16W	R5621	301 224 8913	MT-GLAZE	100K JA 1/16W
R5063	301 224 9316	MT-GLAZE	1K JA 1/16W	R5622	301 190 1710	MT-GLAZE	0.000 ZA 1W
R5064	301 224 9316	MT-GLAZE	1K JA 1/16W	R5624	301 190 1710	MT-GLAZE	0.000 ZA 1W
R5066	301 225 0213	MT-GLAZE	3.3K JA 1/16W	R5650	301 224 8913	MT-GLAZE	100K JA 1/16W
R5067	301 224 9316	MT-GLAZE	1K JA 1/16W	R5651	301 224 8913	MT-GLAZE	100K JA 1/16W
R5069	301 224 9316	MT-GLAZE	1K JA 1/16W	R5652	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R507	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R5654	301 294 3016	MT-GLAZE	10K FA 1/16W
R510	301 294 3115	MT-GLAZE	1K FA 1/16W	R5656	301 294 3016	MT-GLAZE	10K FA 1/16W
R511	301 225 8110	MT-GLAZE	10 JA 1/16W	R566	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R519	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R5661	301 294 2613	MT-GLAZE	4.7K FA 1/16W
R5204	301 225 8813	MT-GLAZE	39 JA 1/16W	R5662	301 301 3718	MT-GLAZE	2K FA 1/16W
R5206	301 225 8813	MT-GLAZE	39 JA 1/16W	R5666	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R5207	301 225 8813	MT-GLAZE	39 JA 1/16W	R567	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R5208	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R5671	301 294 2811	MT-GLAZE	2.2K FA 1/16W
R5209	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R5672	301 299 4810	MT-GLAZE	2.7K FA 1/16W
R5214	301 224 9019	MT-GLAZE	10K JA 1/16W	R5679	301 037 5017	MT-GLAZE	0.000 ZA 1/10W
R5216	301 224 9019	MT-GLAZE	10K JA 1/16W	R570	301 294 3115	MT-GLAZE	1K FA 1/16W
R5217	301 224 9019	MT-GLAZE	10K JA 1/16W	R5701	301 294 3016	MT-GLAZE	10K FA 1/16W
R5218	301 224 9019	MT-GLAZE	10K JA 1/16W	R5702	301 294 4419	MT-GLAZE	1.8K FA 1/16W
R5228	301 225 8110	MT-GLAZE	10 JA 1/16W	R5703	301 301 0410	MT-GLAZE	240 FA 1/16W
R5229	301 225 8110	MT-GLAZE	10 JA 1/16W	R5704	301 224 8814	MT-GLAZE	100 JA 1/16W
R5303	301 224 8814	MT-GLAZE	100 JA 1/16W	R5705	301 224 9316	MT-GLAZE	1K JA 1/16W
R5312	301 224 9316	MT-GLAZE	1K JA 1/16W	R571	301 225 8110	MT-GLAZE	10 JA 1/16W
R5313	301 224 9019	MT-GLAZE	10K JA 1/16W	R579	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R5314	301 225 8615	MT-GLAZE	560K JA 1/16W	R5803	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R5316	301 224 9316	MT-GLAZE	1K JA 1/16W	R5804	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R5317	301 225 1814	MT-GLAZE	47 JA 1/16W	R5805	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R5318	301 225 3818	MT-GLAZE	1.5K JA 1/16W	R5806	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R5319	301 224 9316	MT-GLAZE	1K JA 1/16W	R5807	301 224 9019	MT-GLAZE	10K JA 1/16W
R5321	301 224 9316	MT-GLAZE	1K JA 1/16W	R588	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R5322	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R589	301 224 9019	MT-GLAZE	10K JA 1/16W
R5327	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R590	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R5329	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R591	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R5331	301 240 9710	MT-GLAZE	820K JA 1/16W	R592	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R5332	301 224 9316	MT-GLAZE	1K JA 1/16W	R596	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R5333	301 224 9316	MT-GLAZE	1K JA 1/16W	R598	301 224 9019	MT-GLAZE	10K JA 1/16W
R5334	301 224 9019	MT-GLAZE	10K JA 1/16W	R599	301 224 9019	MT-GLAZE	10K JA 1/16W
R5336	301 224 9316	MT-GLAZE	1K JA 1/16W	R6831	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R5337	301 224 9316	MT-GLAZE	1K JA 1/16W	R6833	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R5338	301 226 2414	MT-GLAZE	560 JA 1/16W	R6836	301 226 1516	MT-GLAZE	0.000 ZA 1/16W
R5342	301 225 0718	MT-GLAZE	56K JA 1/16W	R7801	301 224 9019	MT-GLAZE	10K JA 1/16W
R5343	301 224 9316	MT-GLAZE	1K JA 1/16W	R7803	301 224 9019	MT-GLAZE	10K JA 1/16W
R5344	301 037 5017	MT-GLAZE	0.000 ZA 1/10W	R7805	301 225 1210	MT-GLAZE	4.7K JA 1/16W
R536	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R7816	301 225 8110	MT-GLAZE	10 JA 1/16W
R537	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R7818	301 294 3016	MT-GLAZE	10K FA 1/16W
R540	301 294 3115	MT-GLAZE	1K FA 1/16W	R7819	301 224 8913	MT-GLAZE	100K JA 1/16W
R541	301 225 8110	MT-GLAZE	10 JA 1/16W	R7821	301 294 3511	MT-GLAZE	27K FA 1/16W
R549	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R7824	301 294 2811	MT-GLAZE	2.2K FA 1/16W
R5541	301 224 9019	MT-GLAZE	10K JA 1/16W	R7828	301 224 9019	MT-GLAZE	10K JA 1/16W
R5543	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R7829	301 224 9316	MT-GLAZE	1K JA 1/16W
R5547	301 226 1516	MT-GLAZE	0.000 ZA 1/16W	R7831	301 224 9316	MT-GLAZE	1K 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>				
R7832	301 225 1210	MT-GLAZE	4.7K	JA	1/16W	R852	301 225 1210	MT-GLAZE	4.7K	JA	1/16W
R7833	301 225 0213	MT-GLAZE	3.3K	JA	1/16W	R8811	301 225 8110	MT-GLAZE	10	JA	1/16W
R7834	301 286 4717	MT-GLAZE	30K	JA	1/16W	R8812	301 225 8110	MT-GLAZE	10	JA	1/16W
R7843	301 224 9415	MT-GLAZE	1M	JA	1/16W	R8821	301 225 8110	MT-GLAZE	10	JA	1/16W
R7846	301 225 8110	MT-GLAZE	10	JA	1/16W	R8822	301 225 8110	MT-GLAZE	10	JA	1/16W
R7848	301 294 3016	MT-GLAZE	10K	FA	1/16W	R891	301 224 8814	MT-GLAZE	100	JA	1/16W
R7849	301 224 8913	MT-GLAZE	100K	JA	1/16W	R898	301 224 8814	MT-GLAZE	100	JA	1/16W
R7850	301 286 4717	MT-GLAZE	30K	JA	1/16W	R9859	301 226 1516	MT-GLAZE	0.000	ZA	1/16W
R7851	301 261 1113	MT-GLAZE	24K	JA	1/16W	R9883	301 226 1516	MT-GLAZE	0.000	ZA	1/16W
R7853	301 294 2811	MT-GLAZE	2.2K	FA	1/16W	RB2502	945 034 5051	R-NETWORK	22X4	1/32W	
R7854	301 294 4419	MT-GLAZE	1.8K	FA	1/16W		945 037 0824	R-NETWORK	22X4	1/16W	
R7858	301 224 9019	MT-GLAZE	10K	JA	1/16W	RB2504	945 034 5051	R-NETWORK	22X4	1/32W	
R7859	301 235 1415	MT-GLAZE	1.2K	JA	1/16W		945 037 0824	R-NETWORK	22X4	1/16W	
R7863	301 225 1210	MT-GLAZE	4.7K	JA	1/16W	RB311	945 036 0986	R-NETWORK	47X4	1/32W	
R7866	301 225 8110	MT-GLAZE	10	JA	1/16W		945 037 0831	R-NETWORK	47X4	1/16W	
R7869	301 224 8913	MT-GLAZE	100K	JA	1/16W	RB312	945 036 0986	R-NETWORK	47X4	1/32W	
R7871	301 294 3511	MT-GLAZE	27K	FA	1/16W		945 037 0831	R-NETWORK	47X4	1/16W	
R7874	301 294 2811	MT-GLAZE	2.2K	FA	1/16W	RB313	945 036 0986	R-NETWORK	47X4	1/32W	
R7878	301 224 9019	MT-GLAZE	10K	JA	1/16W		945 037 0831	R-NETWORK	47X4	1/16W	
R7879	301 224 9316	MT-GLAZE	1K	JA	1/16W	RB314	945 036 0986	R-NETWORK	47X4	1/32W	
R7881	301 224 9316	MT-GLAZE	1K	JA	1/16W		945 037 0831	R-NETWORK	47X4	1/16W	
R7882	301 225 1210	MT-GLAZE	4.7K	JA	1/16W	RB316	945 036 0986	R-NETWORK	47X4	1/32W	
R7883	301 225 0213	MT-GLAZE	3.3K	JA	1/16W		945 037 0831	R-NETWORK	47X4	1/16W	
R7884	301 286 4717	MT-GLAZE	30K	JA	1/16W	RB317	945 036 0986	R-NETWORK	47X4	1/32W	
R7891	301 224 9316	MT-GLAZE	1K	JA	1/16W		945 037 0831	R-NETWORK	47X4	1/16W	
R7892	301 225 1210	MT-GLAZE	4.7K	JA	1/16W	RB318	945 036 0986	R-NETWORK	47X4	1/32W	
R7893	301 225 0213	MT-GLAZE	3.3K	JA	1/16W		945 037 0831	R-NETWORK	47X4	1/16W	
R801	301 224 9019	MT-GLAZE	10K	JA	1/16W	RB319	945 036 0986	R-NETWORK	47X4	1/32W	
R8020	301 224 9019	MT-GLAZE	10K	JA	1/16W		945 037 0831	R-NETWORK	47X4	1/16W	
R8022	301 224 9019	MT-GLAZE	10K	JA	1/16W	RB411	945 037 0831	R-NETWORK	47X4	1/16W	
R804	301 224 9019	MT-GLAZE	10K	JA	1/16W	RB412	945 037 0831	R-NETWORK	47X4	1/16W	
R8064	301 224 8913	MT-GLAZE	100K	JA	1/16W	RB413	945 037 0831	R-NETWORK	47X4	1/16W	
R807	301 224 9019	MT-GLAZE	10K	JA	1/16W	RB414	945 037 0831	R-NETWORK	47X4	1/16W	
R808	301 224 9019	MT-GLAZE	10K	JA	1/16W	RB416	945 037 0831	R-NETWORK	47X4	1/16W	
R8080	301 150 6212	MT-GLAZE	1K	JA	1/10W	RB417	945 037 0831	R-NETWORK	47X4	1/16W	
R8081	301 225 0312	MT-GLAZE	33	JA	1/16W	RB418	945 037 0831	R-NETWORK	47X4	1/16W	
R8082	301 225 0312	MT-GLAZE	33	JA	1/16W	RB419	945 037 0831	R-NETWORK	47X4	1/16W	
R8083	301 225 0312	MT-GLAZE	33	JA	1/16W	RB421	945 037 0831	R-NETWORK	47X4	1/16W	
R8084	301 224 9613	MT-GLAZE	2.7K	JA	1/16W	RB422	945 037 0831	R-NETWORK	47X4	1/16W	
R8086	301 225 0312	MT-GLAZE	33	JA	1/16W	RB423	945 037 0831	R-NETWORK	47X4	1/16W	
R809	301 225 8516	MT-GLAZE	1.8K	JA	1/16W	RB424	945 037 0831	R-NETWORK	47X4	1/16W	
R8092	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	RB426	945 037 0831	R-NETWORK	47X4	1/16W	
R8094	301 224 9514	MT-GLAZE	2.2K	JA	1/16W	RB427	945 037 0831	R-NETWORK	47X4	1/16W	
R8096	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	RB428	945 037 0831	R-NETWORK	47X4	1/16W	
R8097	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	RB429	945 037 0831	R-NETWORK	47X4	1/16W	
R8099	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	RB431	945 037 0831	R-NETWORK	47X4	1/16W	
R8101	301 225 1210	MT-GLAZE	4.7K	JA	1/16W	RB432	945 037 0831	R-NETWORK	47X4	1/16W	
R8102	301 225 1210	MT-GLAZE	4.7K	JA	1/16W	RB433	945 037 0831	R-NETWORK	47X4	1/16W	
R8103	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	RB434	945 037 0831	R-NETWORK	47X4	1/16W	
R8104	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	RB436	945 037 0831	R-NETWORK	47X4	1/16W	
R8106	301 224 9019	MT-GLAZE	10K	JA	1/16W	RB437	945 037 0831	R-NETWORK	47X4	1/16W	
R8108	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	RB501	645 071 9592	R-NETWORK	0X4	1/32W	
R8113	301 224 9019	MT-GLAZE	10K	JA	1/16W		945 036 3529	R-NETWORK	0X4	1/32W	
R8114	301 224 9316	MT-GLAZE	1K	JA	1/16W		945 037 0817	R-NETWORK	0X4	1/16W	
R812	301 224 9316	MT-GLAZE	1K	JA	1/16W	RB502	645 071 9592	R-NETWORK	0X4	1/32W	
R8121	301 226 1516	MT-GLAZE	0.000	ZA	1/16W		945 036 3529	R-NETWORK	0X4	1/32W	
R8122	301 226 1516	MT-GLAZE	0.000	ZA	1/16W		945 037 0817	R-NETWORK	0X4	1/16W	
R8123	301 225 0213	MT-GLAZE	3.3K	JA	1/16W	RB503	645 071 9592	R-NETWORK	0X4	1/32W	
R8124	301 225 0213	MT-GLAZE	3.3K	JA	1/16W		945 036 3529	R-NETWORK	0X4	1/32W	
R813	301 224 9316	MT-GLAZE	1K	JA	1/16W		945 037 0817	R-NETWORK	0X4	1/16W	
R8130	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	RB531	645 071 9592	R-NETWORK	0X4	1/32W	
R8131	301 226 1516	MT-GLAZE	0.000	ZA	1/16W		945 036 3529	R-NETWORK	0X4	1/32W	
R8132	301 226 1516	MT-GLAZE	0.000	ZA	1/16W		945 037 0817	R-NETWORK	0X4	1/16W	
R8133	301 226 1516	MT-GLAZE	0.000	ZA	1/16W	RB532	645 071 9592	R-NETWORK	0X4	1/32W	
R8134	301 226 1516	MT-GLAZE	0.000	ZA	1/16W		945 036 3529	R-NETWORK	0X4	1/32W	
R846	301 224 9316	MT-GLAZE	1K	JA	1/16W		945 037 0817	R-NETWORK	0X4	1/16W	
R851	301 224 9316	MT-GLAZE	1K	JA	1/16W	RB533	645 071 9592	R-NETWORK	0X4	1/32W	

