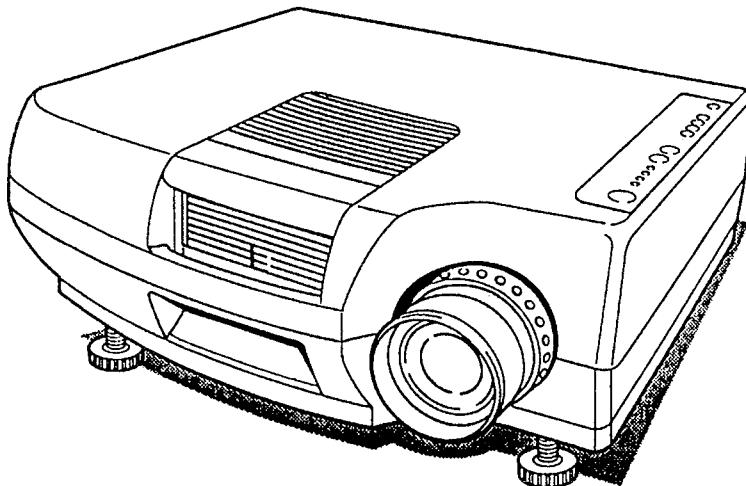


# SANYO

FILE NO. C - 2172

## SERVICE MANUAL      Portable LCD Color Video Projector



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### ORIGINAL VERSION

Service	PLC-400P-00
Ref.No.	PLC-400PB-00
	PLC-400PP-00

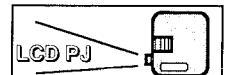
### PRODUCT CODE

- P4BA (PLC-400P-00) ; 1122 017 00  
P4BB (PLC-400PB-00) ; 1122 017 01  
P4BC (PLC-400PP-00) ; 1122 017 02

REFERENCE NO. SM525027



# 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 transformer 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 receiver 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 and barriers.

**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 perform the following safety checks and be sure that it is completely safe to operate without danger of electrical shock.

## PRODUCT SAFETY NOTICE

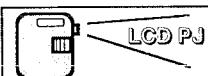
Product safety should be considered when a component replacement is made in any area of the projector. Components indicated by a mark (△) in the parts list and the schematic diagram designate components in which safety can be of special significance. It is, therefore, particularly recommended that the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

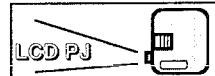
**Always Turn Off Lamp Before Opening Cover. Ultraviolet Radiation Eye Protection Required During This Servicing."**

**Never turn the power on without the lamp to avoid electric - shock or damage of the devices since the stabilizer generates high voltages(10kV - 15kV) at its start.**

**Since the lamp is very high temperature during units operation replacement of the lamp should be done at least one hour after the power has been turned off, to allow the lamp cool - off.**



## [ PRINCIPLES AND FUNCTIONS OF THE LIQUID CRYSTAL PROJECTOR ]



### 1. Fundamental Principles of the Liquid Crystal Projector

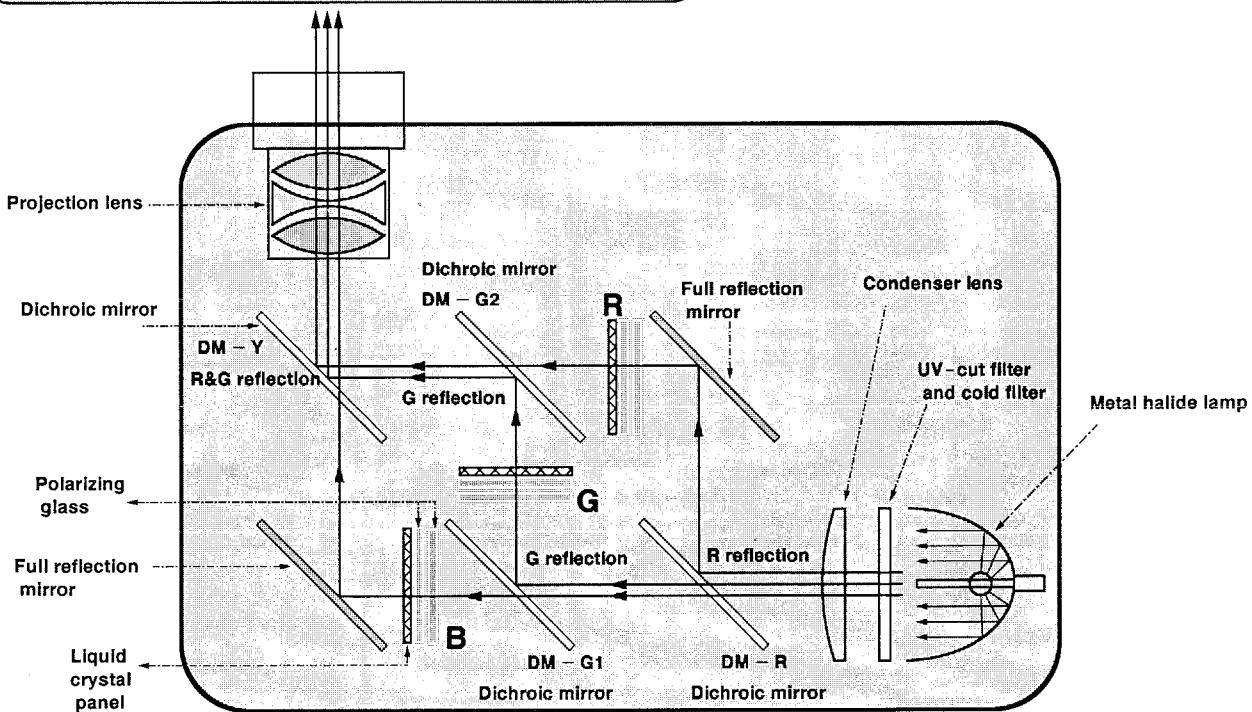
The white light emitted from the light source is separated into red (R), green (G) and blue (B) light components by the dichroic mirror. Each component is projected onto one of the three liquid crystal panels.

The three crystal liquid panels are respectively driven by R, G, and B primary color signals. The R/G/B images are reproduced by the shutter operation of these panels. The R, G, and B pictures displayed on the three panels are again combined by the dichroic mirror into one and projected onto the screen.

Fig. 1 shows the fundamental principles of the liquid crystal projector. Ultraviolet and infrared rays are filtered out by the UV - cut filter and cold filter from the light beams produced by the metal halide lamp which is the light source. Thus unneeded light components in the projected image are eliminated and the liquid crystal

panel is protected from the light and heat of the lamp. The ultraviolet rays harmful to the operator are also cut out. The light beams now consist only of visible light components which enter the condenser lens, creating parallel light beams to prevent light from scattering, improving luminous efficiency. The light beams are next divided into three primary colors (red, green and blue) by the dichroic mirror. The dichroic mirror is a filter constructed of multiple dielectric layers, each having a different refractive index. The layers are formed on glass to reflect light of a specific wavelength and transmit others. Each of the divided R, G, and B parallel light beams now enter its respective liquid crystal panel, where they are intensity - modulated by R/G/B color signals. The images formed on R, G and B panels are again combined by the dichroic mirror and reflected by the full reflection mirror before being projected on the screen by the projection lens.

Fig. 1 Liquid crystal projector conceptual drawing



## 2. Lamp Power Source

The lamp power source activates the lamp and controls the power supply to the lamp to maintain and stabilize the lamp discharge, keeping illumination at a constant level.

Fig. 2 shows the lamp power source block diagram.

### 2-1. Chopper

Designed to control power supply to the lamp, the chopper circuit consists of switching transistors, choke coils, diodes, etc. It generates intermittent current by switching the switching transistor on and off. The longer the On time, does the supplied power increase, while the longer the Off time, does the supplied power lower. Therefore, by varying the on/off time, power supply can be controlled.

The chopper circuit varies the switching transistor on/off time to maintain the power supply to the lamp at a constant level.

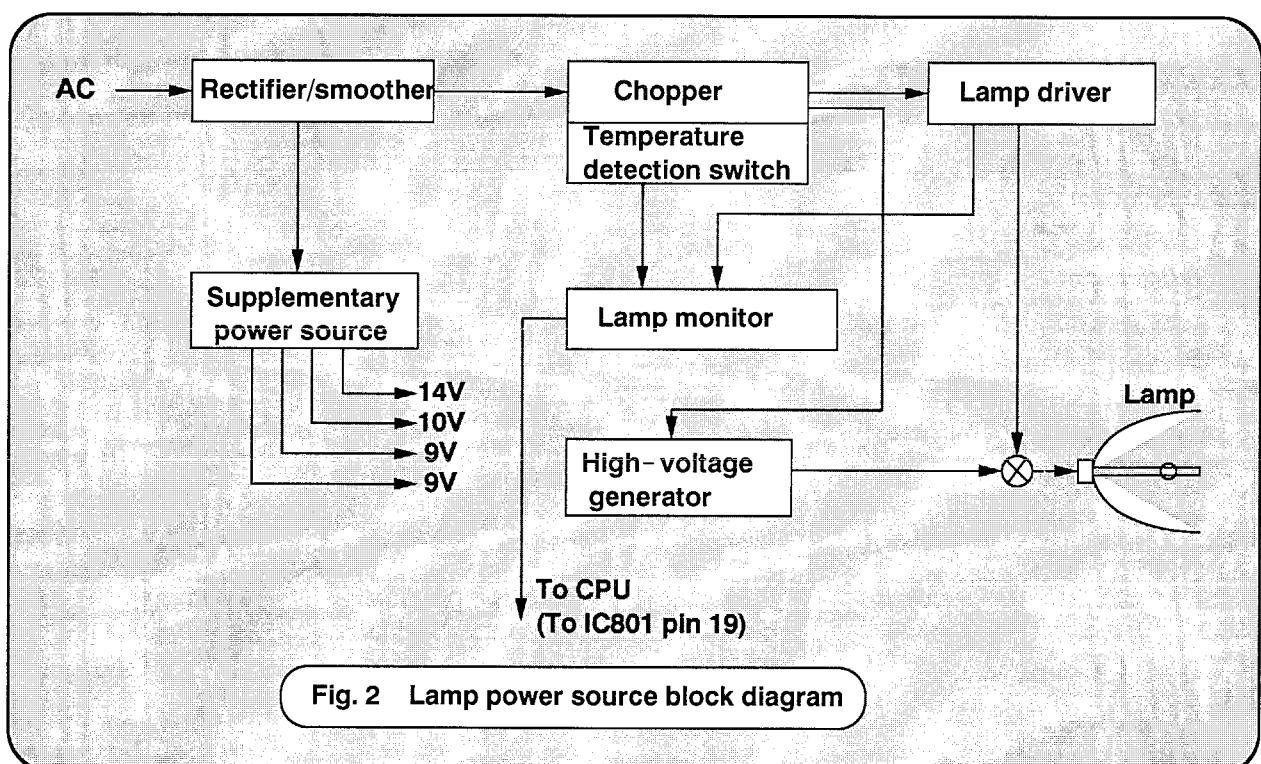
### 2-2. Lamp driver

DC and AC lamp illumination methods are available.