**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>
RB561	945 036 3529	R-NETWORK 0X4 1/32W	L303	945 086 5368	IMPEDANCE,220 OHM P
	945 037 0817	R-NETWORK 0X4 1/16W	L3031	945 068 8325	FILTER,EMI 20MHZ
	645 071 9592	R-NETWORK 0X4 1/32W	L304	945 086 5368	IMPEDANCE,220 OHM P
	945 036 3529	R-NETWORK 0X4 1/32W	L305	945 086 5368	IMPEDANCE,220 OHM P
RB562	945 037 0817	R-NETWORK 0X4 1/16W	L3051	945 068 8325	FILTER,EMI 20MHZ
	645 071 9592	R-NETWORK 0X4 1/32W	L306	945 086 5368	IMPEDANCE,220 OHM P
	945 036 3529	R-NETWORK 0X4 1/32W	L3061	945 068 8325	FILTER,EMI 20MHZ
RB563	945 037 0817	R-NETWORK 0X4 1/16W	L307	945 086 5368	IMPEDANCE,220 OHM P
	645 071 9592	R-NETWORK 0X4 1/32W	L308	945 086 5368	IMPEDANCE,220 OHM P
	945 036 3529	R-NETWORK 0X4 1/32W	L3081	945 068 8325	FILTER,EMI 20MHZ
	945 037 0817	R-NETWORK 0X4 1/16W	L3082	945 068 8325	FILTER,EMI 20MHZ
RB8001	645 049 0675	R-NETWORK 33X4 1/32W	L309	945 086 5368	IMPEDANCE,220 OHM P
	945 049 0690	R-NETWORK 33X4 1/16W	L311	945 086 5368	IMPEDANCE,220 OHM P
RB8002	645 049 0675	R-NETWORK 33X4 1/32W	L312	945 086 5368	IMPEDANCE,220 OHM P
	945 049 0690	R-NETWORK 33X4 1/16W	L313	945 086 5368	IMPEDANCE,220 OHM P
RB8003	645 049 0675	R-NETWORK 33X4 1/32W	L314	945 086 5368	IMPEDANCE,220 OHM P
	945 049 0690	R-NETWORK 33X4 1/16W	L3530	945 086 5368	IMPEDANCE,220 OHM P
RB8004	645 049 0675	R-NETWORK 33X4 1/32W	L3532	945 086 5368	IMPEDANCE,220 OHM P
	945 049 0690	R-NETWORK 33X4 1/16W	L3533	945 086 5368	IMPEDANCE,220 OHM P
RB8006	645 049 0675	R-NETWORK 33X4 1/32W	L3534	945 041 2210	INDUCTOR,0.12U K
	945 049 0690	R-NETWORK 33X4 1/16W	L3621	945 086 5368	IMPEDANCE,220 OHM P
RB8007	645 049 0675	R-NETWORK 33X4 1/32W	L3622	945 086 5368	IMPEDANCE,220 OHM P
	945 049 0690	R-NETWORK 33X4 1/16W	L3623	945 086 5368	IMPEDANCE,220 OHM P
RB8258	945 028 0697	R-NETWORK 100X4 1/16W	L3624	945 086 5368	IMPEDANCE,220 OHM P
RB8259	945 028 0697	R-NETWORK 100X4 1/16W	L3626	945 086 5368	IMPEDANCE,220 OHM P
RB8260	945 028 0697	R-NETWORK 100X4 1/16W	L3627	945 086 5368	IMPEDANCE,220 OHM P
			L3628	945 018 9327	INDUCTOR,1000 OHM
<b>COIL</b>			L3629	945 086 5368	IMPEDANCE,220 OHM P
L1011	945 070 3660	INDUCTOR,90 OHM	L3631	945 018 9327	INDUCTOR,1000 OHM
L1013	945 070 3660	INDUCTOR,90 OHM	L3632	945 086 5368	IMPEDANCE,220 OHM P
L1014	945 070 3660	INDUCTOR,90 OHM	L3633	945 018 9327	INDUCTOR,1000 OHM
L1016	945 070 3660	INDUCTOR,90 OHM	L3634	945 086 5368	IMPEDANCE,220 OHM P
L1021	945 086 7577	FILTER,EMI 400MHZ	L3636	945 018 9327	INDUCTOR,1000 OHM
L1022	945 086 7577	FILTER,EMI 400MHZ	L3637	945 086 5368	IMPEDANCE,220 OHM P
L1023	945 086 7577	FILTER,EMI 400MHZ	L3638	945 018 9327	INDUCTOR,1000 OHM
L1024	945 086 7560	FILTER,EMI 200MHZ	L3639	945 086 5368	IMPEDANCE,220 OHM P
L1026	945 086 7560	FILTER,EMI 200MHZ	L3641	945 018 9327	INDUCTOR,1000 OHM
L1031	945 040 6455	INDUCTOR,4.7U M	L3642	945 086 5368	IMPEDANCE,220 OHM P
L1032	945 086 7577	FILTER,EMI 400MHZ	L4001	945 086 7577	FILTER,EMI 400MHZ
L1033	945 086 7577	FILTER,EMI 400MHZ	L4002	945 086 7577	FILTER,EMI 400MHZ
L1034	945 086 7560	FILTER,EMI 200MHZ	L4003	945 086 7577	FILTER,EMI 400MHZ
L1036	945 086 7560	FILTER,EMI 200MHZ	L4004	945 086 7577	FILTER,EMI 400MHZ
L1037	945 086 7577	FILTER,EMI 400MHZ	L4006	945 086 7577	FILTER,EMI 400MHZ
L2011	301 037 5017	MT-GLAZE 0.000 ZA 1/10W	L402	945 041 1978	INDUCTOR,330 OHM
L2012	945 068 8318	FILTER,EMI 100MHZ	L403	945 041 1978	INDUCTOR,330 OHM
L2021	301 037 5017	MT-GLAZE 0.000 ZA 1/10W	L4809	945 018 9327	INDUCTOR,1000 OHM
L2022	945 068 8318	FILTER,EMI 100MHZ	L4810	945 018 9327	INDUCTOR,1000 OHM
L2031	301 037 5017	MT-GLAZE 0.000 ZA 1/10W	L4811	945 018 9327	INDUCTOR,1000 OHM
L2032	945 068 8318	FILTER,EMI 100MHZ	L4812	945 086 5368	IMPEDANCE,220 OHM P
L2041	945 068 8325	FILTER,EMI 20MHZ	L4814	945 018 9327	INDUCTOR,1000 OHM
L2051	945 068 8325	FILTER,EMI 20MHZ	L5001	945 062 2855	INDUCTOR,33U M
L2501	945 086 5368	IMPEDANCE,220 OHM P	L5002	945 062 2855	INDUCTOR,33U M
L2502	945 086 5368	IMPEDANCE,220 OHM P	L501	945 086 5368	IMPEDANCE,220 OHM P
L2531	945 086 5368	IMPEDANCE,220 OHM P	L5031	945 086 5368	IMPEDANCE,220 OHM P
L2532	945 086 5368	IMPEDANCE,220 OHM P	L5032	945 086 5368	IMPEDANCE,220 OHM P
L2561	945 086 5368	IMPEDANCE,220 OHM P	L5201	945 041 1978	INDUCTOR,330 OHM
L2562	945 086 5368	IMPEDANCE,220 OHM P	L5202	945 041 1978	INDUCTOR,330 OHM
L2891	945 086 5368	IMPEDANCE,220 OHM P	L531	945 086 5368	IMPEDANCE,220 OHM P
L2892	945 018 9327	INDUCTOR,1000 OHM	L5331	301 037 5017	MT-GLAZE 0.000 ZA 1/10W
L2893	945 086 5368	IMPEDANCE,220 OHM P	L5332	945 032 8344	INDUCTOR,39U J
L2894	945 086 5368	IMPEDANCE,220 OHM P	L5541	301 226 1516	MT-GLAZE 0.000 ZA 1/16W
L3002	945 068 8325	FILTER,EMI 20MHZ	L5542	301 226 1516	MT-GLAZE 0.000 ZA 1/16W
L301	945 086 5368	IMPEDANCE,220 OHM P	L5543	301 226 1516	MT-GLAZE 0.000 ZA 1/16W
L3011	945 068 8325	FILTER,EMI 20MHZ	L5544	301 226 1516	MT-GLAZE 0.000 ZA 1/16W
L302	945 086 5368	IMPEDANCE,220 OHM P	L5601	945 038 4579	INDUCTOR,33U M
L3021	945 068 8325	FILTER,EMI 20MHZ		945 075 1012	INDUCTOR,33U M
				945 041 1978	INDUCTOR,330 OHM

**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>
L5608	945 041 1978	INDUCTOR,330 OHM		307 209 1214	ZD UDZS-TE-176.2B
L5609	945 041 1978	INDUCTOR,330 OHM		408 063 7507	ZENER DIODE MM3Z6V2B
L561	945 086 5368	IMPEDANCE,220 OHM P	D1036	307 223 1115	ZENER DIODE 02DZ6.2Y(TPH3)
L5610	945 041 1978	INDUCTOR,330 OHM		307 209 1214	ZD UDZS-TE-176.2B
L5611	945 062 2930	INDUCTOR,10U M		408 063 7507	ZENER DIODE MM3Z6V2B
L5612	945 062 2930	INDUCTOR,10U M	D1041	307 223 1115	ZENER DIODE 02DZ6.2Y(TPH3)
L5613	945 041 1978	INDUCTOR,330 OHM		307 209 1214	ZD UDZS-TE-176.2B
L5614	945 041 1978	INDUCTOR,330 OHM		408 063 7507	ZENER DIODE MM3Z6V2B
L5616	945 041 1978	INDUCTOR,330 OHM	D1042	307 223 1115	ZENER DIODE 02DZ6.2Y(TPH3)
L5661	945 040 6455	INDUCTOR,4.7U M		307 209 1214	ZD UDZS-TE-176.2B
L5663	945 041 1978	INDUCTOR,330 OHM		408 063 7507	ZENER DIODE MM3Z6V2B
L5702	945 041 1978	INDUCTOR,330 OHM	D1091	307 205 5216	DIODE RB521S-30-TE61
L5703	945 041 1978	INDUCTOR,330 OHM	D1092	307 205 5216	DIODE RB521S-30-TE61
L5704	945 041 1978	INDUCTOR,330 OHM	D2891	307 223 1115	ZENER DIODE 02DZ6.2Y(TPH3)
L7811	945 062 2855	INDUCTOR,33U M		307 209 1214	ZD UDZS-TE-176.2B
L7841	945 062 2855	INDUCTOR,33U M		408 063 7507	ZENER DIODE MM3Z6V2B
L7861	945 062 2855	INDUCTOR,33U M	D2892	307 223 1115	ZENER DIODE 02DZ6.2Y(TPH3)
L8001	945 041 1978	INDUCTOR,330 OHM		307 209 1214	ZD UDZS-TE-176.2B
L8002	945 041 1978	INDUCTOR,330 OHM		408 063 7507	ZENER DIODE MM3Z6V2B
L8003	945 041 1978	INDUCTOR,330 OHM	D2893	307 223 1115	ZENER DIODE 02DZ6.2Y(TPH3)
L8004	945 041 1978	INDUCTOR,330 OHM		307 209 1214	ZD UDZS-TE-176.2B
L8007	945 041 1978	INDUCTOR,330 OHM		408 063 7507	ZENER DIODE MM3Z6V2B
L8042	945 041 1978	INDUCTOR,330 OHM	D2894	307 223 1115	ZENER DIODE 02DZ6.2Y(TPH3)
L8166	945 086 5368	IMPEDANCE,220 OHM P		307 209 1214	ZD UDZS-TE-176.2B
L821	945 086 5368	IMPEDANCE,220 OHM P		408 063 7507	ZENER DIODE MM3Z6V2B
L822	945 086 5368	IMPEDANCE,220 OHM P	D3051	307 163 0414	DIODE 1SS352-(TPH3)
L823	945 086 5368	IMPEDANCE,220 OHM P		307 149 0810	DIODE 1SS355-TE-17
L824	945 086 5368	IMPEDANCE,220 OHM P		408 062 7201	DIODE 1SS35
L9884	945 086 5368	IMPEDANCE,220 OHM P	D3601	307 163 0414	DIODE 1SS352-(TPH3)
L9885	945 086 5368	IMPEDANCE,220 OHM P		307 149 0810	DIODE 1SS355-TE-17
L9886	945 086 5368	IMPEDANCE,220 OHM P		408 062 7201	DIODE 1SS35
L9887	945 086 5368	IMPEDANCE,220 OHM P	D3602	307 163 0414	DIODE 1SS352-(TPH3)
L9888	945 086 5368	IMPEDANCE,220 OHM P		307 149 0810	DIODE 1SS355-TE-17
L9889	945 086 5368	IMPEDANCE,220 OHM P		408 062 7201	DIODE 1SS35
L9890	945 086 5368	IMPEDANCE,220 OHM P	D3603	307 163 0414	DIODE 1SS352-(TPH3)
L9891	945 086 5368	IMPEDANCE,220 OHM P		307 149 0810	DIODE 1SS355-TE-17
L9892	945 086 5368	IMPEDANCE,220 OHM P		408 062 7201	DIODE 1SS35
L9893	945 086 5368	IMPEDANCE,220 OHM P	D3611	307 163 0414	DIODE 1SS352-(TPH3)
<b>DIODE</b>				307 149 0810	DIODE 1SS355-TE-17
D001	307 163 0414	DIODE 1SS352-(TPH3)		408 062 7201	DIODE 1SS35
	307 149 0810	DIODE 1SS355-TE-17	D3612	307 163 0414	DIODE 1SS352-(TPH3)
	408 062 7201	DIODE 1SS35		307 149 0810	DIODE 1SS355-TE-17
D002	307 163 0414	DIODE 1SS352-(TPH3)		408 062 7201	DIODE 1SS35
	307 149 0810	DIODE 1SS355-TE-17	D3613	307 163 0414	DIODE 1SS352-(TPH3)
	408 062 7201	DIODE 1SS35		307 149 0810	DIODE 1SS355-TE-17
D008	307 222 5916	ZENER DIODE UDZS3.6B-TE-17		408 062 7201	DIODE 1SS35
D1001	307 223 1115	ZENER DIODE 02DZ6.2Y(TPH3)	D3614	307 163 0414	DIODE 1SS352-(TPH3)
	307 209 1214	ZD UDZS-TE-176.2B		307 149 0810	DIODE 1SS355-TE-17
	408 063 7507	ZENER DIODE MM3Z6V2B		408 062 7201	DIODE 1SS35
D1002	307 223 1115	ZENER DIODE 02DZ6.2Y(TPH3)	D3616	307 163 0414	DIODE 1SS352-(TPH3)
	307 209 1214	ZD UDZS-TE-176.2B		307 149 0810	DIODE 1SS355-TE-17
	408 063 7507	ZENER DIODE MM3Z6V2B		408 062 7201	DIODE 1SS35
D1003	307 223 1115	ZENER DIODE 02DZ6.2Y(TPH3)	D3617	307 163 0414	DIODE 1SS352-(TPH3)
	307 209 1214	ZD UDZS-TE-176.2B		307 149 0810	DIODE 1SS355-TE-17
	408 063 7507	ZENER DIODE MM3Z6V2B		408 062 7201	DIODE 1SS35
D1011	307 223 1115	ZENER DIODE 02DZ6.2Y(TPH3)	D3621	307 163 0414	DIODE 1SS352-(TPH3)
	307 209 1214	ZD UDZS-TE-176.2B		307 149 0810	DIODE 1SS355-TE-17
	408 063 7507	ZENER DIODE MM3Z6V2B		408 062 7201	DIODE 1SS35
D1024	307 223 1115	ZENER DIODE 02DZ6.2Y(TPH3)	D3622	307 163 0414	DIODE 1SS352-(TPH3)
	307 209 1214	ZD UDZS-TE-176.2B		307 149 0810	DIODE 1SS355-TE-17
	408 063 7507	ZENER DIODE MM3Z6V2B		408 062 7201	DIODE 1SS35
D1026	307 223 1115	ZENER DIODE 02DZ6.2Y(TPH3)	D3623	307 163 0414	DIODE 1SS352-(TPH3)
	307 209 1214	ZD UDZS-TE-176.2B		307 149 0810	DIODE 1SS355-TE-17
	408 063 7507	ZENER DIODE MM3Z6V2B		408 062 7201	DIODE 1SS35
D1031	307 210 5416	DIODE RB551V-30-TE-17	D3624	307 163 0414	DIODE 1SS352-(TPH3)
D1034	307 223 1115	ZENER DIODE 02DZ6.2Y(TPH3)		307 149 0810	DIODE 1SS355-TE-17
				408 062 7201	DIODE 1SS35

## 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>		
D3626	307 163 0414	DIODE	1SS352-(TPH3)		SC1031	945 076 3503	SURGE-ABSORBER		
	307 149 0810	DIODE	1SS355-TE-17		SC1032	945 076 3503	SURGE-ABSORBER		
	408 062 7201	DIODE	1SS35		SC1033	945 076 3503	SURGE-ABSORBER		
D3627	307 163 0414	DIODE	1SS352-(TPH3)		SC2011	945 076 3503	SURGE-ABSORBER		
	307 149 0810	DIODE	1SS355-TE-17		SC2021	945 076 3503	SURGE-ABSORBER		
	408 062 7201	DIODE	1SS35		SC2031	945 076 3503	SURGE-ABSORBER		
D3644	307 163 0414	DIODE	1SS352-(TPH3)		SC2041	945 076 3503	SURGE-ABSORBER		
	307 149 0810	DIODE	1SS355-TE-17		SC2051	945 076 3503	SURGE-ABSORBER		
	408 062 7201	DIODE	1SS35		SC3001	945 076 3503	SURGE-ABSORBER		
D4812	307 223 1115	ZENER	DIODE 02DZ6.2Y(TPH3		SC3011	945 076 3503	SURGE-ABSORBER		
	307 209 1214	ZD	UDZS-TE-176.2B		SC3021	945 076 3503	SURGE-ABSORBER		
	408 063 7507	ZENER	DIODE MM3Z6V2B		SC3031	945 076 3503	SURGE-ABSORBER		
D4813	307 223 1115	ZENER	DIODE 02DZ6.2Y(TPH3		SC3051	945 076 3503	SURGE-ABSORBER		
	307 209 1214	ZD	UDZS-TE-176.2B		SC3061	945 076 3503	SURGE-ABSORBER		
	408 063 7507	ZENER	DIODE MM3Z6V2B		SC3081	945 076 3503	SURGE-ABSORBER		
D5061	307 163 0414	DIODE	1SS352-(TPH3)		SC3082	945 076 3503	SURGE-ABSORBER		
	307 149 0810	DIODE	1SS355-TE-17		SC4001	945 076 3503	SURGE-ABSORBER		
	408 062 7201	DIODE	1SS35		SC4002	945 076 3503	SURGE-ABSORBER		
D5062	307 163 0414	DIODE	1SS352-(TPH3)		SC4003	945 076 3503	SURGE-ABSORBER		
	307 149 0810	DIODE	1SS355-TE-17		SC4004	945 076 3503	SURGE-ABSORBER		
	408 062 7201	DIODE	1SS35		SC4006	945 076 3503	SURGE-ABSORBER		
D5541	307 247 8827	DIODE	RF101L2S		X1331	945 088 7179	OSC,CRYSTAL 27.0MHZ		
D5542	307 247 8827	DIODE	RF101L2S						
D5543	307 247 8827	DIODE	RF101L2S						
D5544	307 247 8827	DIODE	RF101L2S						
D5601	307 254 2716	DIODE	CMS16						
D5611	307 254 2716	DIODE	CMS16						
D5612	307 254 2716	DIODE	CMS16						
D5622	307 163 0414	DIODE	1SS352-(TPH3)						
	307 149 0810	DIODE	1SS355-TE-17						
	408 062 7201	DIODE	1SS35						
D5623	307 163 0414	DIODE	1SS352-(TPH3)						
	307 149 0810	DIODE	1SS355-TE-17						
	408 062 7201	DIODE	1SS35						
D5624	307 163 0414	DIODE	1SS352-(TPH3)						
	307 149 0810	DIODE	1SS355-TE-17						
	408 062 7201	DIODE	1SS35						
D5703	307 163 0414	DIODE	1SS352-(TPH3)						
	307 149 0810	DIODE	1SS355-TE-17						
	408 062 7201	DIODE	1SS35						
D5704	307 163 0414	DIODE	1SS352-(TPH3)						
	307 149 0810	DIODE	1SS355-TE-17						
	408 062 7201	DIODE	1SS35						
D7812	307 254 2716	DIODE	CMS16						
D7842	307 254 2716	DIODE	CMS16						
D7862	307 254 2716	DIODE	CMS16						
D8003	307 232 0611	ZENER	DIODE UDZS3.3B-TE-1						
D8161	307 205 5216	DIODE	RB521S-30-TE61						
D8162	307 205 5216	DIODE	RB521S-30-TE61						
D8163	307 223 1115	ZENER	DIODE 02DZ6.2Y(TPH3						
	307 209 1214	ZD	UDZS-TE-176.2B						
	408 063 7507	ZENER	DIODE MM3Z6V2B						
<b>MISCELLANEOUS</b>									
IC4811	307 236 0310	SENSOR	MPXHZ6115A6T1						
K10A	945 076 2698	SOCKET,DVI	29P						
K10B	645 089 7696	SOCKET,D-SUB	15P						
K20A	945 076 2735	JACK,RCA-2							
	952 001 9585	JACK,RCA-2							
K20B	945 067 6124	TERMINAL,BOARD							
	952 001 7932	TERMINAL, BOARD							
K30B	652 002 6704	JACK,PHONE	D3.6						
K40A	645 089 7702	SOCKET,D-SUB	15P						
K40B	945 053 4936	PLUG,D-SUB	9P						
SC1021	945 076 3503	SURGE-ABSORBER							
SC1022	945 076 3503	SURGE-ABSORBER							
SC1023	945 076 3503	SURGE-ABSORBER							
<b>CAPACITOR</b>									
C6801	303 453 8917	CERAMIC							
	303 453 8610	CERAMIC							
	303 409 3426	CERAMIC							
C6802	303 453 8917	CERAMIC							
	303 453 8610	CERAMIC							
	303 409 3426	CERAMIC							
<b>655 002 4695 ASSY,PWB,R/C KK7AC</b>									
<b>CAPACITOR</b>									
C2901	403 455 1012	CERAMIC							
	303 433 1112	CERAMIC							
C2902	303 453 8719	CERAMIC							
	303 453 9211	CERAMIC							
	303 282 5118	CERAMIC							
C2903	303 358 3215	CERAMIC							
	303 368 7319	CERAMIC							
<b>RESISTOR</b>									
R2901	301 226 1516	MT-GLAZE							
R2903	301 224 8814	MT-GLAZE							
<b>MISCELLANEOUS</b>									
A2901	652 002 3352	UNIT,REMOCON, RECEIVER							
<b>655 002 4688 ASSY,PWB,CONTROL KK7AC</b>									
<b>TRANSISTOR</b>									
Q6841	406 021 7804	TR	2SC4617						
Q6842	406 021 7804	TR	2SC4617						
Q6843	406 021 7804	TR	2SC4617						
Q6844	406 021 7804	TR	2SC4617						
Q6845	406 021 7804	TR	2SC4617						
Q6861	305 134 5928	TR	2SA1037AK-T146-R						
	305 147 2218	TR	2SA1037AK-S-T146						
	305 173 9618	TR	2SA1235A1E						
	305 173 9717	TR	2SA1235A1F						
	405 220 3115	TR	ISA1235AC1E						
	405 220 3016	TR	ISA1235AC1F						
Q6862	406 021 7804	TR	2SC4617						
<b>CAPACITOR</b>									
C6801	303 453 8917	CERAMIC							
	303 453 8610	CERAMIC							
	303 409 3426	CERAMIC							
C6802	303 453 8917	CERAMIC							
	303 453 8610	CERAMIC							
	303 409 3426	CERAMIC							