With DC illumination, luminous substances are attracted to the negative electrode, causing discharge to accumulate toward it. Another drawback is a greater power loss which lessens efficiency. Therefore AC illumination is more often used. The lamp driver circuit is a DC-AC converter used for AC illumination of the lamp.

### 2-3. High-voltage pulse generator

The high-voltage pulse generator lights the lamp. The metal halide lamp emits light through arc discharge. To initiate arc discharge, dielectric breakdown must occur between the lamp electrodes. The high-voltage pulse generator generates and applies high-voltage pulses with peak values of about 20kV between the lamp's positive and negative electrodes in order to generate glow discharge. This in turn results in dielectric breakdown between the electrodes, causing a shift from glow discharge to arc discharge.



### 3. Metal Halide Lamp

The metal halide lamp consists of argon, mercury and halogen compounds enclosed in its luminous tube.

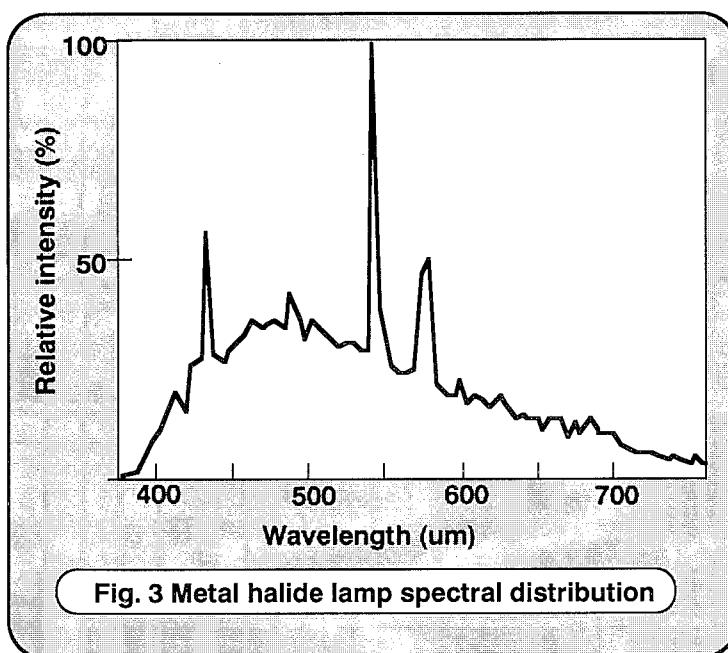
Fig. 3 shows the spectral distribution of this lamp. At the center of an arc discharge, halogen compounds are dissociated into metal atoms and halogen atoms, the metal being excited so that it emits a metal-specific spectrum. At the periphery of the arc discharge, metal atoms and halogen atoms are bonded again. Repeating this cyclic process causes light to be generated.

The metal halide lamp features a higher luminous efficiency than halogen and xenon lamps. Depending on

the compounds enclosed in the lamp tube, different light spectra are generated. This also enables natural

white light to be produced as the projector light source. Metal halide lamps are a mainstream product as the light source of high- and middle-grade liquid crystal projectors. After projector turn-on, 2 to 3 minutes are required before the light output stabilizes. After the projector is turned off, the cooling fan operates for 30 to 60 seconds to cool down the lamp and reduce gas pressure inside the lamp.

During this "cooling down" period, the projector cannot be turned on.



## 4. System Control

### 4-1. Lamp monitor

To ensure correct and safe lamp illumination, lamp illumination conditions are monitored to detect abnormal temperatures in the lamp power source and to control the cooling fan. On the metal halide lamp used, voltage as high as 20kV is applied at striking to

initiate discharge. Once discharge commences, voltage stabilizes at about 85V.

In addition, the lamp also generates heat, increasing projector interior temperature. A cooling fan prevents temperature increases. Cooling fan operation is controlled by the CPU which monitors the lamp power source to determine lamp illumination conditions.

Correct lamp illumination makes the lamp power source send an "L" signal to pin 19 of the CPU (IC801). If the lamp does not light or is suddenly extinguished, the "H" signal is sent to pin 19 of the CPU (IC801). When the lamp lights after the projector is turned on, the CPU (IC801) starts checking the input at pin 19 at 3 seconds after projector turn - on. If the "H" signal is received by pin 19 for a duration of 1 second, the CPU (IC801) evaluates this indications as an abnormal condition, turning the power off automatically and initiating 1 - minute thermal protection. While in protection mode, all set keys and remote control keys including the power on/off switch will not respond. The cooling fan will continue to operate in protection mode.

The lamp power source temperature also rises due to control loss of the chopper (Q701) and lamp driver

(Q702 – Q705). This makes it necessary to also cool down the lamp power source with the cooling fan, therefore the lamp power source temperature is also monitored. If the temperature of power source heat sink reaches approximately 80 °C , an "H" signal is sent to pin 19 of CPU (IC801) ("L" signal for normal temperatures). An "H" signal at pin 19 for a 1 second duration is considered as abnormal. The projector automatically turns off and the 1 - minute protection is initiated. All set keys and remote control keys will not respond in protection mode, but the cooling fan will continue to operate.

During lamp lighting, the discharge - induced heat increases gas pressure inside the lamp. As gas pressure remains high after lamp turn - off, the lamp cannot be turned on again immediately. The 1 - minute protection is initiated again after turning off the lamp (turning off the projector), disabling all set keys and remote control keys for that period. The cooling fan will continue to operate until the gas pressure returns to a satisfactory level.

The green LED indicates lamp monitor operation as follows:

- LED off: Lamp is being cooled.
- LED on: Lamp is being lit or already cooled down.

Fig. 4 shows lamp monitor flow chart.

## 4-2. Temperature monitor

Projector temperature is monitored, and power will turn off automatically if the temperature rises beyond normal. The cooling fan will operate until the temperature returns to normal. This prevents projector components from being damaged by excessive heat.

As the lamp generates heat and heat waves by discharge, the temperatures of the lamp itself, as well as the polarizing glass, liquid crystal panels and other optical components will increase. Fan-induced cooling is essential.

The temperature of the lamp's luminous glass surface must be lower than approximately 950 °C, the reflector internal surface temperature must be lower than 350 °C and the polarizing glass and liquid crystal panel surface temperatures lower than 55 °C.

Temperatures may exceed these ranges if the fan does not operate or if the projector is operated in poor ventilation. If the projector is used at ambient temperatures exceeding 35 °C, the above-mentioned temperatures will also exceed permissible ranges, damaging optical components such as the polarizing glass and liquid crystal panels.

In order to prevent damage resulting from excessive heat, temperature sensors are located at the peripheries of the polarizing glass and liquid crystal panel to monitor temperatures.

The temperature sensor positioned near the lamp has an applicable temperature range of 80 ° ± 5 °C with hysteresis of 7 °C (sensor activates at 80 ° ± 5 °C and resets at 73 ° ± 5 °C). Its main purpose is to protect the lamp.

The temperature sensor positioned close to the liquid crystal panels has an applicable temperature range of 55 ° ± 2.5 °C with hysteresis of 7 °C. It means the sensor activates at 55 ° ± 2.5 °C and resets at 48 ° ± 2.5 °C. Its main purpose is to protect the liquid crystal panels.

Once AC power is input, the CPU (IC801) performs an input check at pin 33 regardless of the power on/off setting. If the temperature at the lamp periphery reaches approximately 80 °C or the temperature at the periphery of the liquid crystal panels reaches approximately 55 °C, an "L" signal is generated and sent to pin 33 of the CPU.

If the "L" signal is continuous for 1 second, the CPU sees it as an abnormal condition, automatically turning off the projector and so turning off the lamp, and continues cooling fan operation until the temperature lowers.

In this protection mode, all set keys and remote control keys do not respond. The CPU checks input at pin 33 during cooling as well. The temperature sensor at the periphery of the lamp will reset when the temperature goes below 73 °C, sending an "H" signal. In similar fashion, the liquid crystal panel temperature sensor will reset below 48 °C and output an "H" signal.

The CPU then judges normal temperature and cuts cooling fan operation.

The red LED indicates temperature monitor operation as follows:

- LED off: Normal temperatures
- LED flashes in 0.6 second interval: Abnormal temperatures

Fig. 5 shows the temperature monitor flow chart.

## 4-3. Lamp replacement monitor

The lamp will require replacement during operation at some point. The yellow LED indicator will light up after 1,000 hours of use and recommend replacement.

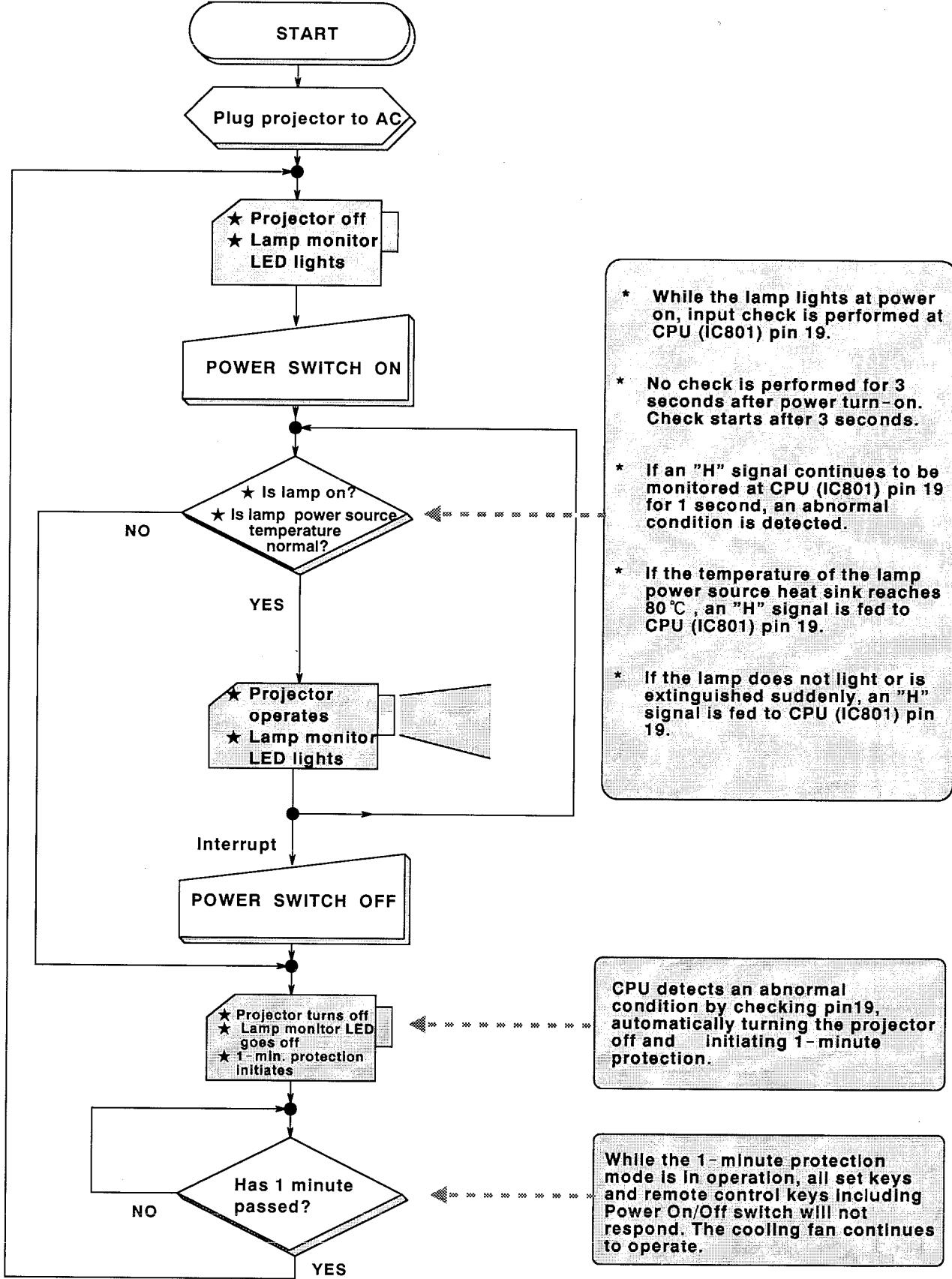
Usage time will be stored in non-volatile memory (IC807) by the CPU (IC801). Even when disconnected, this information is retained.

After lamp replacement, pressing the Reset switch at the bottom of the projector will return lamp usage time to 0. The Reset switch activates only when power is on.

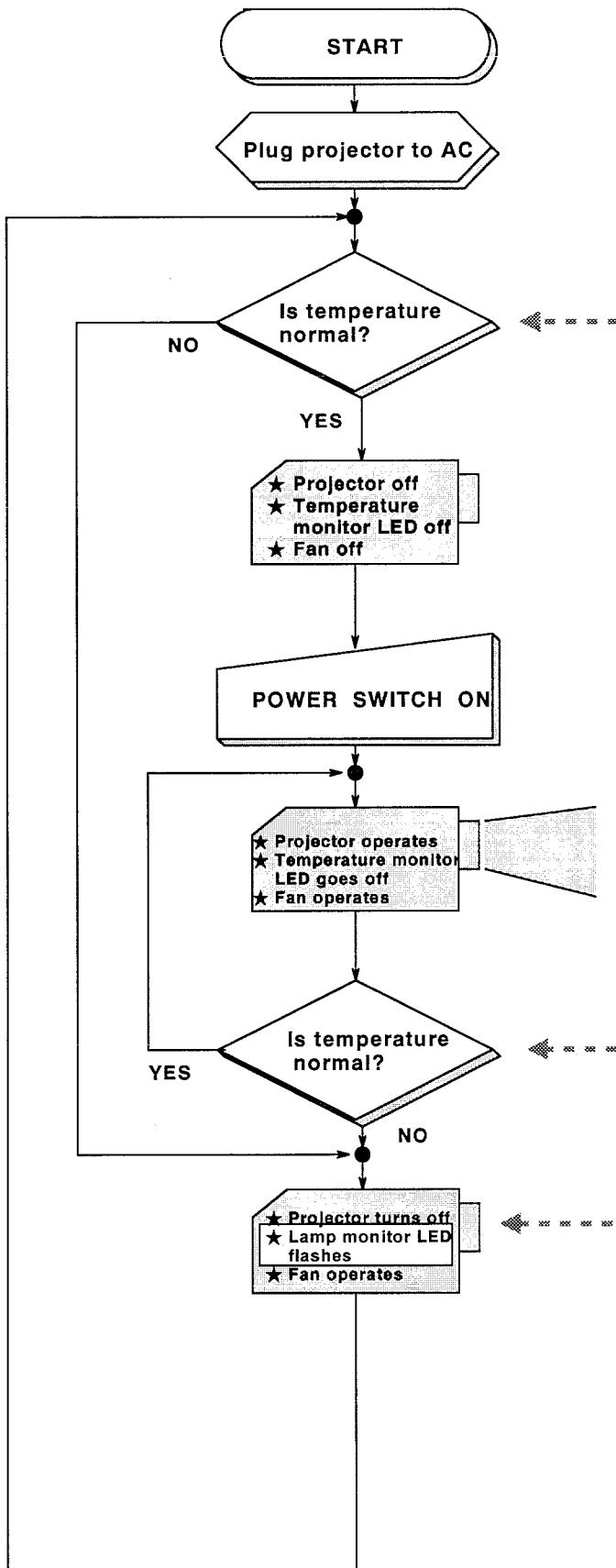
When this switch is pressed, a "RESET" indication will appear onscreen. As the "RESET" indication cannot be recognized immediately after power on, the Reset switch can be operated only after the lamp has stabilized ("A MOMENT!" goes off). Make sure to confirm "RESET." The Reset switch should only be operated at lamp replacement.

For details, refer to LAMP REPLACEMENT procedure on page 15.

**Fig. 4 Lamp monitor flow chart**



**Fig. 5 Temperature monitor flow chart**



- \* CPU (IC801) performs input check at pin 33 (input port) once the projector is connected to AC outlet, regardless of AC power on/off status.

- \* If an "L" signal continues to be monitored at pin 33 for 1 second, the CPU detects an abnormal condition.

- \* If temperatures around the lamp and liquid crystal panels reach 80°C and 55°C, respectively, the CPU feeds an "L" signal to pin 33.

- \* Once tripped, the temperature sensors around the lamp and liquid crystal panels reset respectively at temperatures below 73°C and 48°C, sending an "H" signal.

- \* If an abnormal condition is detected through input check at pin 33, the CPU automatically turns the projector off and operates the cooling fan until the temperature goes down. All set keys and remote control keys will not respond.