## Electrical Parts List

**Electrical Parts List**

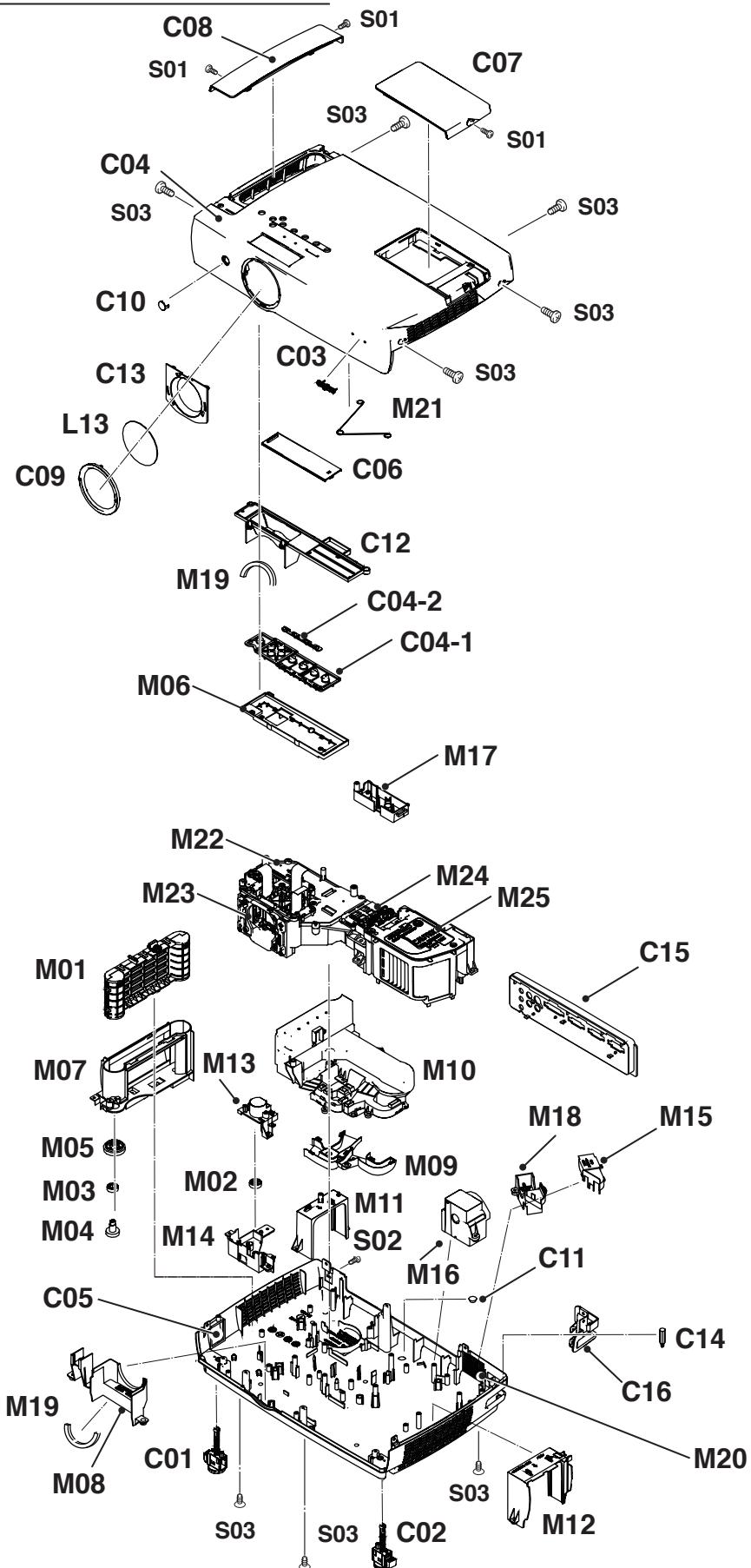
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<b>CAPACITOR</b>									
C611	303 222 1326	CERAMIC	1000P	K	1K	R672	301 150 6212	MT-GLAZE	1K JA 1/10W
	304 084 6300	CERAMIC	1000P	K	1K	R673	301 264 2919	MT-GLAZE	12K FA 1/10W
C612	303 222 1326	CERAMIC	1000P	K	1K	R674	301 264 4715	MT-GLAZE	1.8K FA 1/10W
	304 084 6300	CERAMIC	1000P	K	1K	R675	301 150 6212	MT-GLAZE	1K JA 1/10W
C613	303 451 4119	MT-POLYEST	1U	K	450V	R676	301 264 2810	MT-GLAZE	1.2K FA 1/10W
C614	303 451 4119	MT-POLYEST	1U	K	450V	R683	301 265 0211	MT-GLAZE	390 FA 1/10W
C615	404 118 3609	ELECT	150U	M	420V	R684	301 264 9314	MT-GLAZE	3.3K FA 1/10W
C621	303 336 3510	CERAMIC	0.47U	K	16V				
C622	304 091 4504	CERAMIC	0.047U	K	50V				
C623	304 090 1207	CERAMIC	0.01U	K	50V				
C625	304 090 1207	CERAMIC	0.01U	K	50V				
C626	303 396 9613	CERAMIC	1U	K	25V				
C627	304 091 3309	CERAMIC	2200P	K	50V				
C631	303 157 4215	CERAMIC	220P	J	50V				
C632	303 245 4417	CERAMIC	470P	K	2K				
C633	303 265 3216	CERAMIC	1000P	J	50V				
C634	304 091 3309	CERAMIC	2200P	K	50V				
C641	304 091 2609	CERAMIC	0.1U	K	50V				
C644	303 417 9912	CERAMIC	4.7U	K	25V				
C651	304 097 0005	ELECT	100U	M	25V				
C652	304 073 5109	CERAMIC	470P	K	250V				
C653	303 367 0410	CERAMIC	0.1U	K	50V				
	303 370 1510	CERAMIC	0.1U	K	50V				
C661	303 445 4405	ELECT	1800U	M	25V				
C662	303 367 0410	CERAMIC	0.1U	K	50V				
	304 091 2609	CERAMIC	0.1U	K	50V				
C663	303 367 0410	CERAMIC	0.1U	K	50V				
	304 091 2609	CERAMIC	0.1U	K	50V				
C664	303 429 6718	ELECT	1500U	M	10V				
C665	303 409 9913	ELECT	470U	M	16V				
C671	304 091 2609	CERAMIC	0.1U	K	50V				
C691	304 073 4508	CERAMIC	2200P	K	250V				
C692	304 073 4508	CERAMIC	2200P	K	250V				
<b>RESISTOR</b>									
R611	401 353 0311	MT-GLAZE	430K	JA	1/3W				
R612	401 353 0212	MT-GLAZE	360K	JA	1/3W				
R613	301 256 6314	MT-GLAZE	47K	JA	1/10W				
R614	302 106 5508	RESISTER	0.075	KB	5W				
R615	301 188 3313	MT-GLAZE	680K	JA	1/4W				
R616	301 188 3313	MT-GLAZE	680K	JA	1/4W				
R621	301 265 5711	MT-GLAZE	8.2K	FA	1/10W				
R622	301 264 9215	MT-GLAZE	330	FA	1/10W				
R624	301 162 2912	MT-GLAZE	220	JA	1/10W				
R625	301 256 5614	MT-GLAZE	47	JA	1/10W				
R626	301 150 6014	MT-GLAZE	0.000	ZA	1/10W				
R627	301 150 5918	MT-GLAZE	10K	JA	1/10W				
R628	301 150 5918	MT-GLAZE	10K	JA	1/10W				
R629	301 255 7312	MT-GLAZE	510K	JA	1/10W				
R631	301 255 7718	MT-GLAZE	11K	JA	1/10W				
R633	301 150 6014	MT-GLAZE	0.000	ZA	1/10W				
R634	301 256 1715	MT-GLAZE	33K	JA	1/10W				
R635	302 099 6308	OXIDE-MT	0.39JA		1W				
R636	301 162 3018	MT-GLAZE	22K	JA	1/10W				
R641	301 150 5918	MT-GLAZE	10K	JA	1/10W				
R642	301 256 6611	MT-GLAZE	68K	JA	1/10W				
R643	301 150 5918	MT-GLAZE	10K	JA	1/10W				
R644	301 150 5918	MT-GLAZE	10K	JA	1/10W				
R646	301 256 7212	MT-GLAZE	18K	JA	1/10W				
R648	301 256 7212	MT-GLAZE	18K	JA	1/10W				
R651	301 150 5918	MT-GLAZE	10K	JA	1/10W				
R652	301 183 7316	MT-GLAZE	8.2	JA	1/2W				
R662	301 152 3219	MT-GLAZE	330	JA	1/10W				
R671	301 256 7618	MT-GLAZE	3.9K	JA	1/10W				
<b>VARIABLE RESISTOR</b>									
VR621	645 095 2579		VR,SEMI,	1K	N				
<b>TRANSFORMER</b>									
▲T651	645 097 6483		TRANS,POWER,PULSE						
<b>COIL</b>									
▲L611	645 098 0473		LINE FILTER						
L612	945 077 6565		INDUCTOR,900U						
	945 084 0273		INDUCTOR,1400U						
L613	910 244 3975		CORE						
L614	910 244 3975		CORE						
L631	910 078 5954		PIPE CORE						
L661	910 244 3975		CORE						
L662	910 244 3975		CORE						
L663	945 041 1978		INDUCTOR,330 OHM						
<b>DIODE</b>									
D611	307 191 3903		DIODE FML-G16S						
D611C	645 098 1715		CORE,FERRITE						
D613	307 149 0810		DIODE 1SS355-TE-17						
D632	307 247 8827		DIODE RF101L2S						
D633	307 146 8116		DIODE EG01C						
D651	307 247 8827		DIODE RF101L2S						
D661	407 261 9504		DIODE YG862C10R						
D662	307 222 9607		DIODE FMB-2306						
	307 202 9801		DIODE FMB-26L						
	307 253 7504		DIODE RB085T-60						
	307 250 2403		DIODE RB225T-60						
D663	307 247 8827		DIODE RF101L2S						
	307 190 4119		DIODE SFPL-52V						
DB611	307 202 7708		DIODE D10XB60						
<b>MISCELLANEOUS</b>									
▲F631	324 006 1305		FUSE 250V 2.5A						
Q611F	645 098 1715		CORE,FERRITE						
▲PC661	307 223 7315		PC TLP421F(D4-GB-TP4)						
	307 223 8312		PC TLP421F(D4-GR-TP4)						
▲PC671	307 223 7315		PC TLP421F(D4-GB-TP4)						
	307 223 8312		PC TLP421F(D4-GR-TP4)						
PTH611	308 037 5501		THERMISTOR NTPDB5R0LDHBO						
PTH641	408 062 4606		TH PRF18BD471QB1RB						
ZD631	307 206 5413		ZD UDZS-TE-178.2B						
<b>655 002 4640 ASSY,PWB,LINE FILTER KK7AC</b>									
<b>CAPACITOR</b>									
▲C601	304 088 8805		MT-POLYEST 0.22U M 275V						
	304 094 3801		MT-POLYEST 0.22U K 275V						
▲C602	404 113 2904		MT-POLYEST 0.33U K 275V						
C603	304 073 4508		CERAMIC 2200P K 250V						
C604	304 073 4508		CERAMIC 2200P K 250V						
C605	404 113 2904		MT-POLYEST 0.33U K 275V						
<b>RESISTOR</b>									
▲R601	302 105 6803		OXIDE-MT 240KJA 1W						

**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>
<b>VARIABLE RESISTOR</b>					
△VA601	407 255 6304	VARISTOR MYG3-14K300ZT			
	408 061 9701	VARISTOR S14K300E2S5M4,2			
<b>COIL</b>					
△L601	945 050 2232	LINE FILTER			
△L602	945 050 2232	LINE FILTER			
LF601	645 093 1765	SOCKET,INLET AC 3P			
<b>MISCELLANEOUS</b>					
△F601	323 021 7804	FUSE 250V 6.3A			
<b>PACKING MATERIALS</b>					
	610 339 8686	CARTON CASE-KK7AC FOR KK7-XC5000			
	610 339 8648	CARTON CASE-KL7AC FOR KL7-XC5500			
	610 339 8655	CUSHION BTM-KL7AC			
	610 339 8631	CUSHION TOP-KL7AC			
	645 097 3987	POLY BAG-0550X0600*NC*R8P			
	655 002 4954	BOPP TAPE (BOMEI)			
<b>ACCESSORIES</b>					
<b>OWNER'S MANUAL</b>					
	610 339 8891	CD-ROM, OWNERS MANUAL-KK7AC			
	655 002 4541	SETUP INST -KK7AC			
<b>REMOTE CONTROL</b>					
	645 097 1600	ASSY, REMOCON CXYV			
	910 321 4482	RC-BATTERY LID-CXTJ			
△AC CORD	945 064 6363	CORD,POWER-3.0MK,US			
	945 054 1156	CORD,POWER-3.0MK,EU			
	945 054 1149	CORD,POWER-3.138MK,UK			
<b>MISCELLANEOUS</b>					
	945 073 4855	CABLE,INTERFACE VGA			
	645 093 1642	CABLE,INTERFACE VGA			

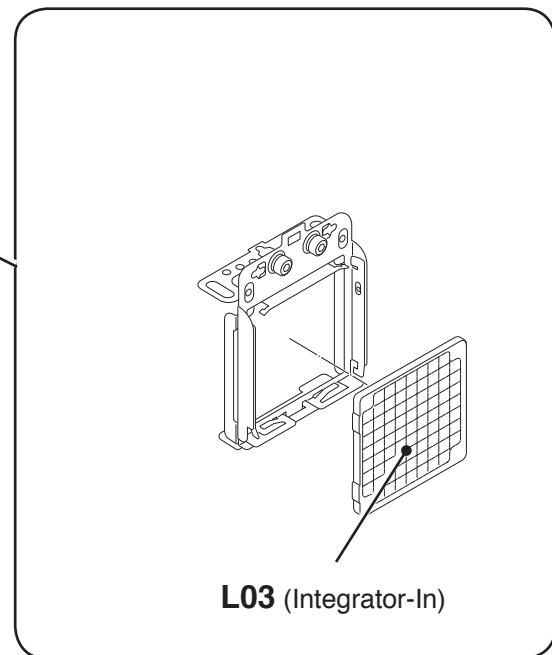
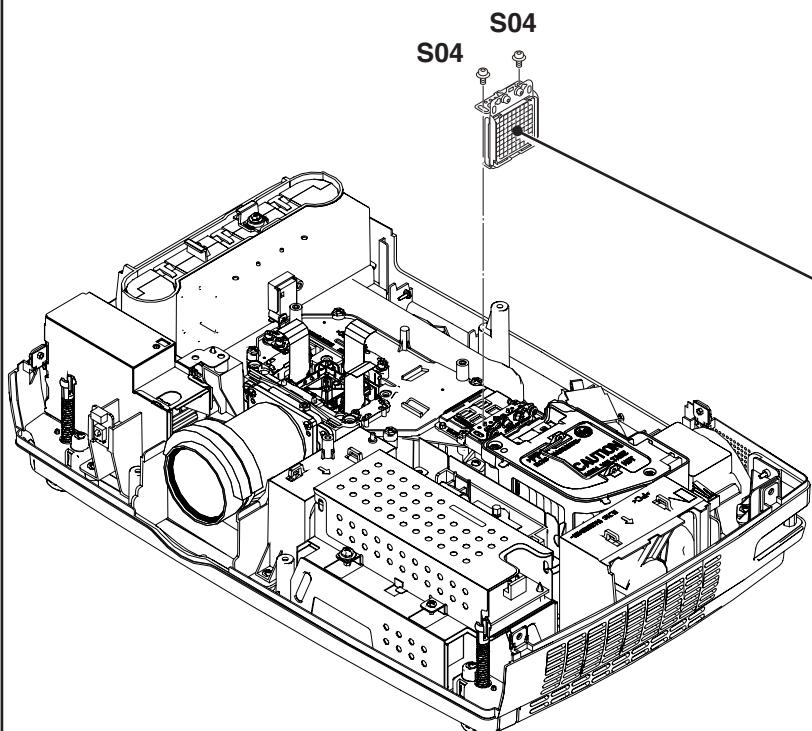
# Mechanical Parts List