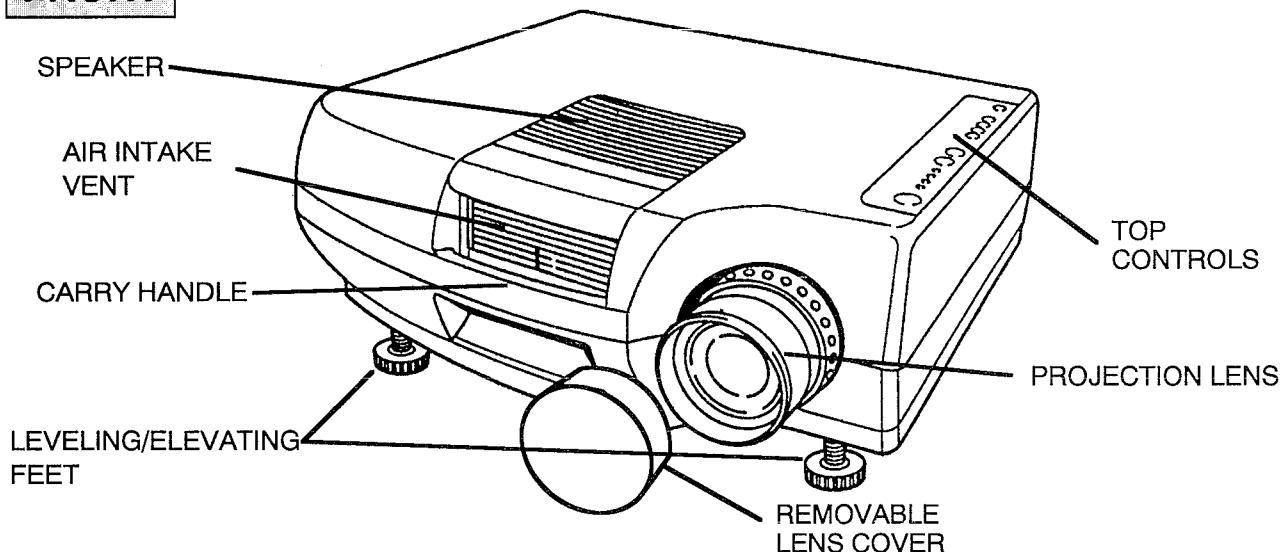
# TECHNICAL SPECIFICATIONS

## SPECIFICATIONS

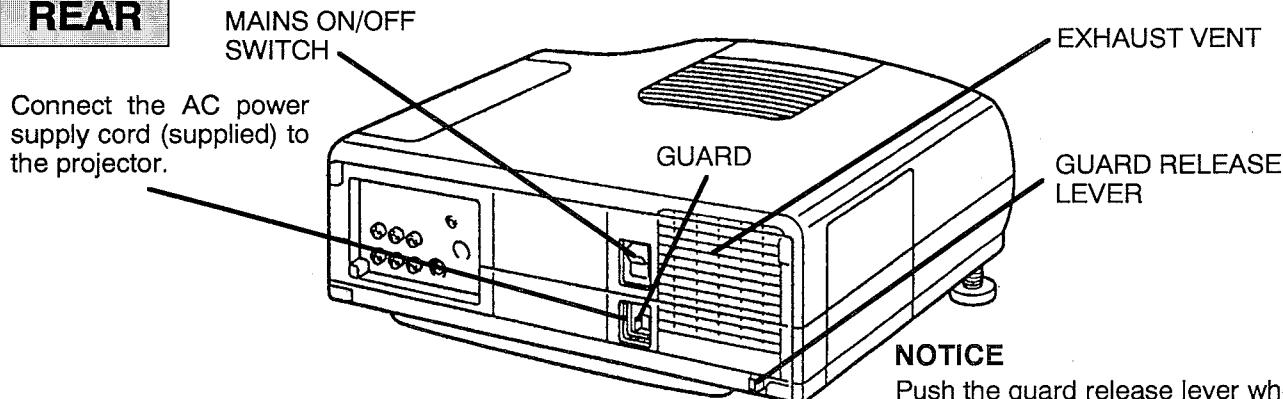
<b>Projector Type</b>	Portable LCD Projector
<b>Dimensions (H x W x D)</b>	158 mm × 430 mm × 385 mm
<b>Net Weight</b>	23.2 lbs (10.5 kg)
<b>LCD Panel System</b>	1.3" TFT Active Matrix type (Thin Film Transistor) × 3
<b>Number of Pixels</b>	544,410 (181,470 × 3)
<b>Colour System</b>	4 colour system (PAL, SECAM, NTSC4.43 and NTSC)
<b>Projection Image Size (Diagonal)</b>	76 cm to 381 cm (30 to 150 inch) Adjustable
<b>Contrast Ratio</b>	100 :1
<b>Horizontal Resolution</b>	550 TV lines
<b>Projection Lens</b>	f2.8 ~ 3.2 lens with 53 mm ~ 69 mm Manual zoom and focus
<b>Lens Aperture</b>	51.8 mm
<b>Throw Distance</b>	1.5 m ~ 6.0 m
<b>Projection Lamp</b>	Metal Halide, 195 watt
<b>Projection Mirror</b>	Dichroic mirror system
<b>AV Input jacks</b>	PHONO Type × 1 (Video, Audio R and L) and DIN 4 pin (S-Video) × 1
<b>Video Monitor Output Jack</b>	PHONO Type × 1
<b>Audio Monitor Output Jacks</b>	PHONO Type × 1 (R and L)
<b>Other Jacks</b>	Stereo Audio Output Jack × 1 and Wired Remote Jack × 1
<b>Built-in Speaker</b>	INT. SP. Monaural, 3 watt RMS (T.H.D. 10%)
<b>Image Elevation Adjustment</b>	Up 6°
<b>Voltage</b>	220-240V AC, 50/60 Hz
<b>Power Consumption</b>	260 Watts
<b>Operating Temperature</b>	5 °C ~ 35 °C
<b>Storage Temperature</b>	-10 °C ~ 60 °C
<b>Remote Control Battery</b>	AA, UM3 or R06 type × 3
<b>Standard Accessories</b>	Remote Control Unit, R/C Cable (1.5 m), AC Power Supply Cord, Lens Cover and Owner's Instruction Manual

# DESCRIPTION

## FRONT



## REAR



### NOTICE

Push the guard release lever when the AC cord may not be connected by the guard.

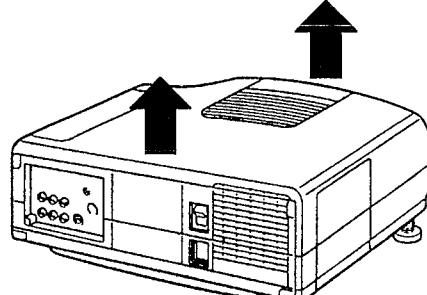
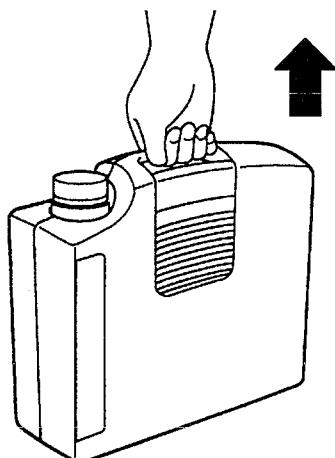
## MOVING THE PROJECTOR

Use the carry handle when moving projector.

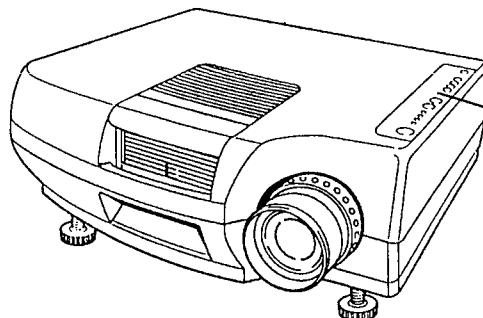
Replace the lens cover when moving the projector to prevent damage to the lens.

### NOTE:

Do not hold the projector by the filter cover when moving. You risk dropping the projector if the cover comes loose.



# OPERATION OF CONTROLS



TOP CONTROLS

## TOP CONTROLS

**POWER (LAMP) ON/OFF BUTTON**  
Used to turn projection lamp on or off.

**POWER INDICATORS**  
Lights dim when the projector is on.  
Lights bright when the projector is stand-by position.

**READY INDICATORS**  
Lights green when projector lamp is ready to be turned on.

**TEMPERATURE WARNING INDICATOR**  
Flashes red when internal projector temperature is too high.

**LAMP REPLACEMENT INDICATOR**  
Lights orange when projection lamp is nearing end of service life.

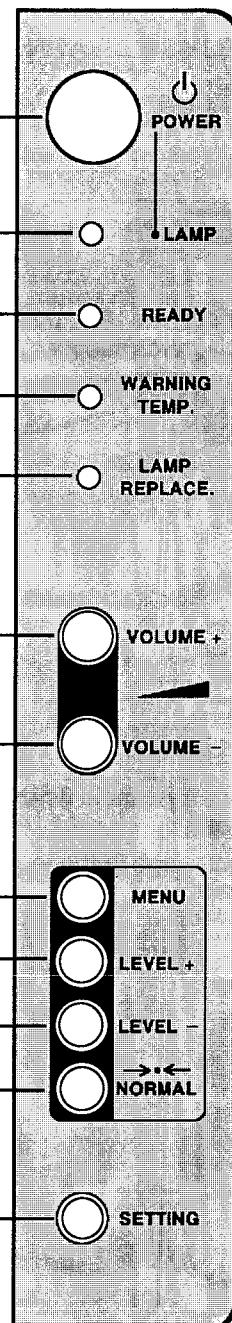
**VOLUME BUTTONS**  
Used to adjust volume.

**MENU BUTTON**  
Used to select on-screen adjustment displays for color, tint, contrast, brightness and sharpness. Press repeatedly to cycle.

**LEVEL CONTROL BUTTONS**  
Used to adjust color, tint, contrast, brightness, sharpness, display, blue background and reverse T/B by pressing + or - button.

**NORMAL BUTTON**  
Used to reset to normal picture adjustment preset by factory.

**SETTING BUTTON**  
Used to select on-screen adjustment displays for focus setting pattern, display, blue background and reverse T/B. Press repeatedly to cycle.



## BACK OF THE PROJECTOR

### AUDIO INPUT JACKS

Used to connect an audio input to the projector.

### VIDEO INPUT JACK

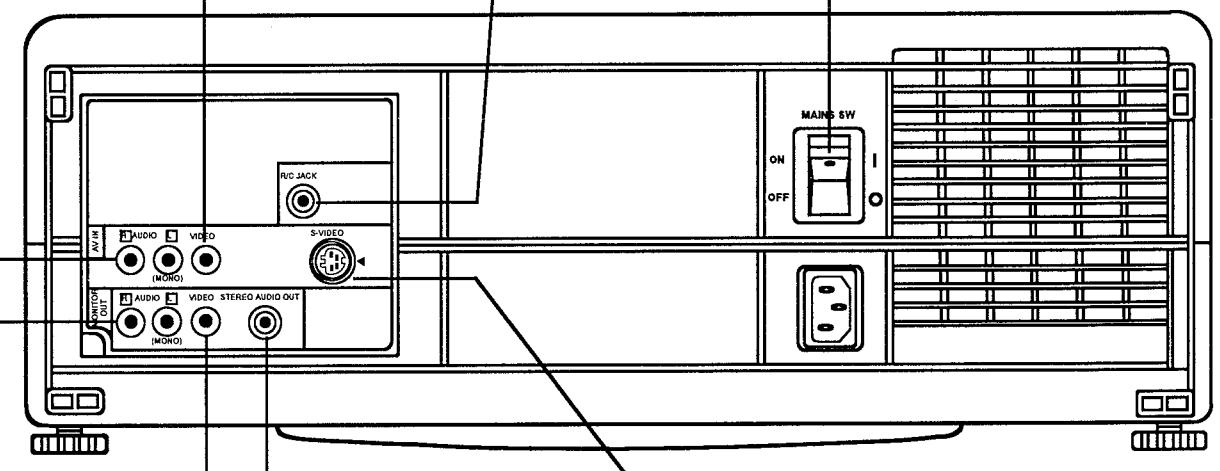
Used to connect a video source to the projector.

### WIRED REMOTE JACK

When using the wired remote control, connect the remote cable to this jack.

### MAINS ON/OFF SWITCH

Used to turn the projector on.



### S-VIDEO INPUT JACK

Used to connect a S-VHS video source to the projector.

### STEREO AUDIO OUTPUT JACK

Used to connect a external stereo amp. and speakers system.

### VIDEO MONITOR OUTPUT JACK

Permits video connection to a monitor.

### AUDIO MONITOR OUTPUT JACKS

Permits audio connection to a monitor.

## AIR FILTER CARE AND CLEANING

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

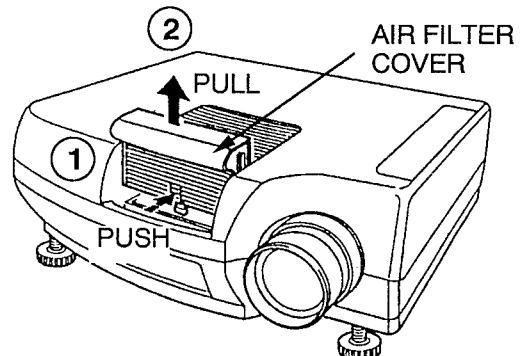
The air filter should be cleaned about every 100 hours. Clean the air filter more often when the projector is used in a particularly dusty or smoky place.

When the air filter is blackened and beyond cleaning, it is time to change new air filter. Request service from an authorized dealer or service station.

Be sure to face the air filter in the correct direction when installing inside of the filter cover. Attach the air filter with the arrow on the "AIR FLOW" label facing towards the inside of the projector.