## Cabinet Parts Location

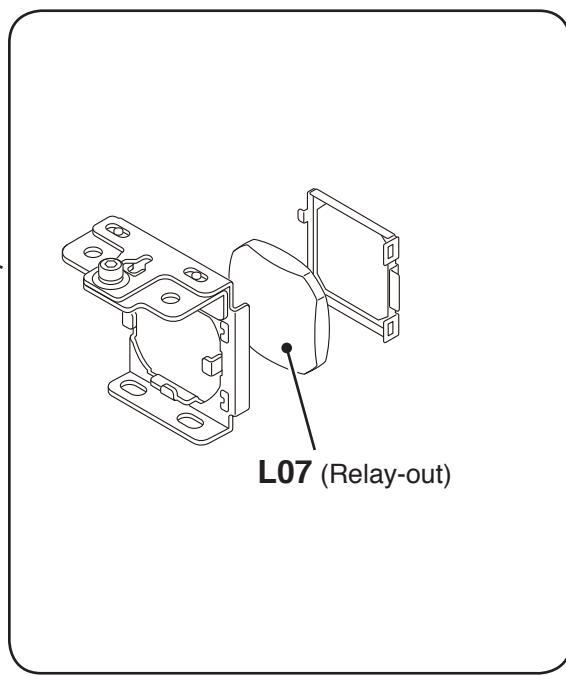
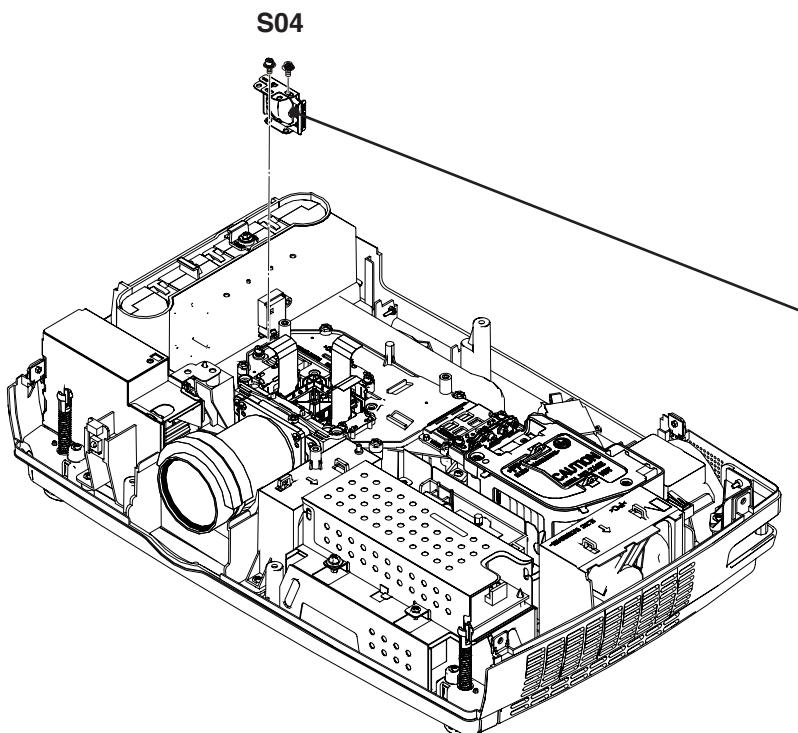


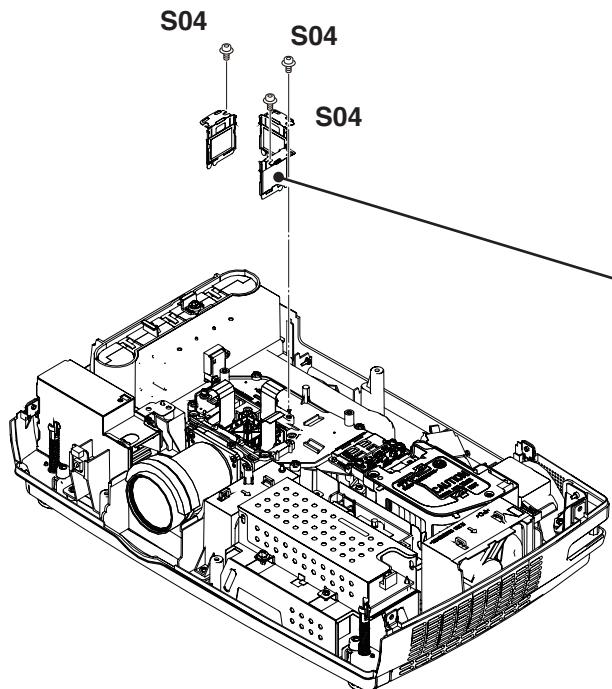
**Mechanical Parts List****Optical Parts Location**

Integrator Lens-In

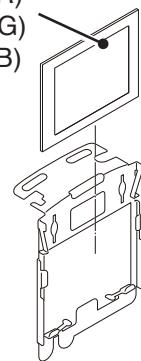
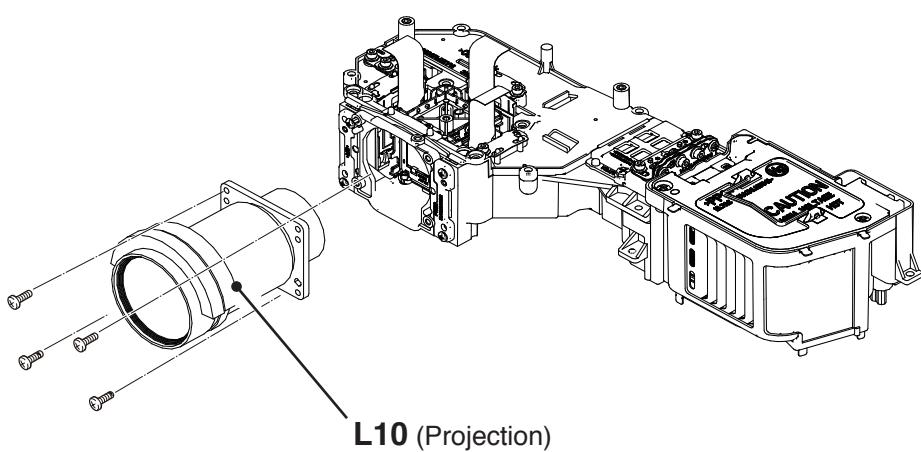
**L03 (Integrator-In)**

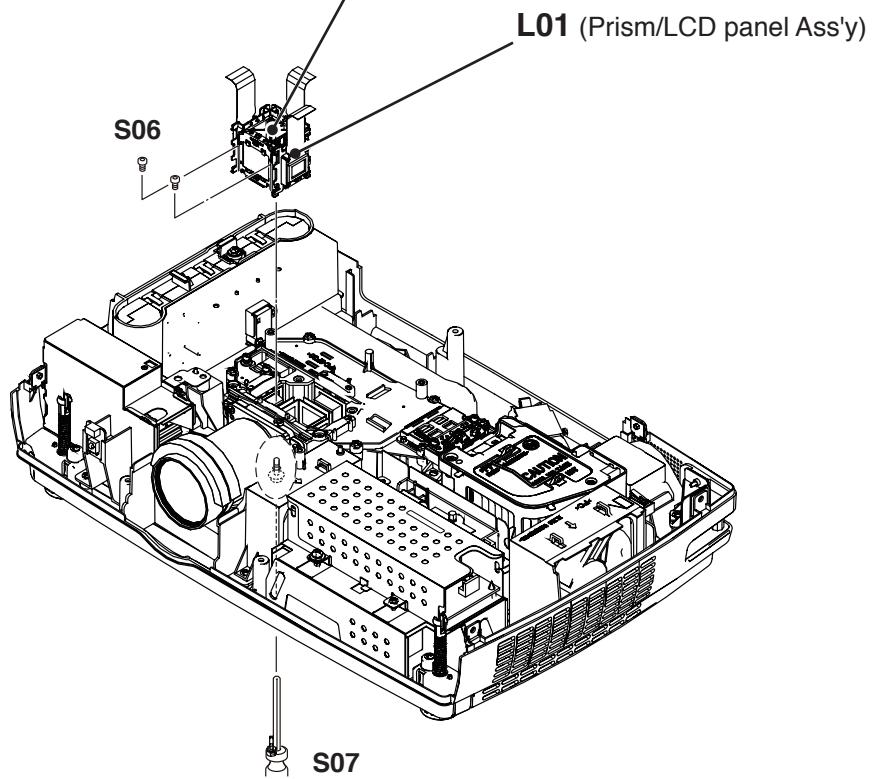
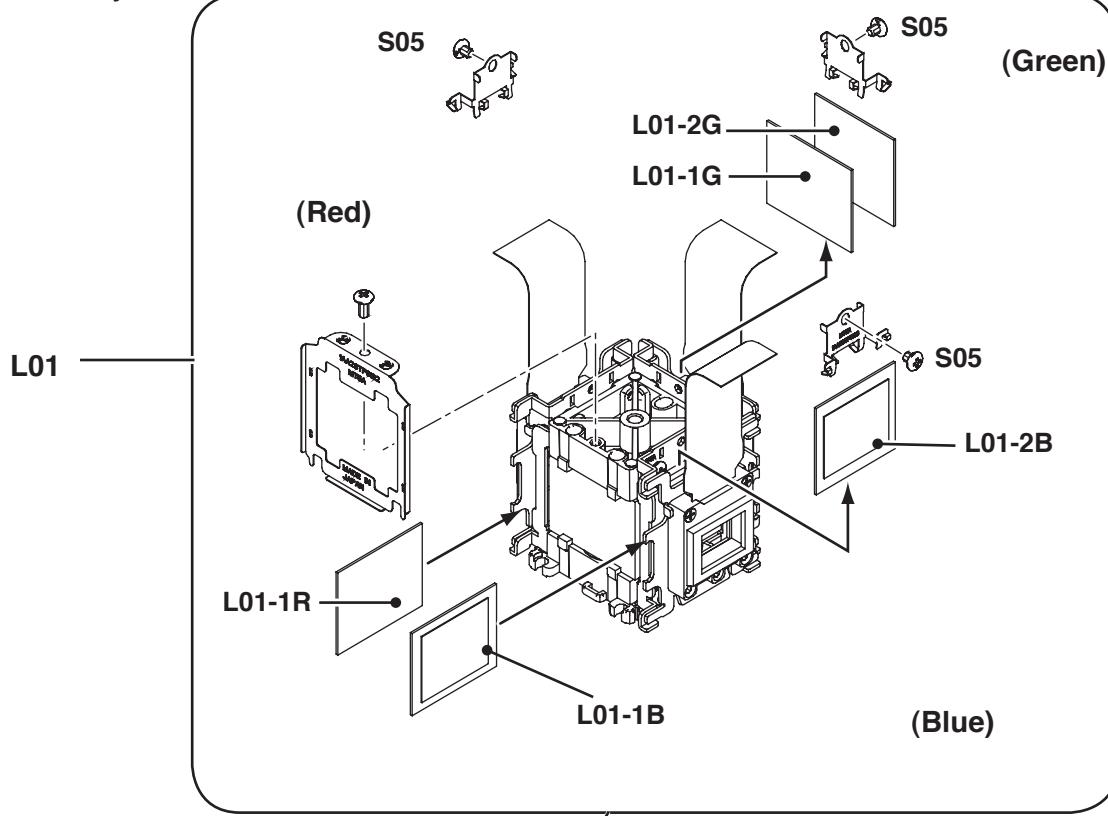
Relay Lens-Out

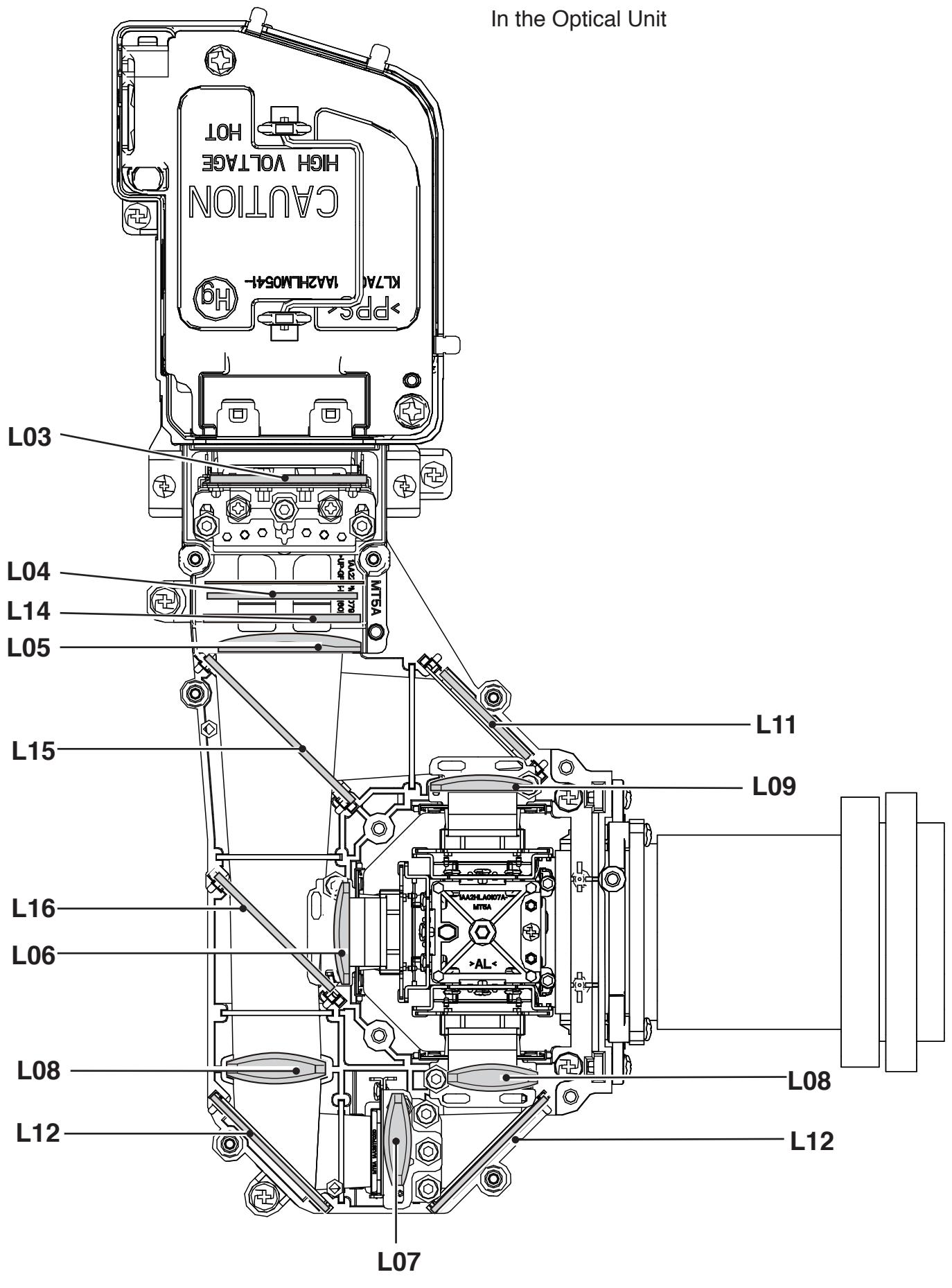
**L07 (Relay-out)**

**Mechanical Parts List****Polarized Glass-In**

**L02-R**(Polarized-in-R)  
**L02-G**(Polarized-in-G)  
**L02-B**(Polarized-in-B)

**Projection Lens**

**Mechanical Parts List****Prism/LCD Panel Assy**

**Mechanical Parts List****In the Optical Unit**

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

<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>
S07	312 070 3400	SPECIAL SCREW-3.0X10V			
<b>FOR KK7-XC5000</b>					
<b>CABINET PARTS</b>					
C01	610 339 8563	ASSY STAND LEFT-KL7AC	L01	610 341 3624	ASSY,PNL/PRISM-KK7AC (Including Key No.L01-1R to L01-2B and LCD Panels)
C02	610 339 8556	ASSY STAND RIGHT-KL7AC	L01-1R	645 095 2722	POLARIZED GLASS(OUT/R)
C03	610 340 6909	BADGE-KL7AC	L01-1G	645 097 9712	POLARIZED GLASS(OUT/G)
C04	610 341 3631	CABINET TOP SERVICE-KL7AC (Including Key No.C04-1 and C04-2)	L01-1B	645 095 2746	POLARIZED GLASS(OUT/B)
C04-1	610 339 5777	BUTTON CONTROL-KL7AC	L01-2G	645 097 0702	PREPOLARIZED GLASS(OUT/G)
C04-2	610 339 5579	DEC INLAY LED-KL7AC	L01-2B	645 097 9729	PREPOLARIZED GLASS(OUT/B)
C05	610 339 5937	CAB BOTTOM-KL7AC	L02-R	645 097 0672	POLARIZED GLASS(IN/R)
C06	610 339 5470	COVER LENS-KL7AC	L02-G	645 097 0689	POLARIZED GLASS(IN/G)
C07	610 341 3679	COVER,LP SERVICE-KL7AC	L02-B	645 097 0696	POLARIZED GLASS(IN/B)
C08	610 339 5555	COVER FILTER-KL7AC	L03	945 078 0692	LENS,INTEGRATOR(IN)
C09	610 339 5494	DEC RING B-KL7AC	L04	645 098 4198	LENS,INTEGRATOR(OUT)-NC/L
C10	610 339 5586	DEC INLAY RC-KL7AC	L05	645 098 4204	LENS,CONDENSER(OUT)-NC
C11	910 325 2477	DEC LEG-PT5EC	L06	645 098 4211	LENS,CONDENSER(G)-NC
C12	610 339 5524	HOLDER SHUTTER-KL7AC	L07	945 078 0753	LENS,RELAY(OUT)
C13	610 339 5517	HOLDER FRONT GLASS-KL7AC	L08	945 078 0760	LENS,CONDENSER(R)
C14	610 339 5869	HOLDER SECURITY BAR-KL7AC	L09	945 087 1154	LENS,CONDENSER(B)
C15	610 339 5487	PANEL AV-KL7AC	L10	645 096 9218	LENS,PROJECTION
C16	610 339 6033	SHAFT SECURITY BAR-KL7AC	L11	945 081 7640	MIRROR(B)
			L12	945 081 7657	MIRROR(R)
			L13	645 097 4946	OPTICAL FILTER (BK7)
			L14	945 078 0845	PRISM(PBS)
			L15	945 085 0043	DICHROIC MIRROR (B)
			L16	945 078 0784	DICHROIC MIRROR(G)
<b>CHASSIS PARTS</b>					
M01	610 339 7665	ASSY,BOX FILTER-KL7AC			
M02	610 339 5647	GEAR A-KL7AC			
M03	610 339 5913	GEAR B-KL7AC			
M04	610 339 5920	GEAR C-KL7AC			
M05	610 342 4255	ASSY,GEAR-KL7AC			
M06	610 339 5784	HOLDER BUTTON-KL7AC			
M07	610 339 5838	HOLDER FILTER-KL7AC			
M08	610 339 5845	HOLDER LENS-KL7AC			
M09	610 339 5791	MTG DUCT PANEL BTM-KL7AC			
M10	610 339 5821	MTG DUCT PANEL TOP-KL7AC			
M11	610 339 5807	MTG FAN IN POWER-KL7AC			
M12	610 339 5814	MTG FAN LAMP OUT-KL7AC			
M13	610 339 5852	MTG MOTOR-KL7AC			
M14	610 339 5883	MTG GEAR-KL7AC			
M15	610 339 5890	MTG DUCT LAMP TOP-KL7AC			
M16	610 339 5876	MTG SPEAKER-KL7AC			
M17	610 339 5906	MTG MICRDSWITCH-KL7AC			
M18	610 339 6125	MTG DUCT LAMP BTM-KL7AC			
M19	610 340 7265	SP SHEET LENS-KL7AC			
M20	610 340 7258	SP SHEET SP HOLE-KL7AC			
M21	610 339 6064	SPRING SHUTTER-KL7AC			
M22	910 321 7780	OPTICAL BASE TOP B-MT5A			
M23	610 338 8632	OPTICAL BASE BTM-KL7AC			
M24	610 338 8649	OPTICAL BASE TOP A-KL7AC			
M25	610 339 1076	OPT BASE LAMP-KL7AC			
<b>SCREWS</b>					
S01	312 070 3707	SPECIAL SCREW			
S02	411 031 9304	SCR BIN 3X8			
S03	411 190 5605	SCR FLT 2X4			
S04	411 189 6507	BOLT HEX-SCT+SW+W 2.5X5			
S05	411 189 6309	SCR BIN 2X2			
S06	312 069 7105	SPECIAL SCREW V			