To clean the air filter, follow the cleaning procedures below:

1. Turn the POWER (LAMP) ON/OFF button OFF.
2. Remove the air filter cover from the side of the projector.
3. Remove the air filter and sponge from the filter cover.
4. Clean the air filter and sponge with a vacuum cleaner.
5. Replace the air filter and sponge. Make sure that air filter cover is fully inserted.



Do not clean with water. Doing so may damage the air filter.

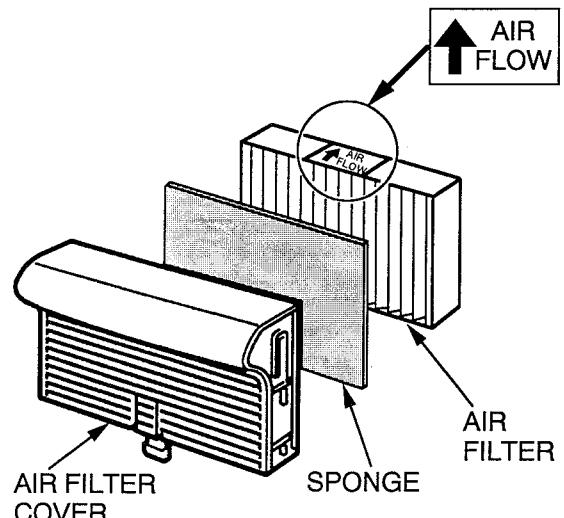
Do not operate the projector with air filter removed.

### RECOMMENDATION

**TO ENJOY PICTURE IMAGE, USE THE PROJECTOR IN THE CLEAN ENVIRONMENT. USAGE IN THE CLEAN ENVIRONMENT IS RECOMMENDED.**

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

When the above symptoms are noticed contact the place where your purchased or the nearest service center for the cleaning.



## LAMP REPLACEMENT & TEMPERATURE WARNING INDICATORS

### LAMP REPLACEMENT INDICATOR

When the lamp nears the end of its service life, the picture quality and color quality will deteriorate and the lamp replacement indicator will light orange.



**DO NOT ATTEMPT TO REMOVE OR CHANGE THE PROJECTION LAMP. THE LAMP CAN ONLY BE CHANGED BY QUALIFIED SERVICE PERSONNEL.**

### TEMPERATURE WARNING INDICATOR

The TEMPERATURE WARNING INDICATOR flashes red when the internal temperature of the projector exceeds the normal temperature.

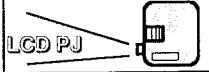
Possible causes for the temperature warning may be:

1. Ventilation slots at the front or rear of the projector are blocked. In such an event, reposition the projector so that ventilation slots are not obstructed.
2. Air filter is clogged with dust particles. Remove dust from the air filter by following instructions in the Air Filter Care and Cleaning section above.

If temperature warning indicator remains on after performing the checks listed above, cooling fan/internal circuits may be malfunctioning. Request service from an authorized dealer or service station.



# [ LAMP REPLACEMENT ]



## **WARNING**

THIS LAMP IS OPERATED UNDER HIGH PRESSURE.

FOR CONTINUED SAFETY, REPLACE WITH A LAMP OF THE PART NO. 610 257 6269.

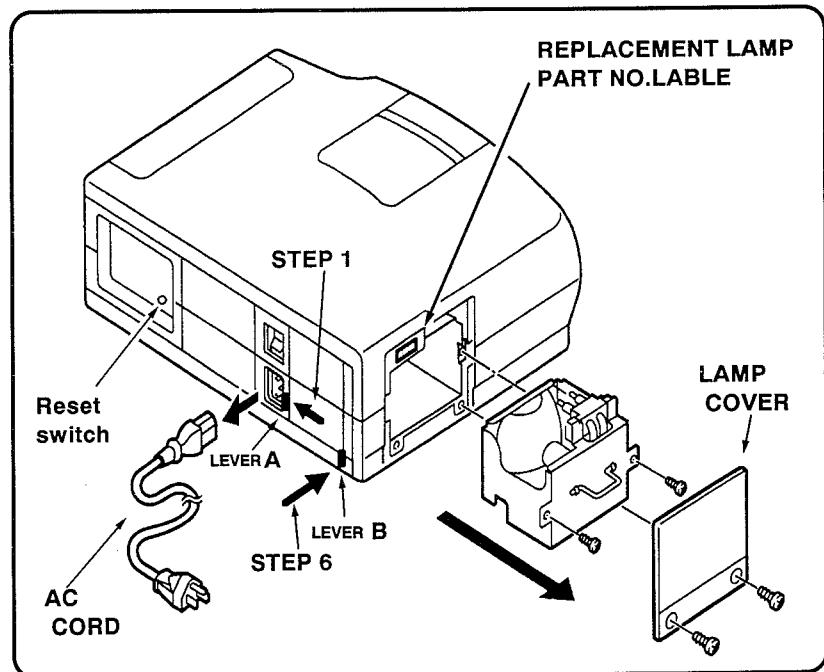
UNPLUG THE PROJECTOR FROM THE POWER OUTLET BEFORE THE PROJECTION LAMP IS REPLACED.  
DO NOT ATTEMPT TO CHANGE A HOT LAMP.

BE CAREFUL NOT TO TOUCH THE LAMP OR MIRROR WITH OILY FINGERS.

### **BEFORE LAMP REPLACEMENT**

To prevent operator injury, the lamp cover is locked. Unless the AC cord is disconnected from the projector and the lock disengaged by pressing the lock release lever, the lamp cover will not disconnect even if the screws have been removed. Replace the lamp following the procedure below.

1. Disconnect the AC cord from the projector and push the lock release lever "A" in the direction of the arrow. (The locking lever "B" emerges to disengage the lamp cover lock.)
2. Remove 2 screws and disconnect the lamp cover. (Note: The lamp cover cannot be disconnected unless the lock is disengaged in step 1 above.)
3. Remove 2 screws and pull out the lamp assembly by gripping the handle.
4. Replace the lamp assembly.
5. Tighten 4 screws to secure the lamp cover to the lamp assembly.
6. Push the locking lever "B" in the direction of the arrow (forward). The lock release lever "A" will now return to its original position, locking the lamp cover.
7. Connect the detachable AC cord to the projector.
8. Reset the lamp replacement monitor timer.
- 8-1. Plug the projector into an AC outlet and switch the power on.
- 8-2. Wait for about 30 seconds until the "A MOMENT!" indication goes off.
- 8-3. Press the Reset switch for two seconds. "RESET" will appear on the screen and go off after a few seconds. The timer has now reset.



### **RECOMMENDATION**

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

Refer to AIR FILTER CARE AND CLEANING on the page 14.

## **HOW TO CHECK THE LAMP ILLUMINATION TIME**

### 1. Checking procedure

With the projector in operating mode (synchronize picture view condition), press the LEVEL "+" or "-" button for 30 seconds; four red alphabets will appear on the screen for 5 seconds.

### 2. Calculation of illumination

$$\text{ILLUMINATION TIME} = 1000 - \frac{8 \times (B \times 4096 + M \times 256 + F \times 16 + L)}{60}$$

**Note: If the RESET button is pressed, the data of illumination time will be initialized.**

### 3. Alphabet – number conversion table

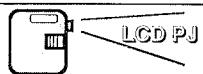
A --- 0	B --- 1	C --- 2	D --- 3	E --- 4	F --- 5	G --- 6	H --- 7	I --- 8
J --- 9	K --- 10	L --- 11	M --- 12	N --- 13	O --- 14	P --- 15		

### 4. Calculation example

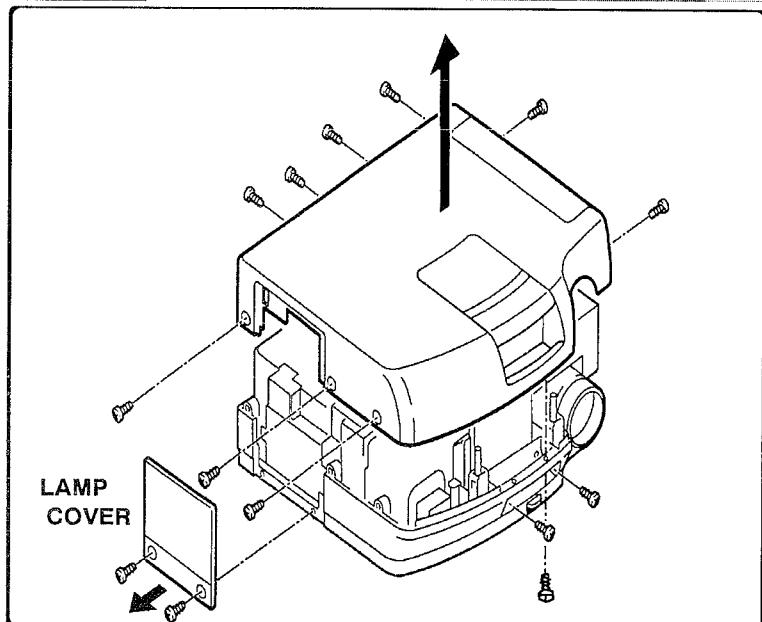
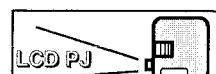
$$1000 - \frac{8 \times (1 \times 4096 + 12 \times 256 + 5 \times 16 + 11)}{60} \approx 32$$