**Mechanical Parts List**

<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Key No.</b>	<b>Part No.</b>	<b>Description</b>			
<b>FOR KL7-XC5500</b>								
<b>CABINET PARTS</b>								
C01	610 339 8563	ASSY STAND LEFT-KL7AC	S07	312 070 3400	SPECIAL SCREW-3.0X10V			
C02	610 339 8556	ASSY STAND RIGHT-KL7AC	<b>OPTICAL PARTS</b>					
C03	610 340 6909	BADGE-KL7AC	L01	610 341 3594	ASSY,PNL/PRISM-KL7AC (Including Key No.L01-1R to L01-2B and LCD Panels)			
C04	610 341 3631	CABINET TOP SERVICE-KL7AC (Including Key No.C04-1 and C04-2)	L01-1R	945 077 8354	POLARIZED GLASS(OUT/R)			
C04-1	610 339 5777	BUTTON CONTROL-KL7AC		645 095 2722	POLARIZED GLASS(OUT/R)			
C04-2	610 339 5579	DEC INLAY LED-KL7AC	L01-1G	945 087 1185	POLARIZED GLASS(OUT/G)			
C05	610 339 5937	CAB BOTTOM-KL7AC		645 095 2739	POLARIZED GLASS(OUT/G)			
C06	610 339 5470	COVER LENS-KL7AC	L01-1B	945 082 0824	POLARIZED GLASS(OUT/B)			
C07	610 331 3679	COVER,LP SERVICE-KL7AC		645 095 2746	POLARIZED GLASS(OUT/B)			
C08	610 339 5555	COVER FILTER-KL7AC	L01-2G	945 077 8385	PRE-POLARIZED GLASS			
C09	610 339 5494	DEC RING B-KL7AC		645 095 2753	PRE-POLARIZED GLASS(OUT/G)			
C10	610 339 5586	DEC INLAY RC-KL7AC	L01-2B	945 083 6597	PRE-POLARIZED GLASS			
C11	910 325 2477	DEC LEG-PT5EC		645 095 2760	PREPOLARIZED GLASS(OUT/B)			
C12	610 339 5524	HOLDER SHUTTER-KL7AC	L02-G	945 087 1178	POLARIZED GLASS(IN/G)			
C13	610 339 5517	HOLDER FRONT GLASS-KL7AC		645 095 2708	POLARIZED GLASS(IN/G)			
C14	610 339 5869	HOLDER SECURITY BAR-KL7AC	L02-B	945 083 3886	POLARIZED GLASS(IN/B)			
C15	610 339 5487	PANEL AV-KL7AC		645 095 2715	POLARIZED GLASS(IN/B)			
C16	610 339 6033	SHAFT SECURITY BAR-KL7AC	L02-R	945 077 8347	POLARIZED GLASS(IN/R)			
<b>CHASSIS PARTS</b>				645 095 2692	POLARIZED GLASS(IN/R)			
M01	610 339 7665	ASSY,BOX FILTER-KL7AC	L03	945 078 0692	LENS,INTEGRATOR(IN)			
M02	610 339 5647	GEAR A-KL7AC	L04	945 078 0708	LENS,INTEGRATOR(OUT)			
M03	610 339 5913	GEAR B-KL7AC	L05	945 078 0722	LENS,CONDENSER(OUT)			
M04	610 339 5920	GEAR C-KL7AC	L06	945 078 0739	LENS,CONDENSER(G)			
M05	610 342 4255	ASSY,GEAR-KL7AC	L07	945 078 0753	LENS,RELAY(OUT)			
M06	610 339 5784	HOLDER BUTTON-KL7AC	L08	945 078 0760	LENS,CONDENSER(R)			
M07	610 339 5838	HOLDER FILTER-KL7AC	L09	945 087 1154	LENS,CONDENSER(B)			
M08	610 339 5845	HOLDER LENS-KL7AC	L10	645 096 9218	LENS,PROJECTION			
M09	610 339 5791	MTG DUCT PANEL BTM-KL7AC	L11	945 081 7640	MIRROR(B)			
M10	610 339 5821	MTG DUCT PANEL TOP-KL7AC	L12	945 081 7657	MIRROR(R)			
M11	610 339 5807	MTG FAN IN POWER-KL7AC	L13	645 097 4946	OPTICAL FILTER (BK7)			
M12	610 339 5814	MTG FAN LAMP OUT-KL7AC	L14	945 078 0845	PRISM(PBS)			
M13	610 339 5852	MTG MOTOR-KL7AC	L15	945 085 0043	DICHROIC MIRROR (B)			
M14	610 339 5883	MTG GEAR-KL7AC	L16	945 078 0784	DAICHROIC MIRROR(G)			
M15	610 339 5890	MTG DUCT LAMP TOP-KL7AC						
M16	610 339 5876	MTG SPEAKER-KL7AC						
M17	610 339 5906	MTG MICRDSWITCH-KL7AC						
M18	610 339 6125	MTG DUCT LAMP BTM-KL7AC						
M19	610 340 7265	SP SHEET LENS-KL7AC						
M20	610 340 7258	SP SHEET SP HOLE-KL7AC						
M21	610 339 6064	SPRING SHUTTER-KL7AC						
M22	910 321 7780	OPTICAL BASE TOP B-MT5A						
M23	610 338 8632	OPTICAL BASE BTM-KL7AC						
M24	610 338 8649	OPTICAL BASE TOP A-KL7AC						
M25	610 339 1076	OPT BASER LAMP-KL7AC						
<b>SCREWS</b>								
S01	312 070 3707	SPECIAL SCREW						
S02	411 031 9304	SCR BIN 3X8						
S03	411 190 5605	SCR FLT 2X4						
S04	411 189 6507	BOLT HEX-SCT+SW+W 2.5X5						
S05	411 189 6309	SCR BIN 2X2						
S06	312 069 7105	SPECIAL SCREW V						

**SANYO**

## Diagrams & Drawings

### Schematic Diagrams Printed Wiring Board Drawings

Model	Chassis No.
PLC-XC50	KK7-XC5000
PLC-XC55	KL7-XC5500

These schematic diagrams and printed wiring board drawings are part of the service manual original for chassis No. KK7-XC5000, KL7-XC5500, models PLC-XC50, PLC-XC55.

File with the service manual No. SM5110979-00.

#### Note:

All 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 from the actual set. When you order the service parts, use service parts code mentioned on the parts list in this service manual.

## 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.

### Capacitor Reading

Example 2000 K K 1000 BG	↑	↑	↑	↑	Characteristic
Example 160 E M 10	↑	↑	↑	↑	Capacitance value Excepting electric capacitors, all capacitance values of less than 1 are expressed in $\mu\text{F}$ and more than 1 are in pF. Tolerance Type Rated voltage

#### ● 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 polyimide
B	Ceramic (semiconductor)
G	Metalized polyester
Y	Composite film
S	Styrol
T	Tantalum oxide solid electrolytic
U	Organic semiconductive electrolyte
D	Electric double layer electrolytic

#### ● Tolerance table

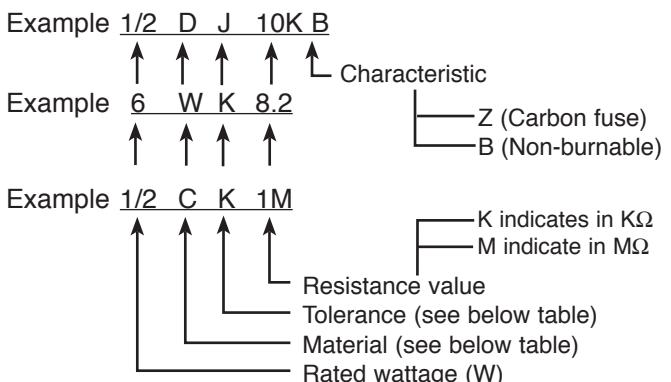
Mark	Tolerance
A	not specified
B	$\pm 0.1$
C	$\pm 0.25$
D	$\pm 0.5$
F	$\pm 1$
G	$\pm 2$
E	$\pm 2.5$
H	$\pm 3$
J	$\pm 5$
K	$\pm 10$
M	$\pm 20$
N	$\pm 30$
P	+100 -0
Q	+30 -10
T	+50 -10
U	+75 -10
V	+20 -10
W	+100 -10
X	+40 -20
Y	+150 -10
Z	+80 -20

### Coil Reading

Example L2 C1 4R7 K N	↑	↑	↑	↑	Tolerance Inductance value Manufacture code Unique code
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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	$\pm 20$

### Resistor Reading



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 winding 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

### 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
AD	NF, NG
AE	PA, QA, RA

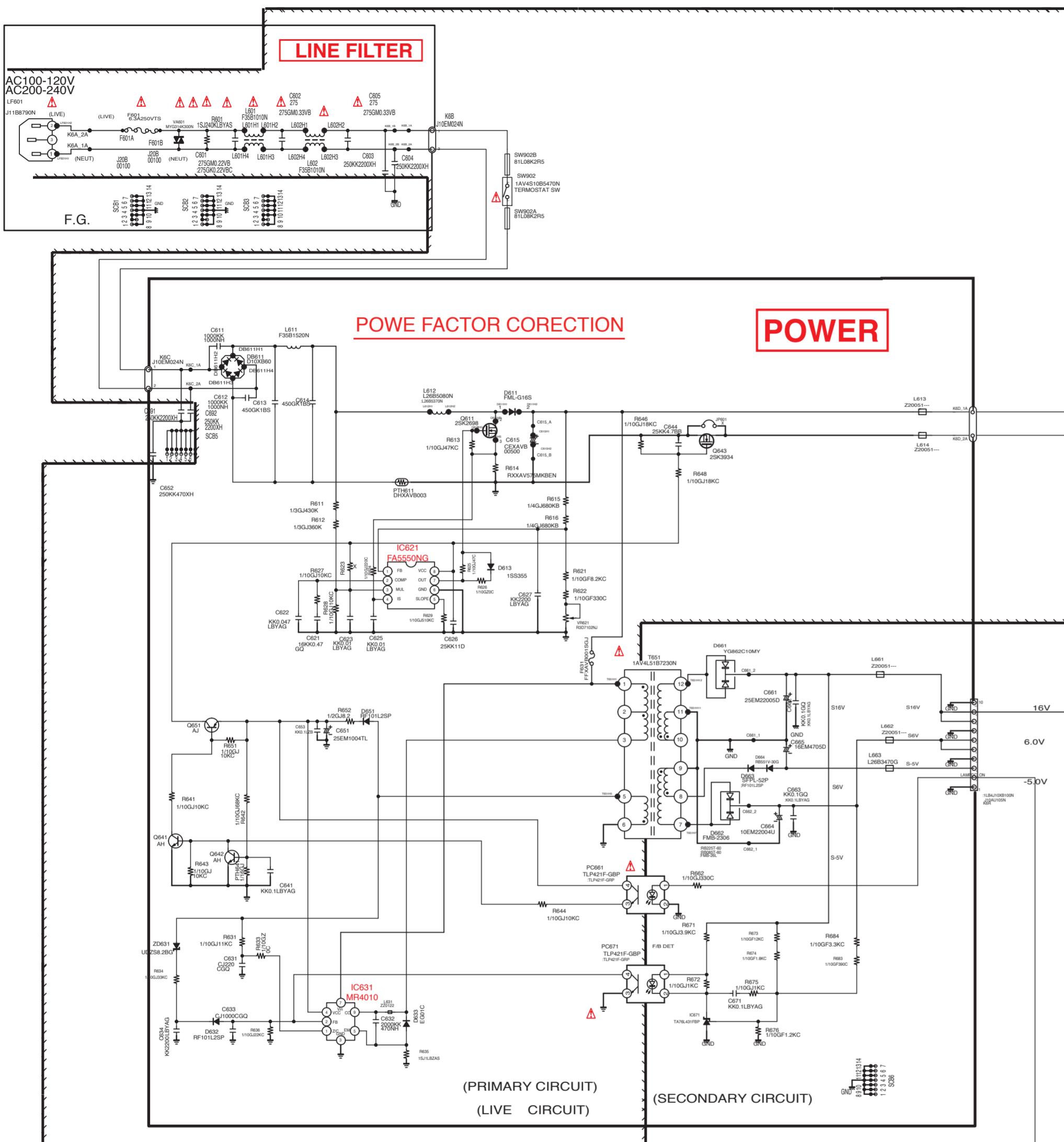
#### (2) PNP type

Mark	Type number
--	2SA608
AB	R
AC	Q, R

#### (3) Chip type

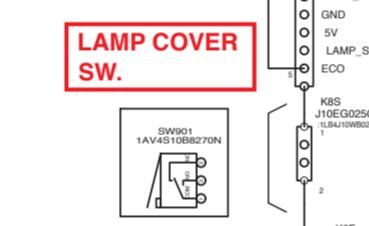
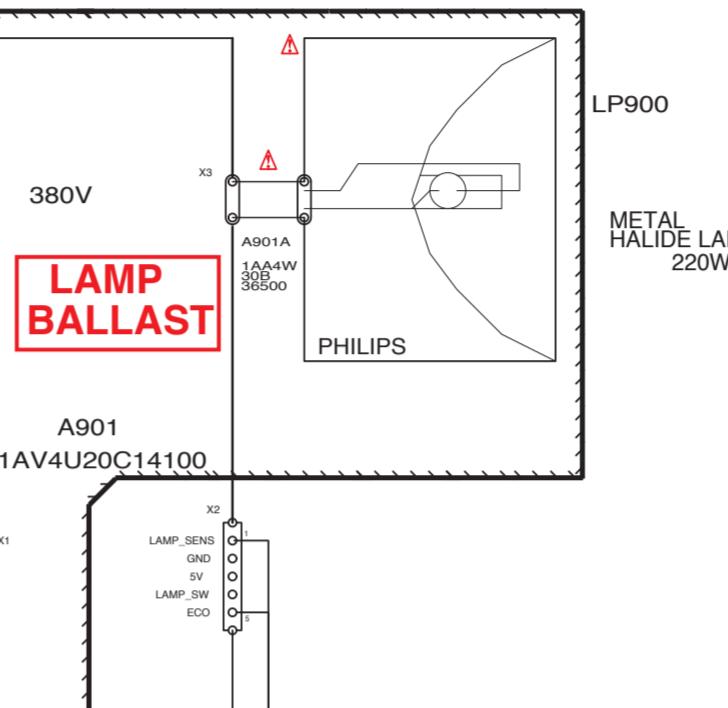
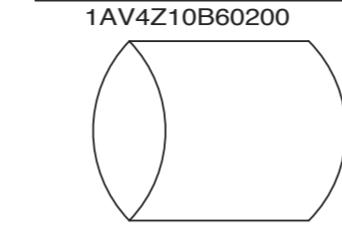
Mark	Type number
--	2SA1179N
AJ	M6, M7
AH	R, S
	O, Y, GR
	L6, L7
	R, S

## Schematic Diagrams

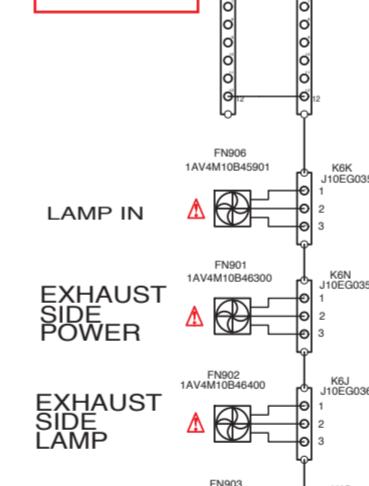


**CAUTION**  
Fuse of the specified parts number must be used.  
Unauthorized substitutions may result in fire or accident.

## PROJECTION LENS



## CONTROL



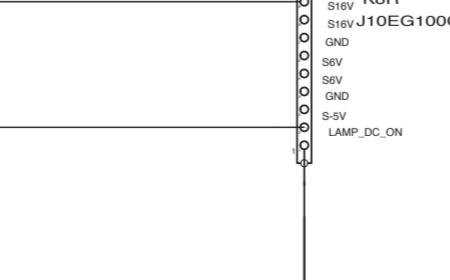
## EXHAUST SIDE POWER

## EXHAUST SIDE LAMP

## R-PNL

## G-PNL

## B-PNL



J10EG056G

K8C J10EG030G

K8E J10EG026G

K8G J10EG006G

S3.3V

POD

GND

S-V

GND

S-V

LAMP\_DC\_ON

SDA

SCL

IC1869

1AV4510B66270N

FILTER SW SW903

SW901

1AV4Z10B60200

MONITOR ROUND TEMP SENSOR A (OUTSIDE)

IC1863

1AV4510B66270N

MONITOR ROUND TEMP SENSOR B (OUTSIDE)

IC1864

1AV4510B66270N

MONITOR ROUND TEMP SENSOR C (OUTSIDE)

IC1865

1AV4510B66270N

MONITOR ROUND TEMP SENSOR D (OUTSIDE)

IC1866

1AV4510B66270N

MONITOR ROUND TEMP SENSOR E (OUTSIDE)

IC1867

1AV4510B66270N

MONITOR ROUND TEMP SENSOR F (OUTSIDE)

IC1868

1AV4510B66270N

MONITOR ROUND TEMP SENSOR G (OUTSIDE)

IC1869

1AV4510B66270N

MONITOR ROUND TEMP SENSOR H (OUTSIDE)

IC1863

1AV4510B66270N

MONITOR ROUND TEMP SENSOR I (OUTSIDE)

IC1864

1AV4510B66270N

MONITOR ROUND TEMP SENSOR J (OUTSIDE)

IC1865

1AV4510B66270N

MONITOR ROUND TEMP SENSOR K (OUTSIDE)

IC1866

1AV4510B66270N

MONITOR ROUND TEMP SENSOR L (OUTSIDE)

IC1867

1AV4510B66270N

MONITOR ROUND TEMP SENSOR M (OUTSIDE)

IC1868

1AV4510B66270N

MONITOR ROUND TEMP SENSOR N (OUTSIDE)

IC1869

1AV4510B66270N

MONITOR ROUND TEMP SENSOR O (OUTSIDE)

IC1863

1AV4510B66270N

MONITOR ROUND TEMP SENSOR P (OUTSIDE)

IC1864

1AV4510B66270N

MONITOR ROUND TEMP SENSOR Q (OUTSIDE)

IC1865

1AV4510B66270N

MONITOR ROUND TEMP SENSOR R (OUTSIDE)

IC1866

1AV4510B66270N

MONITOR ROUND TEMP SENSOR S (OUTSIDE)

IC1867

1AV4510B66270N

MONITOR ROUND TEMP SENSOR T (OUTSIDE)

IC1868

1AV4510B66270N

MONITOR ROUND TEMP SENSOR U (OUTSIDE)

IC1869

1AV4510B66270N

MONITOR ROUND TEMP SENSOR V (OUTSIDE)

IC1863

1AV4510B66270N

MONITOR ROUND TEMP SENSOR W (OUTSIDE)

IC1864

1AV4510B66270N

MONITOR ROUND TEMP SENSOR X (OUTSIDE)

IC1865

1AV4510B66270N

MONITOR ROUND TEMP SENSOR Y (OUTSIDE)

IC1866

1AV4510B66270N

MONITOR ROUND TEMP SENSOR Z (OUTSIDE)

IC1867

1AV4510B66270N

MONITOR ROUND TEMP SENSOR AA (OUTSIDE)

IC1868

1AV4510B66270N

MONITOR ROUND TEMP SENSOR AB (OUTSIDE)

IC1869

1AV4510B66270N

MONITOR ROUND TEMP SENSOR AC (OUTSIDE)

IC1863

1AV4510B66270N

MONITOR ROUND TEMP SENSOR AD (OUTSIDE)

IC1864

1AV4510B66270N

MONITOR ROUND TEMP SENSOR AE (OUTSIDE)

IC1865

1AV4510B66270N

MONITOR ROUND TEMP SENSOR AF (OUTSIDE)

IC1866

1AV4510B66270N

MONITOR ROUND TEMP SENSOR AG (OUTSIDE)

IC1867

1AV4510B66270N

MONITOR ROUND TEMP SENSOR AH (OUTSIDE)

IC1868

1AV4510B66270N

MONITOR ROUND TEMP SENSOR AI (OUTSIDE)

IC1869

1AV4510B66270N

MONITOR ROUND TEMP SENSOR AJ (OUTSIDE)

IC1863

1AV4510B66270N

MONITOR ROUND TEMP SENSOR AK (OUTSIDE)

IC1864

1AV4510B66270N

MONITOR ROUND TEMP SENSOR AL (OUTSIDE)

IC1865

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MONITOR ROUND TEMP SENSOR AM (OUTSIDE)

IC1866

1AV4510B66270N

MONITOR ROUND TEMP SENSOR AN (OUTSIDE)

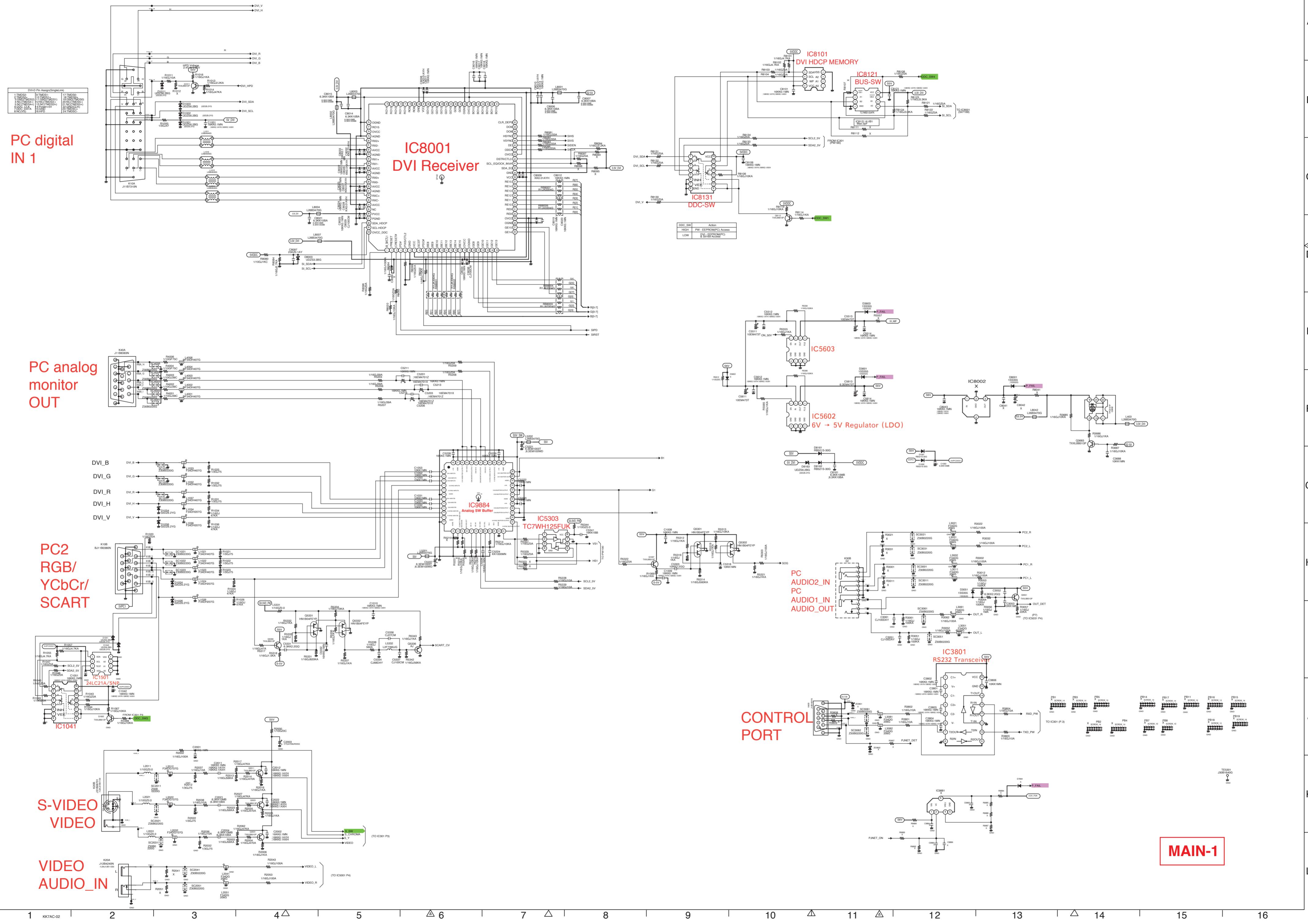
IC1867

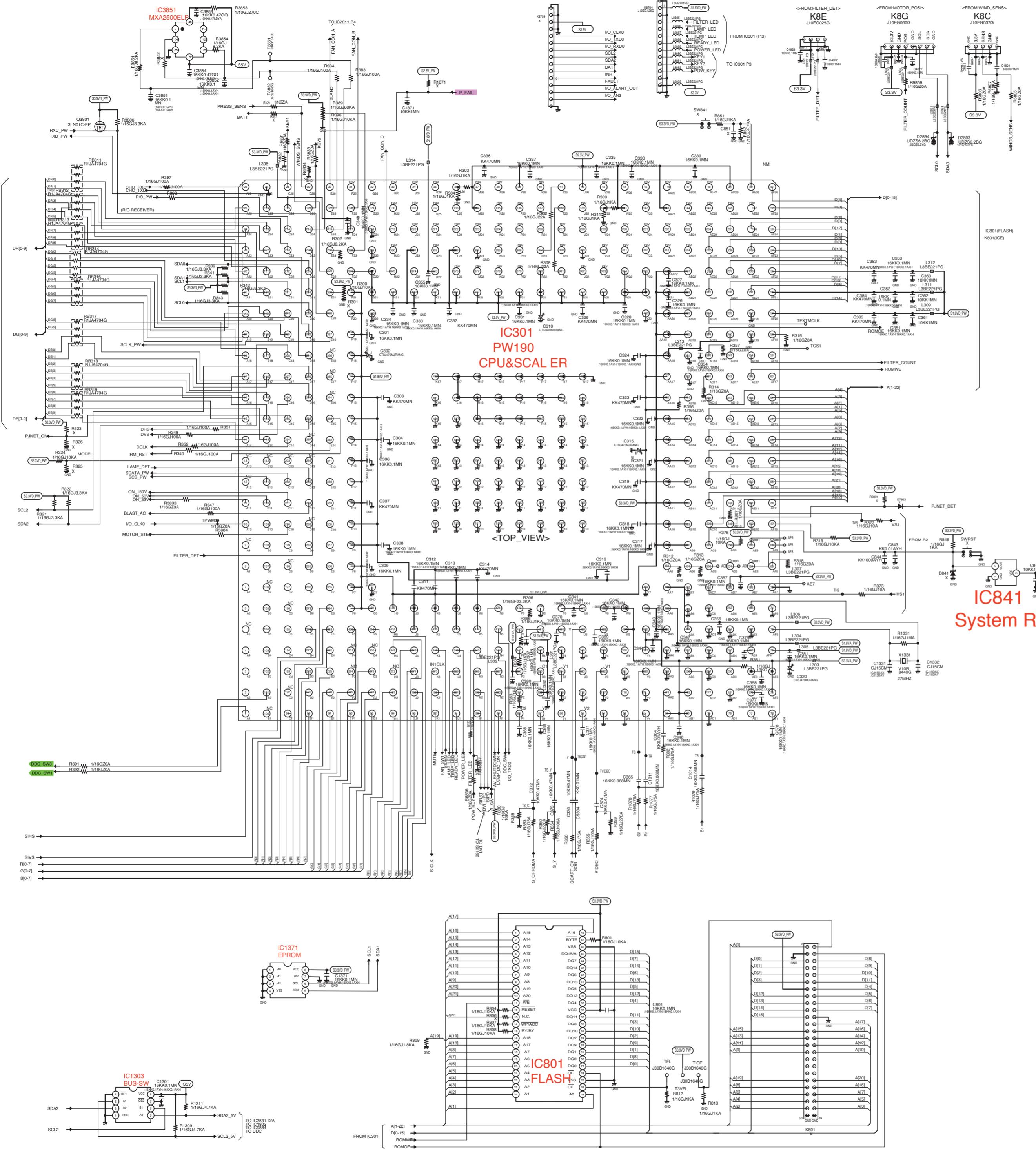
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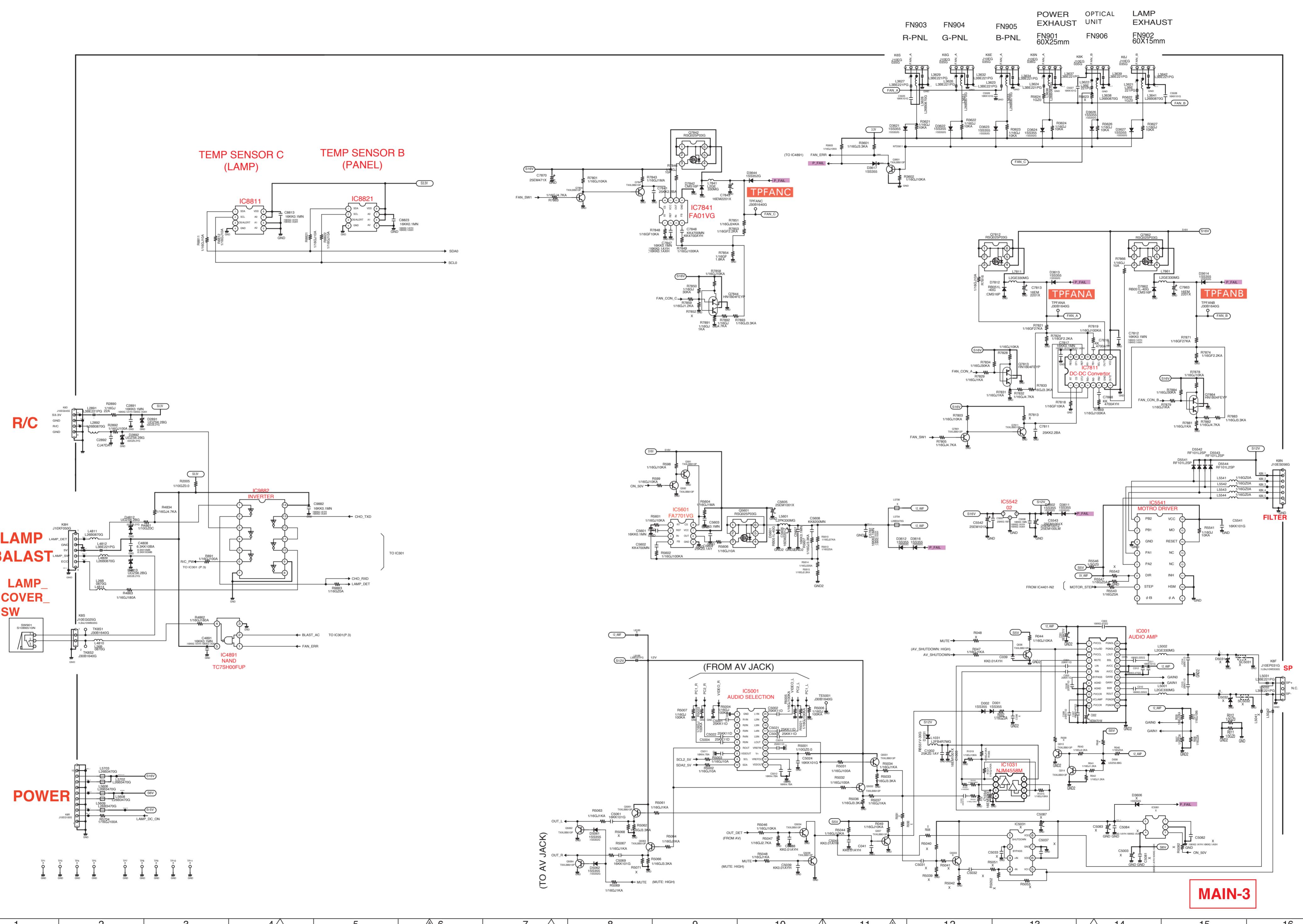
MONITOR ROUND TEMP SENSOR AO (OUTSIDE)

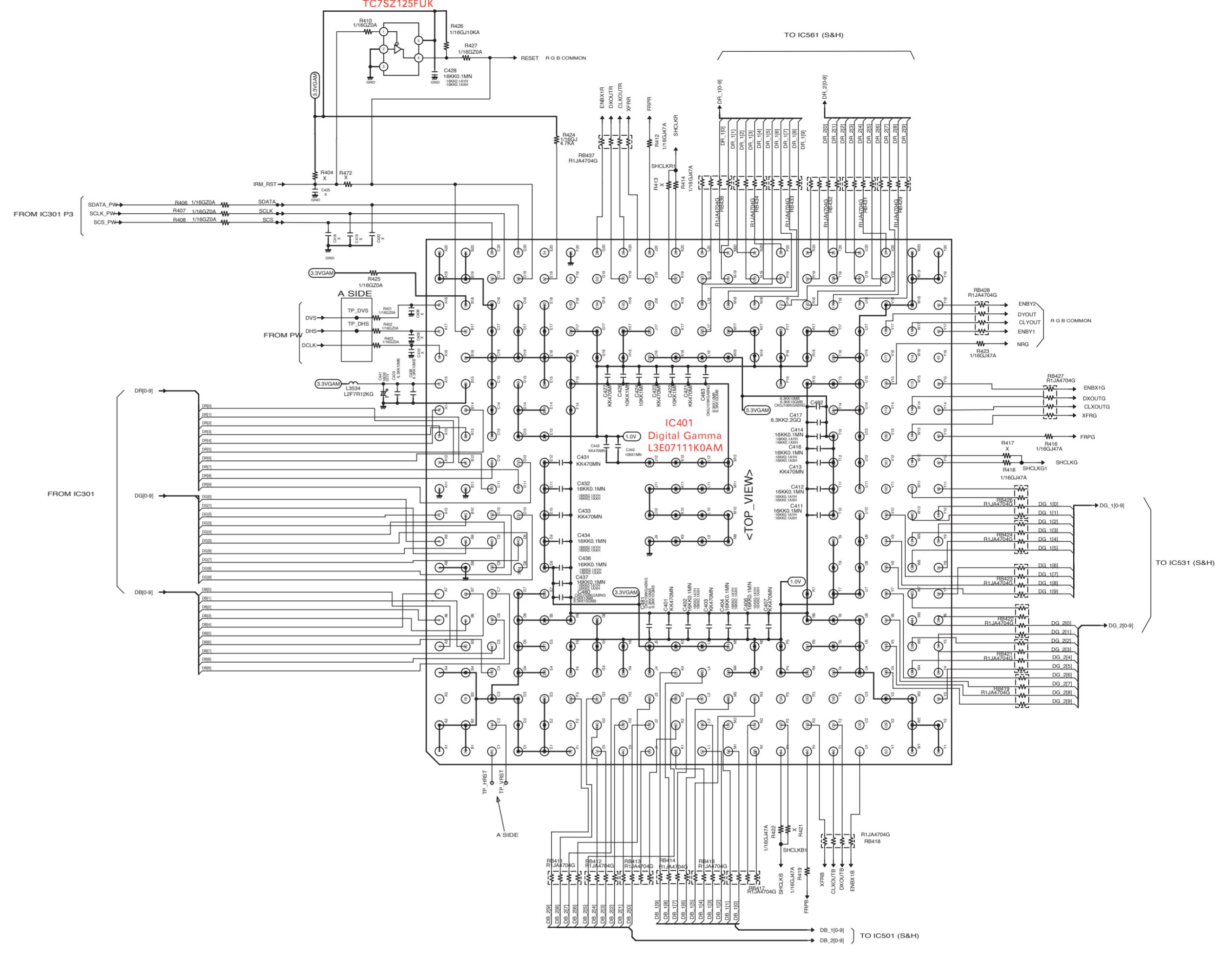
IC1868

1AV4510B66270N







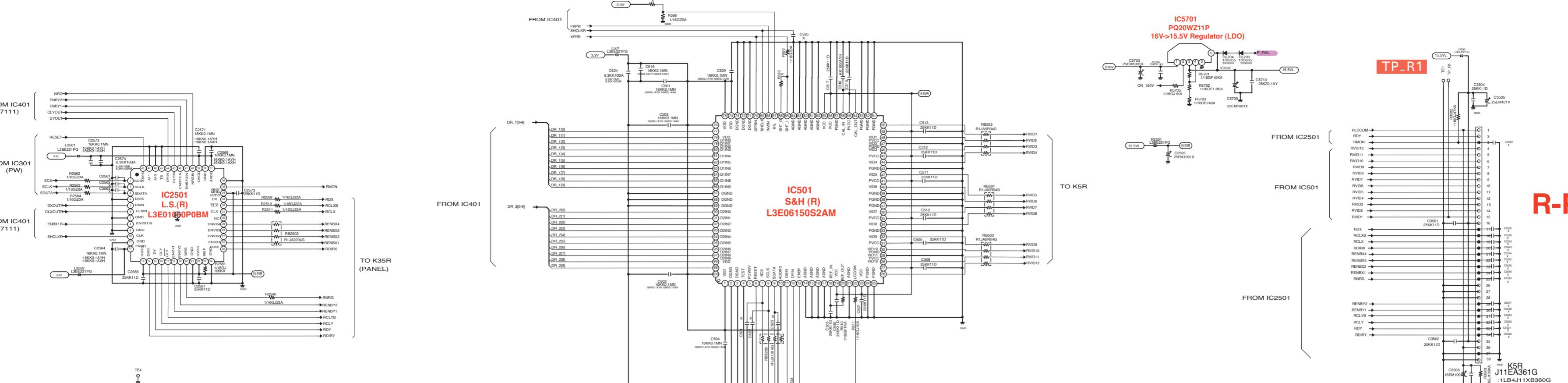
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B  
C  
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I  
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L