**BMFL**

Approx. 32 hour of illumination

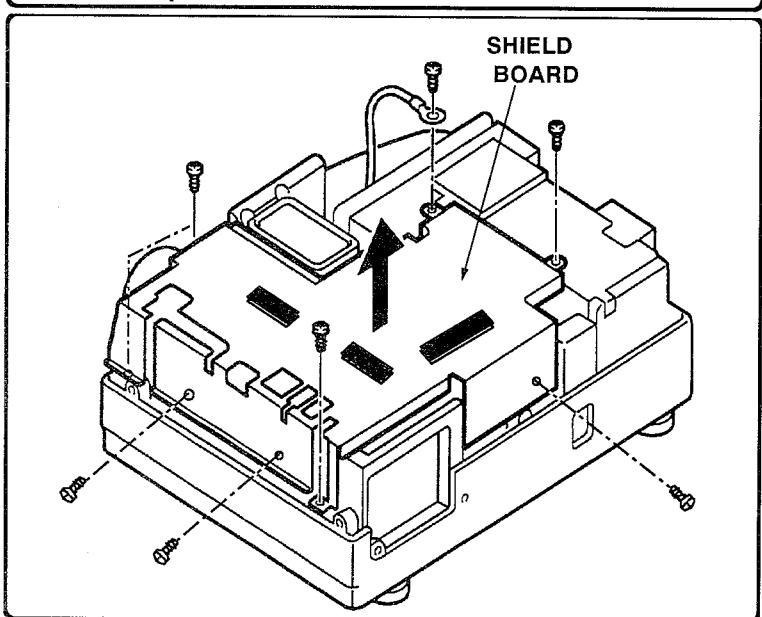


# 【 MECHANICAL DISASSEMBLIES 】



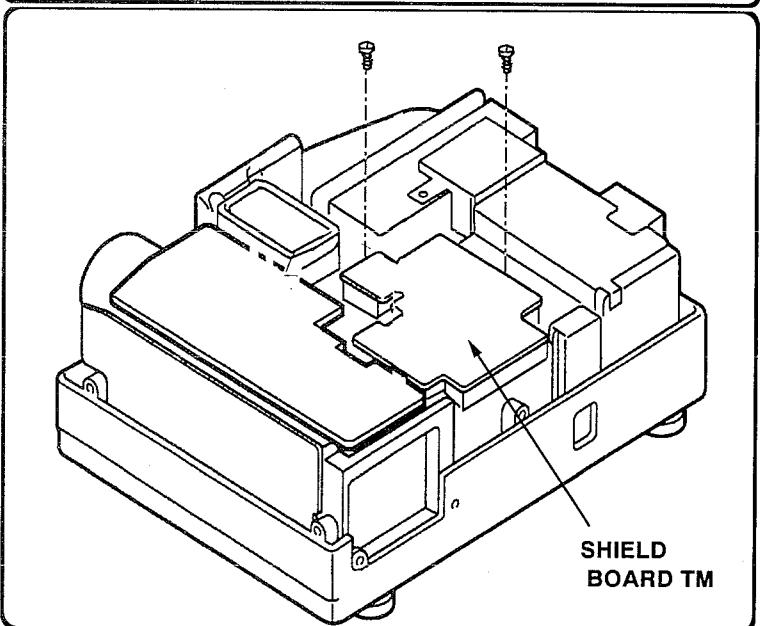
## [1] TOP CABINET REMOVAL

1. Remove lamp cover. (Refer to **LAMP REPLACEMENT** procedure on page 15.)
2. Remove 3 front screws, 4 rear screws and 5 side screws of the top cabinet.
3. Grip the two sides, pull the top cabinet upward and remove.



## [2] SHIELD BOARD REMOVAL

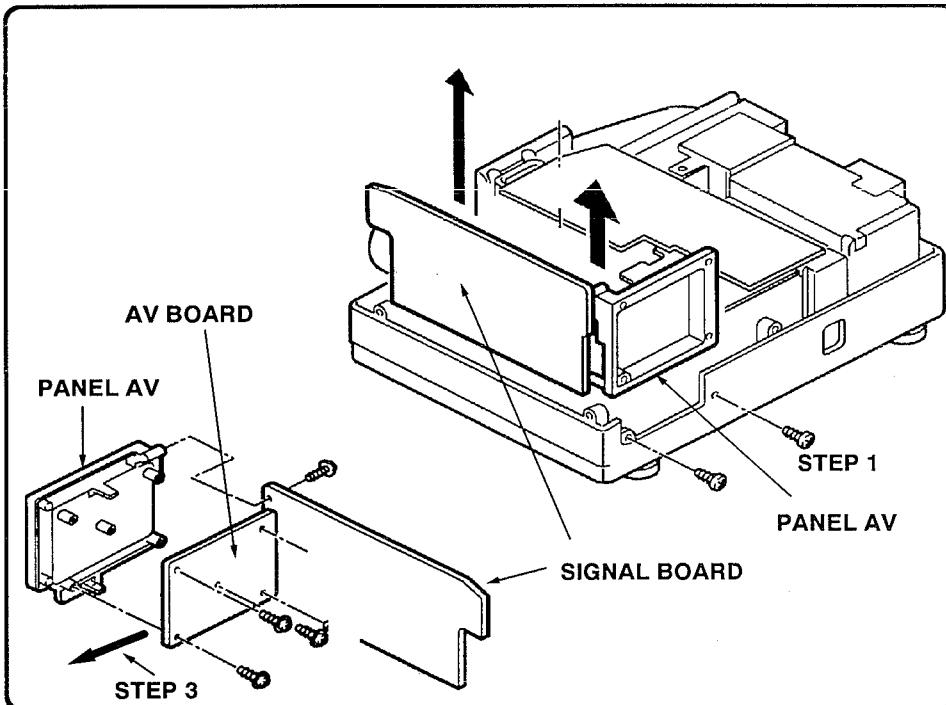
Remove 7 screws and disconnect the Shield board.



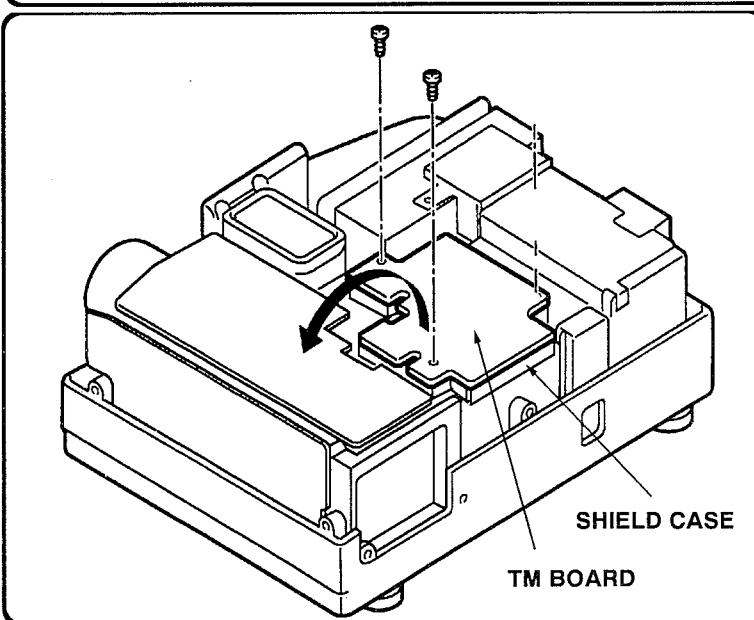
## [3] SHIELD BOARD TM REMOVAL

Remove 2 screws and disconnect the Shield board TM.

#### [4] SIGNAL & AV BOARD REMOVAL

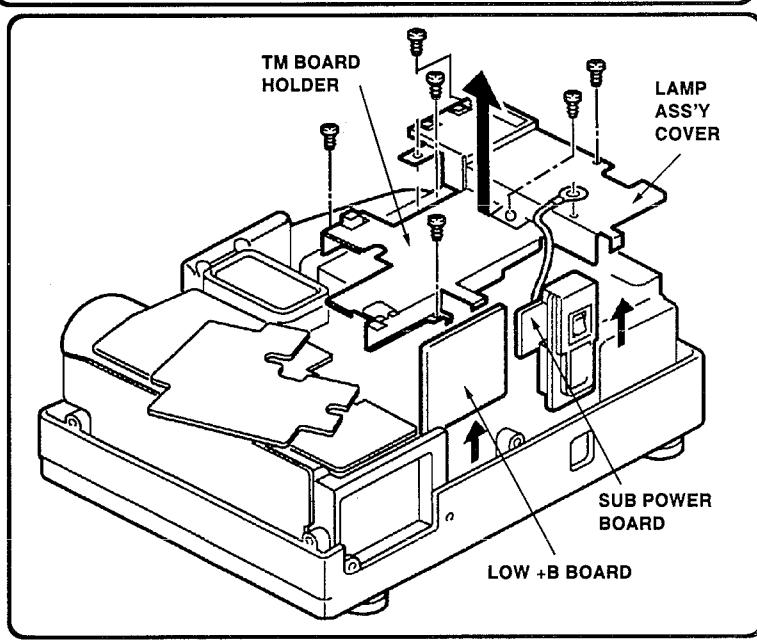


1. Remove 2 screws. Hold the signal board and AV board and pull upward to remove.
2. Remove 4 screws and disconnect the Panel AV.
3. Pull the AV board in the direction of the arrow and disconnect the signal board.



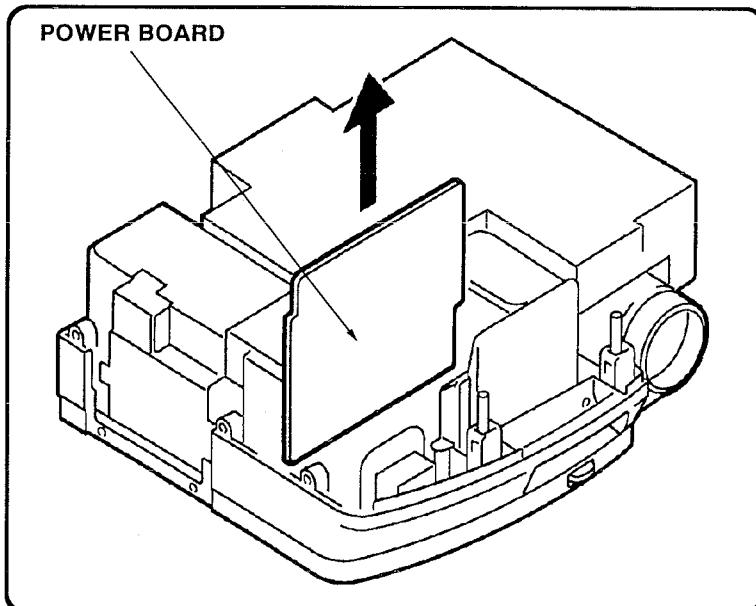
#### [5] TM BOARD REMOVAL

1. Remove 2 screws and turn the TM board 180 in the direction of the arrow.
2. Remove Shield case



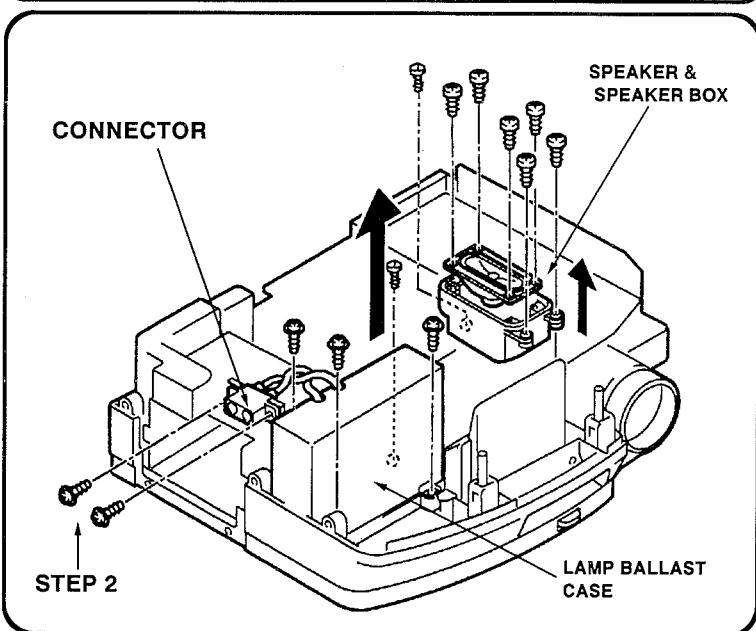
#### [6] LOW +B BOARD & SUB POWER BOARD REMOVAL

1. Remove 3 screws and disconnect the TM board holder.
2. Remove 3 screws and disconnect the Lamp ass'y cover.
3. Pull the sub power board upward to remove.
4. Low +B board upward to remove.



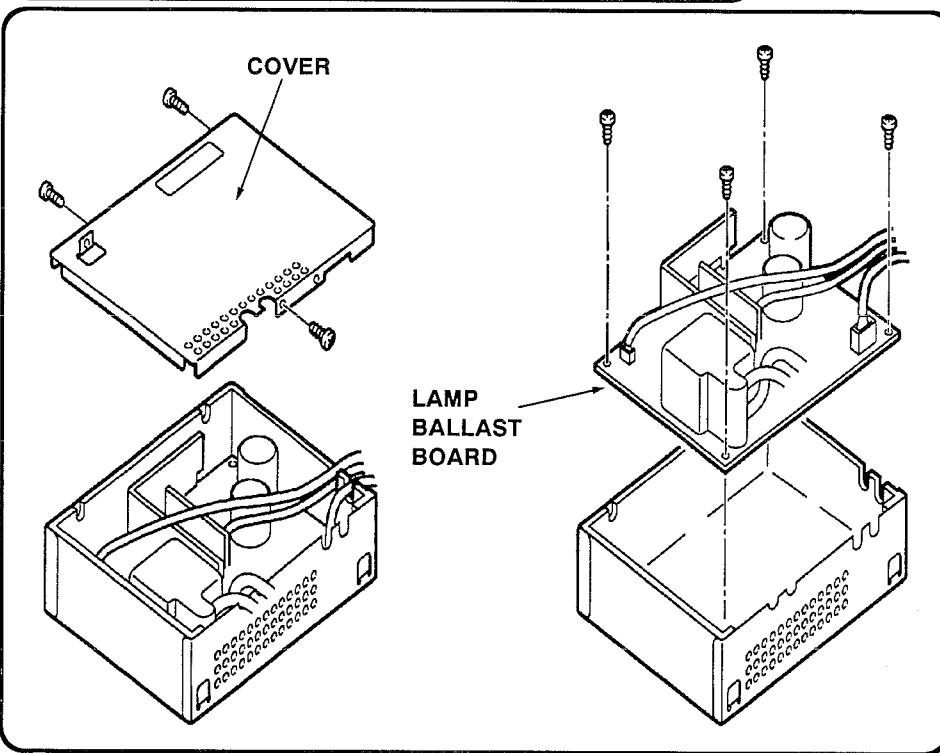
## [7] POWER BOARD REMOVAL

Pull the power board upward to remove.



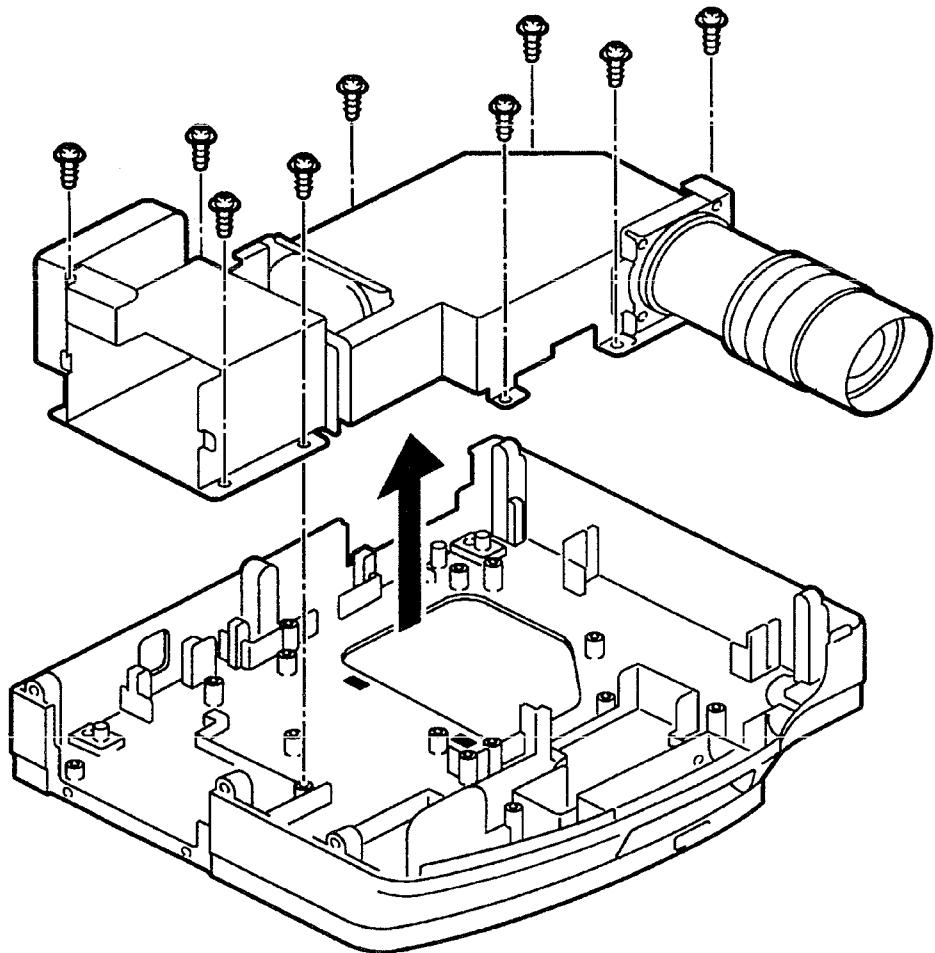
## [8] LAMP BALLAST CASE & SPEAKER REMOVAL

1. Remove 4 screws and disconnect the lamp ballast case
2. Remove 2 screws and disconnect the connector from the lamp ballast board.
3. Remove 7 screws and disconnect the Speaker & Speaker Box



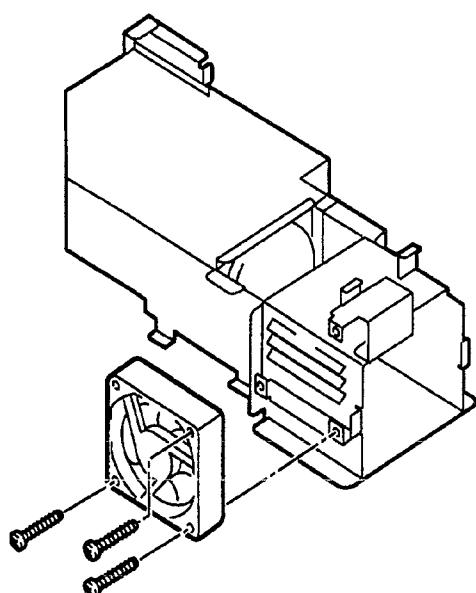
## [9] LAMP BALLAST BOARD REMOVAL

1. Remove 3 screws then pull out the cover and remove.
2. Remove 4 screws on the corner of the lamp ballast board
3. Remove the lamp ballast board from the case.



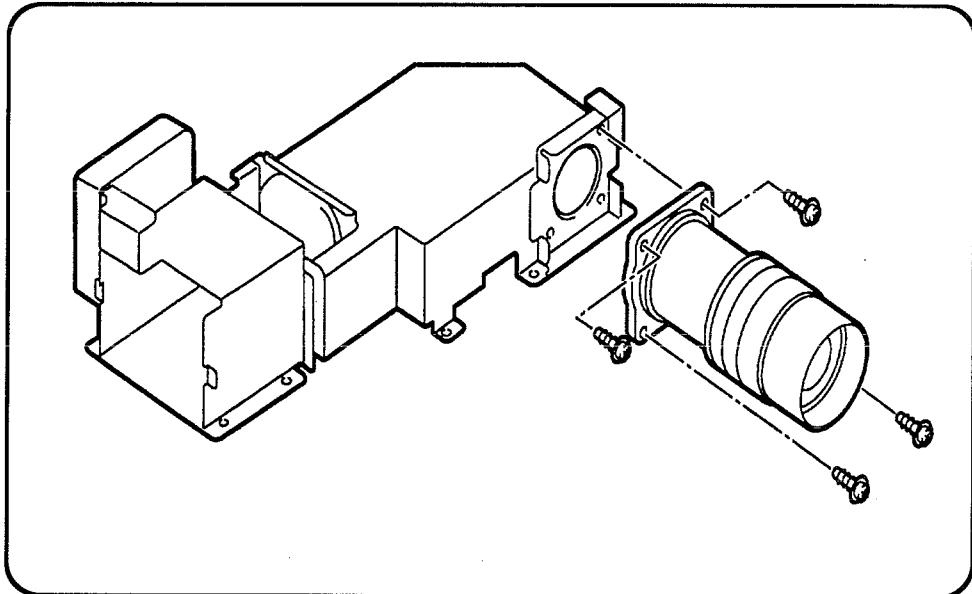
#### [10] CHASSIS REMOVAL

Remove 9 screws and pull the chassis upward to remove.