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

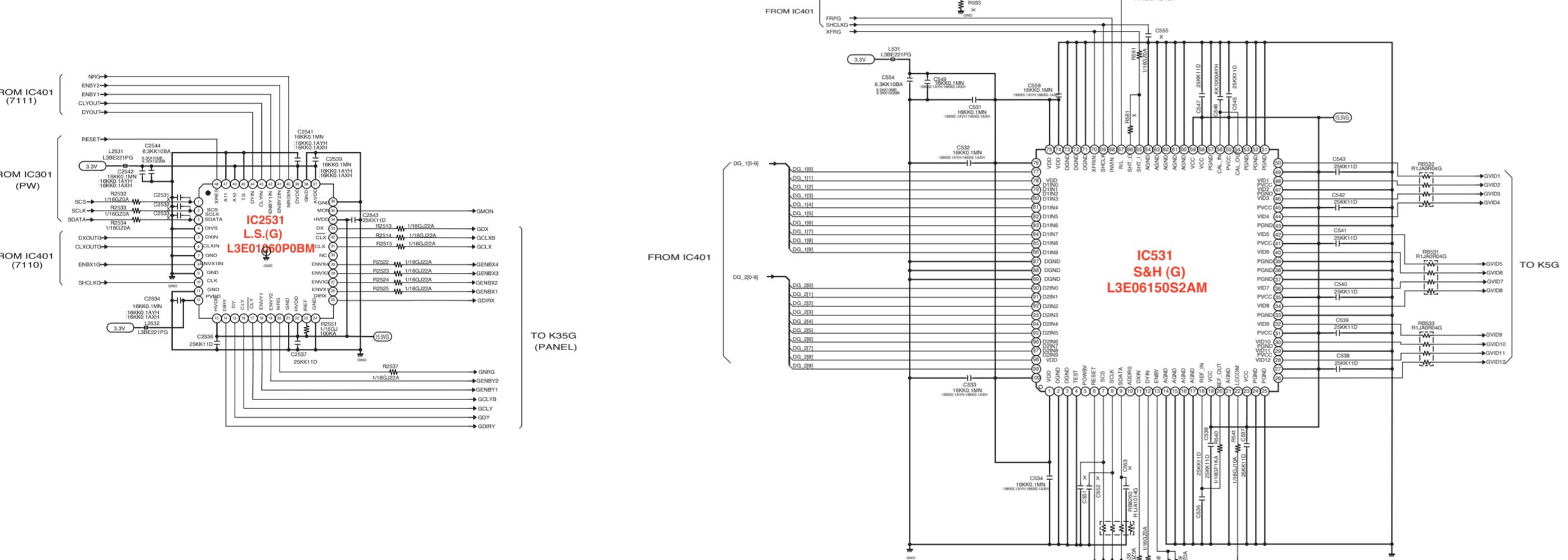
SCH\_KK7AC

A7

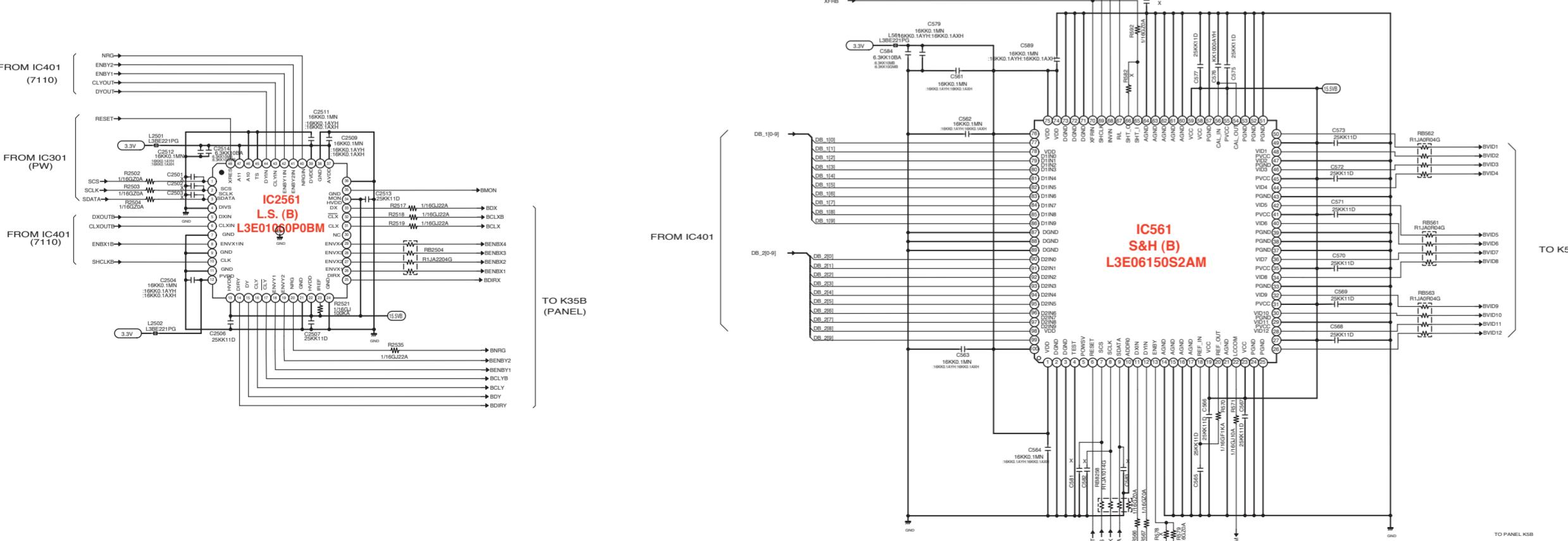
## R-PANEL



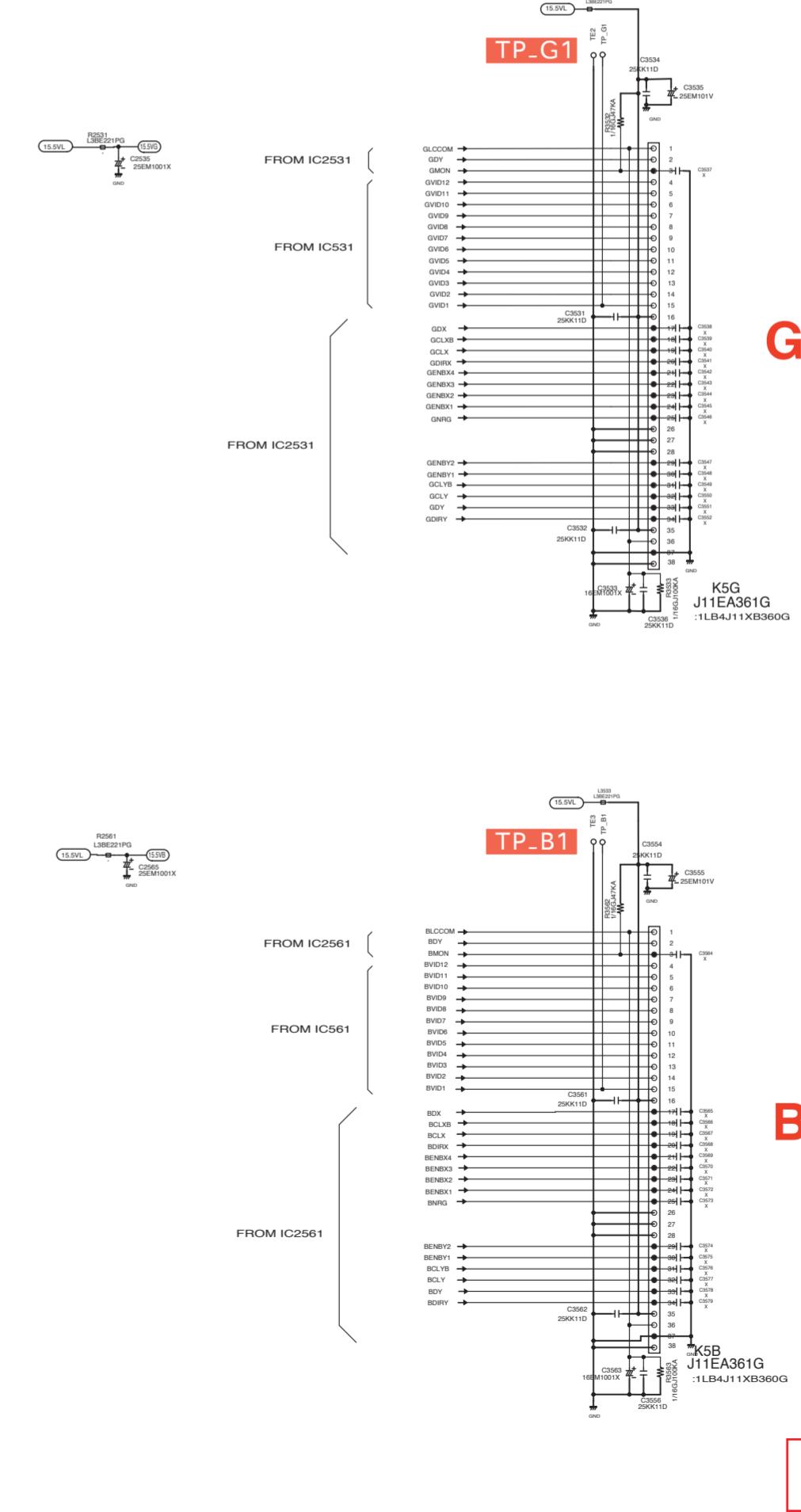
## G-PANEL



## B-PANEL



## MAIN-5



A

B

C

D

E

F

G

H

I

J

K

L

A

B

C

D

E

F

G

H

I

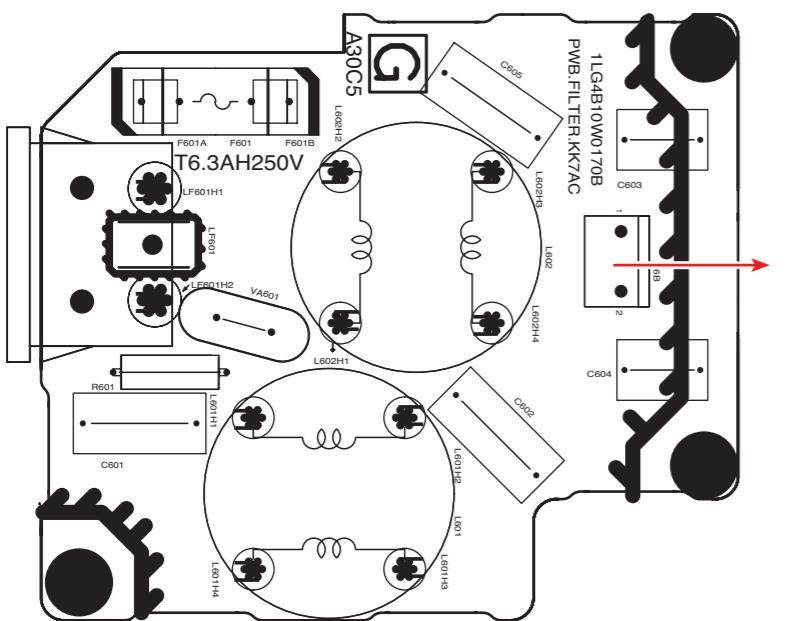
J

K

L

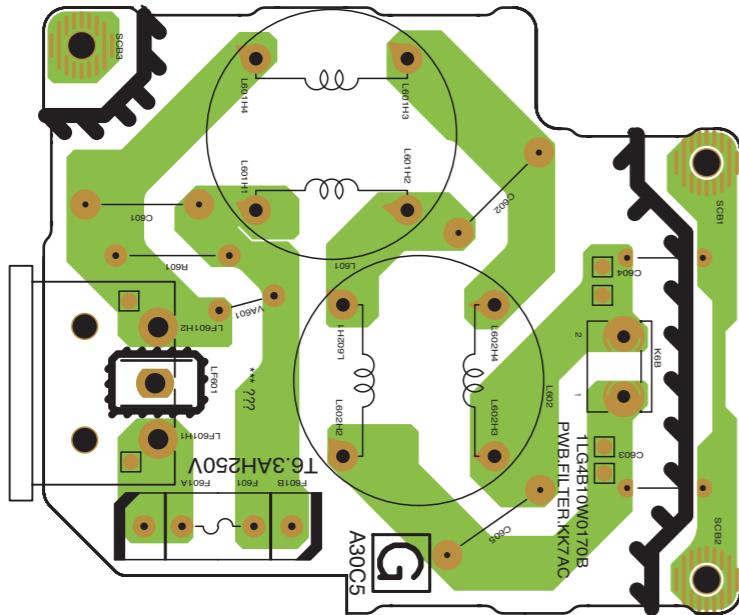
# **Printed Wiring Board Diagrams**

## **LINE FILTER (SIDE :A)**



POWER  
"K6C"

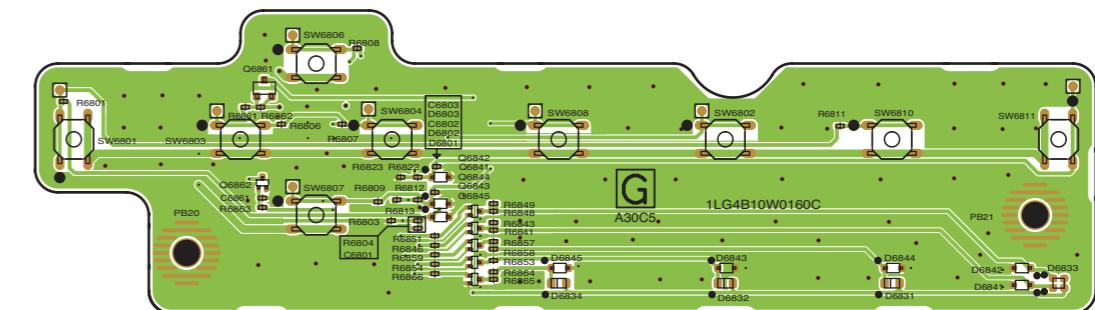
## **LINE FILTER (SIDE: B)**



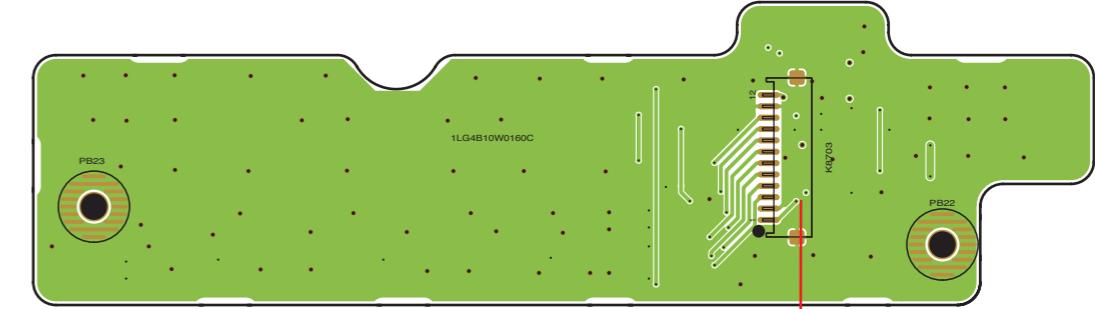
This projector is isolated from AC line by using the internal converter transformer.  
Please pay attention to the following notes in servicing

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.

## CONTROL (SIDE:A)

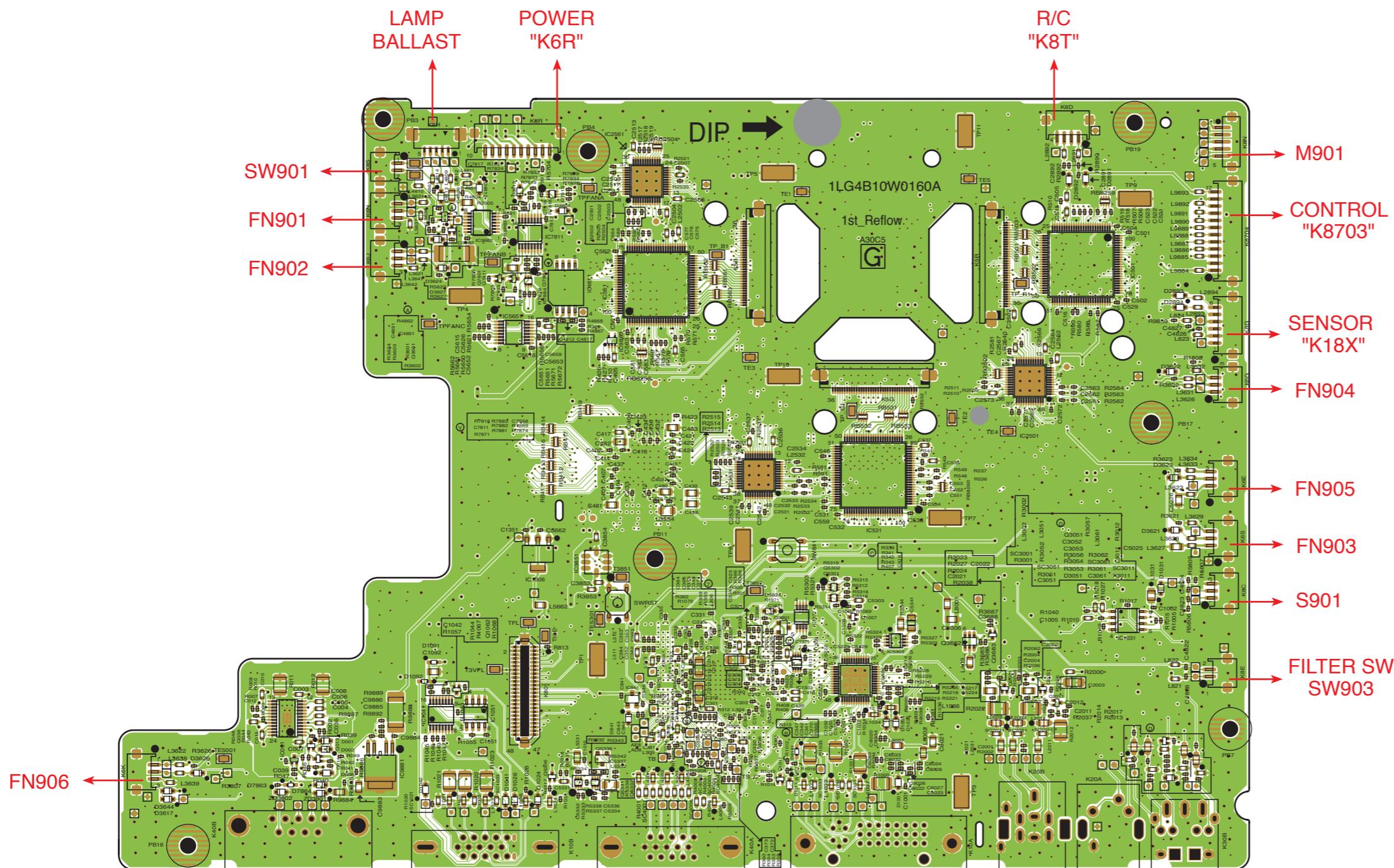


CONTROL (SIE:B)

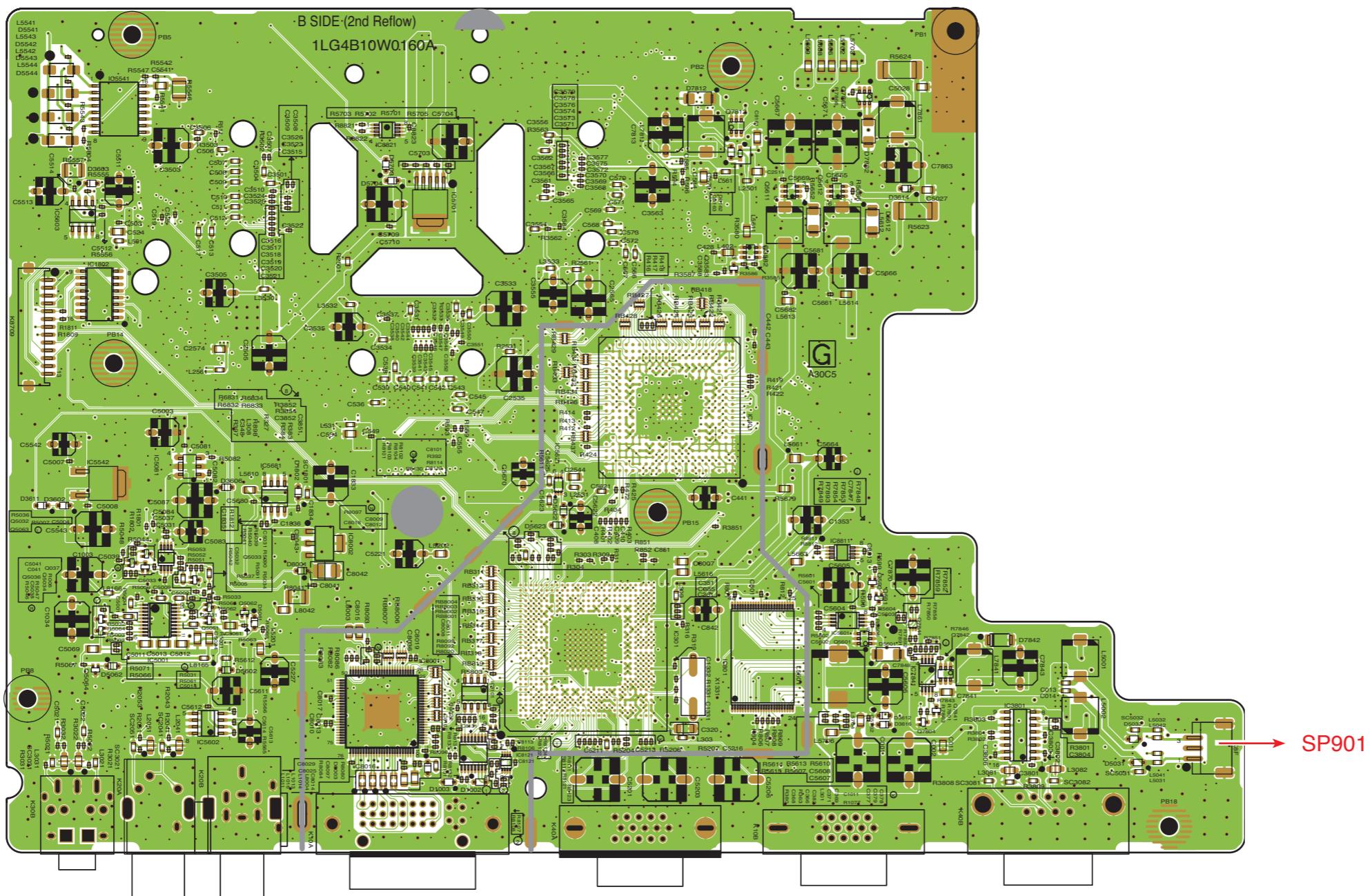


MAIN  
“K8704”

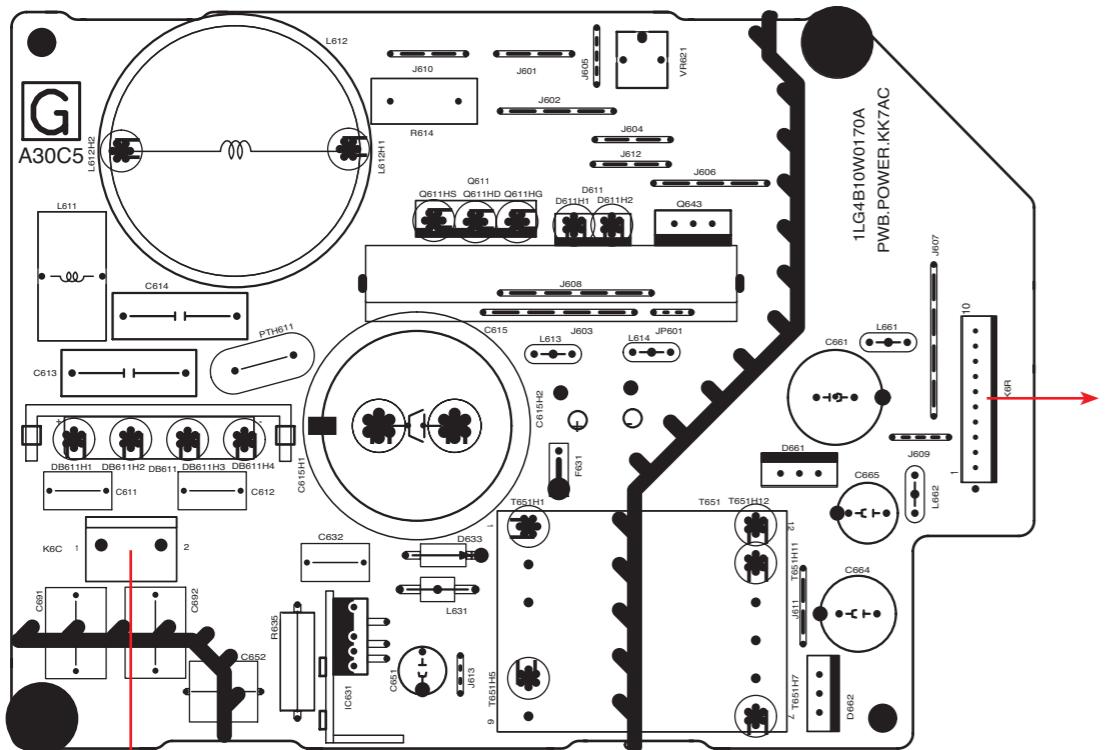
MAIN (SIDE:A)



**MAIN (SIDE:B)**

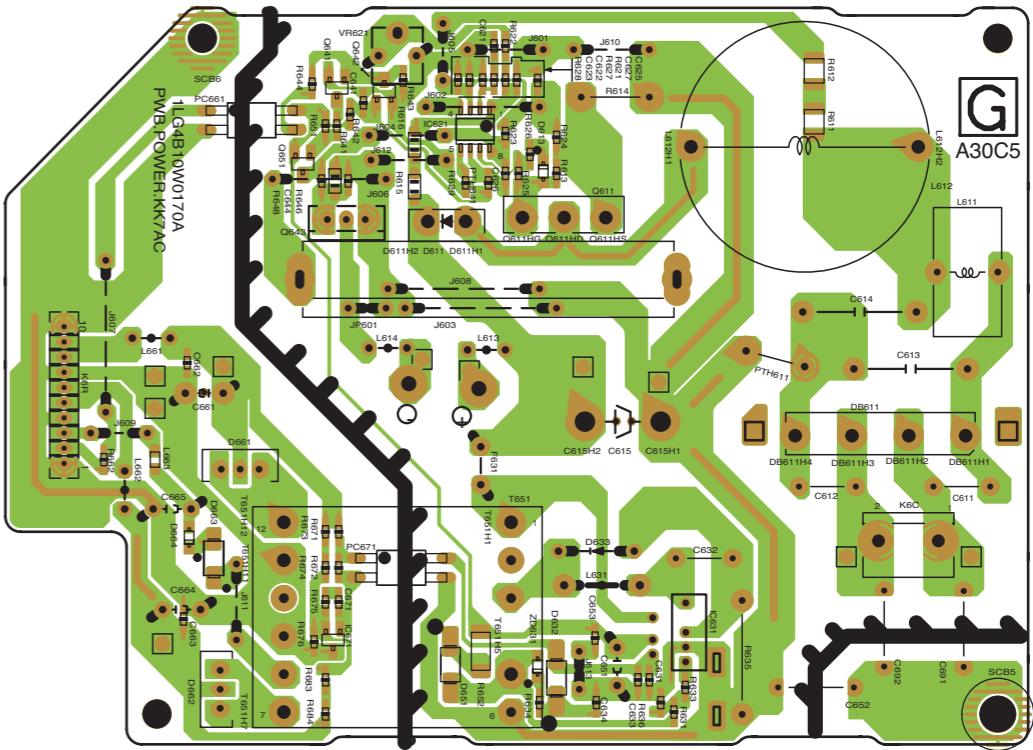


## POWER (SIDE:A)

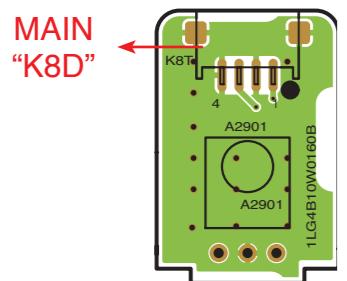


**FILTER  
"K6B"**

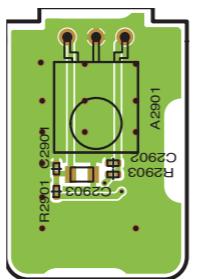
## POWER (SIDE:B)



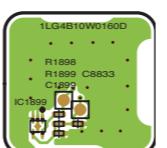
R/CS (SIDE:A)



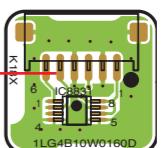
R/CS (SIE:B)



SENSOR (SIDE:A)

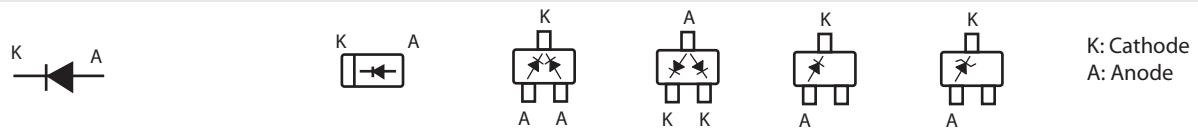


## **SENSOR (SIDE:B)**

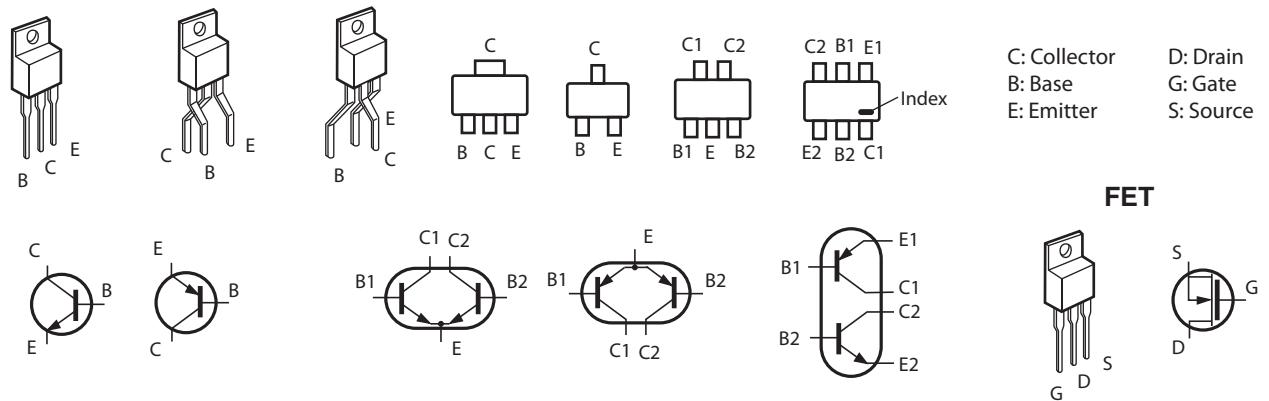


# Pin description of diode, transistor and IC

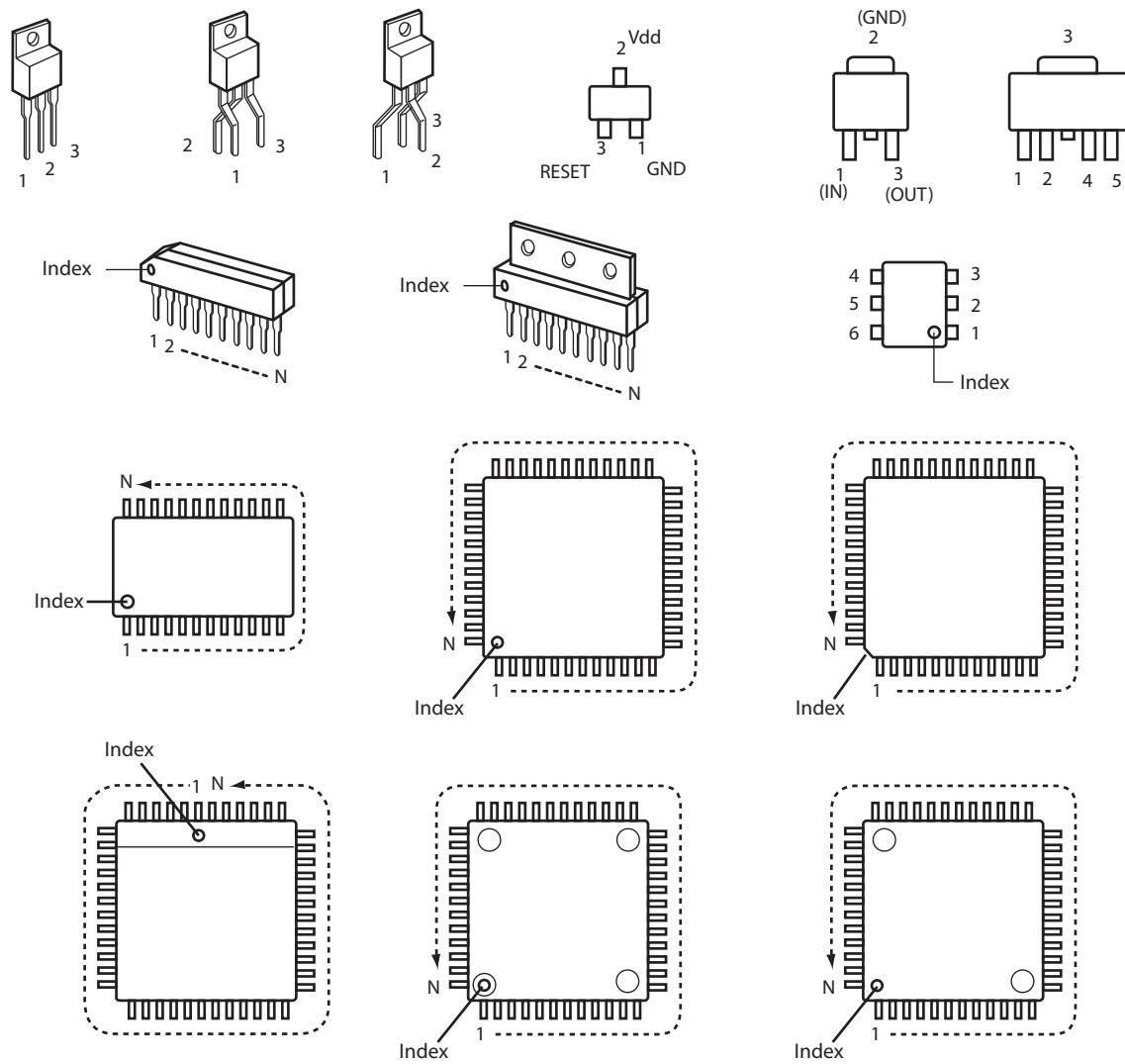
## ● Diode



## ● Transistor/FET



## ● IC



## Note on Soldering

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### Do not use solder containing lead.

This product has been manufactured using lead-free solder in order to help preserve the environment.

Because of this, be sure to use lead-free solder when carrying out repair work, and never use solder containing lead.

Lead-free solder has a melting point that is 30–40 °C (86–104 °F) higher than solder containing lead, and moreover it does not contain lead which attaches easily to other metals. As a result, it does not melt as easily as solder containing lead, and soldering will be more difficult even if the temperature of the soldering iron is increased.

The extra difficulty in soldering means that soldering time will increase and damage to the components or the circuit board may easily occur.

Because of this, you should use a soldering iron and solder that satisfy the following conditions when carrying out repair work. Also, soldering work must be done in a short time.

### Soldering iron

Use a soldering iron which is 70 W or equivalent, and which lets you adjust the tip temperature up to 450 °C (842 °F). It should also have as good temperature recovery characteristics as possible.

### Solder

Use solder with the metal content and composition ratio by weight given in the table below. Do not use solders which do not meet these conditions.

Metal content	Tin (Sn)	Silver (Ag)	Copper (Cu)
Composition ratio by weight	96.5 %	3.0 %	0.5 %

### Note:

If replacing existing solder containing lead with lead-free solder in the soldered parts of products that have been manufactured up until now, remove all of the existing solder at those parts before applying the lead-free solder.