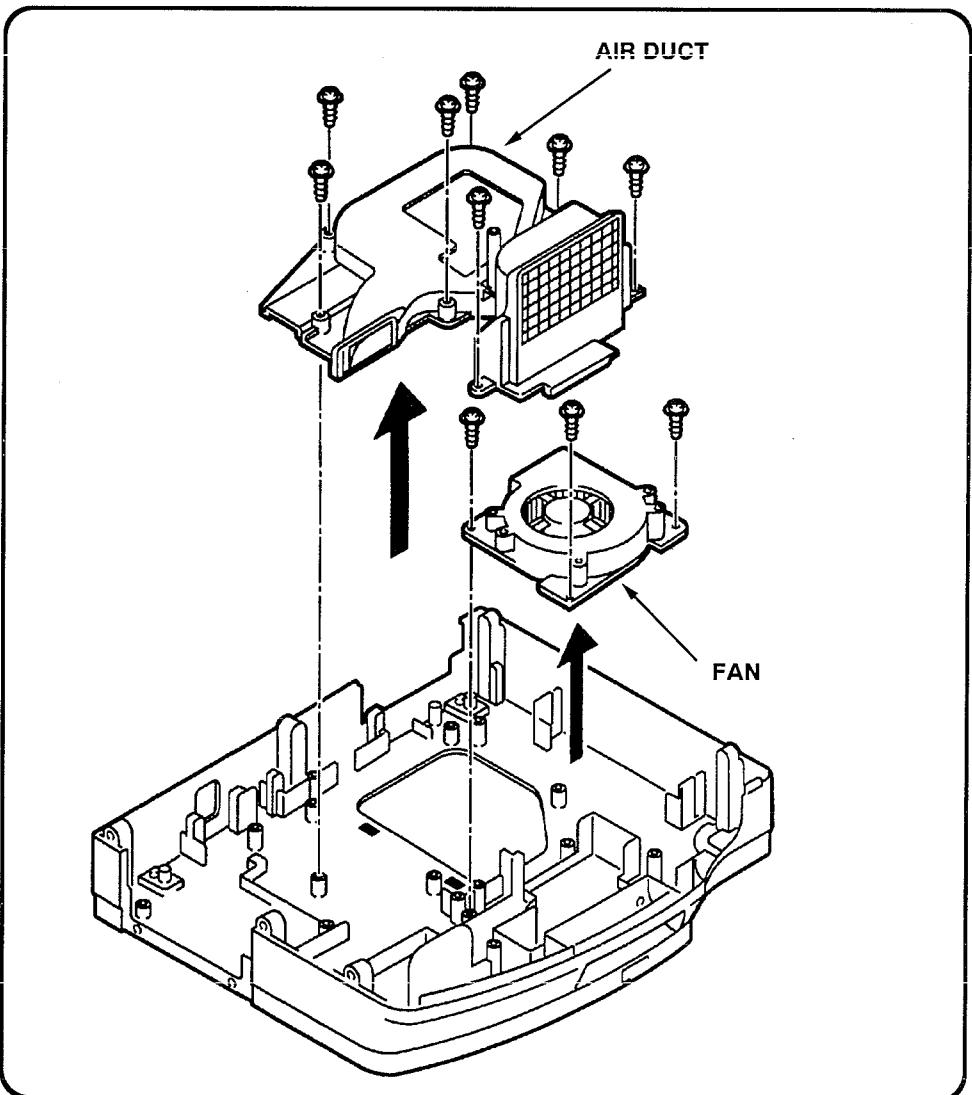


#### [11] FAN REMOVAL

Remove 3 screws and disconnect the fan.



[12] Remove 4 screws securing the lens and pull it forward to remove.



**[13] AIR DUCT & FAN REMOVAL**

1. Remove 7 screws and disconnect the air duct.
2. Remove 3 screws and disconnect the fan.

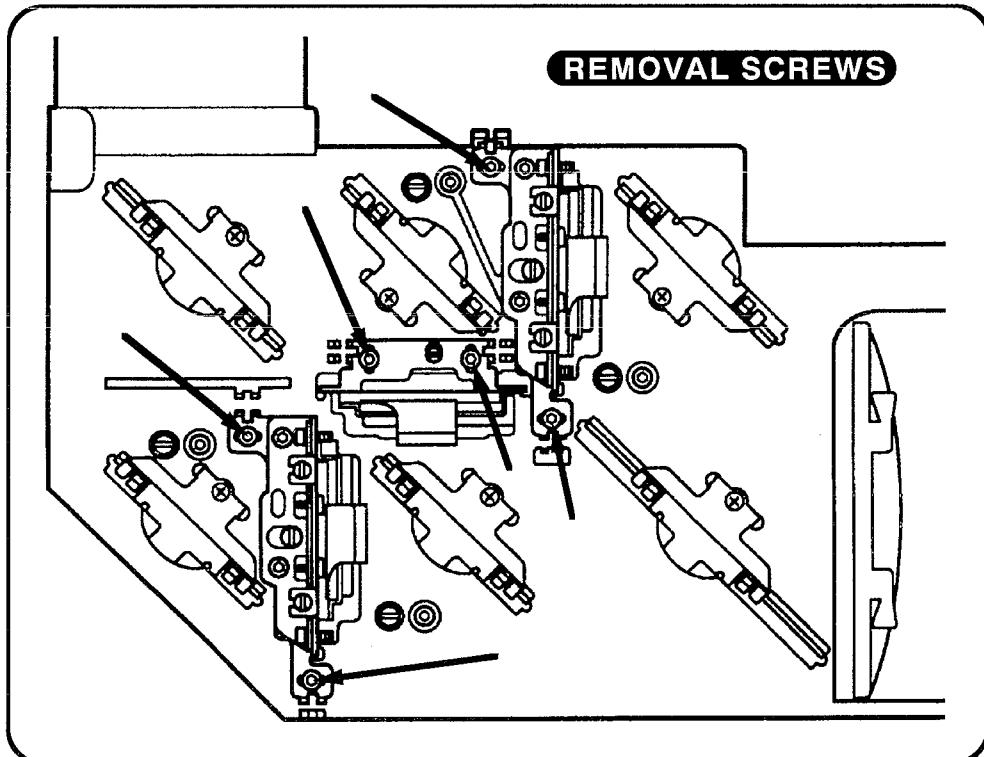


LCD PJ

# [ LCD PANEL REPLACEMENT ]

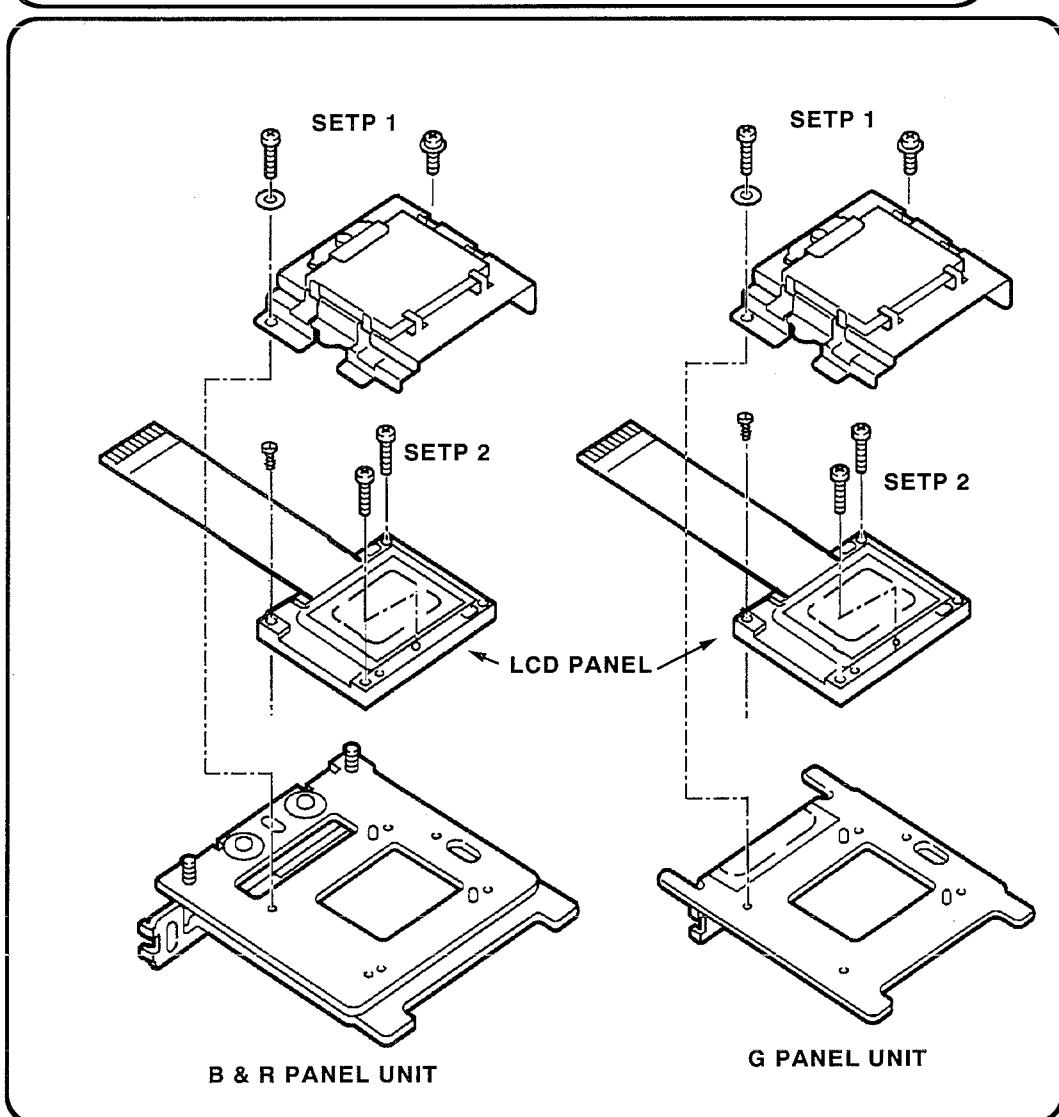


LCD PJ



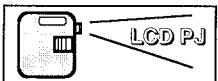
## LCD PANEL UNIT REMOVAL

1. Remove the FPC.
2. Remove 2 screws securing the panel unit.
3. Pull out the panel unit.

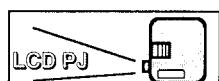


## LCD PANEL REPLACEMENT

1. Remove 2 screws and disconnect 2 polarizing glass plates.
2. Remove 2 screws, disconnect the liquid crystal panel and replace it.
3. Assemble the panel unit.



# FOCUS ADJUSTMENT



## Before adjustment.

For adjusting focus, first adjust the G (green) liquid crystal panel unit as the standard reference. Adjust the red panel unit position so that the bottom of the screen will not go out of focus by zooming. Then bring the focus of top and bottom sections of the B (blue) and R (red) screens into sharp focus by adjusting the position of their panel units.

Input a computer signal (e.g. flat pattern) in which the R, G, and B dots are easily distinguishable.

Adjustment requires a Phillips screwdriver, slot screwdriver and 2.5mm hex wrench.

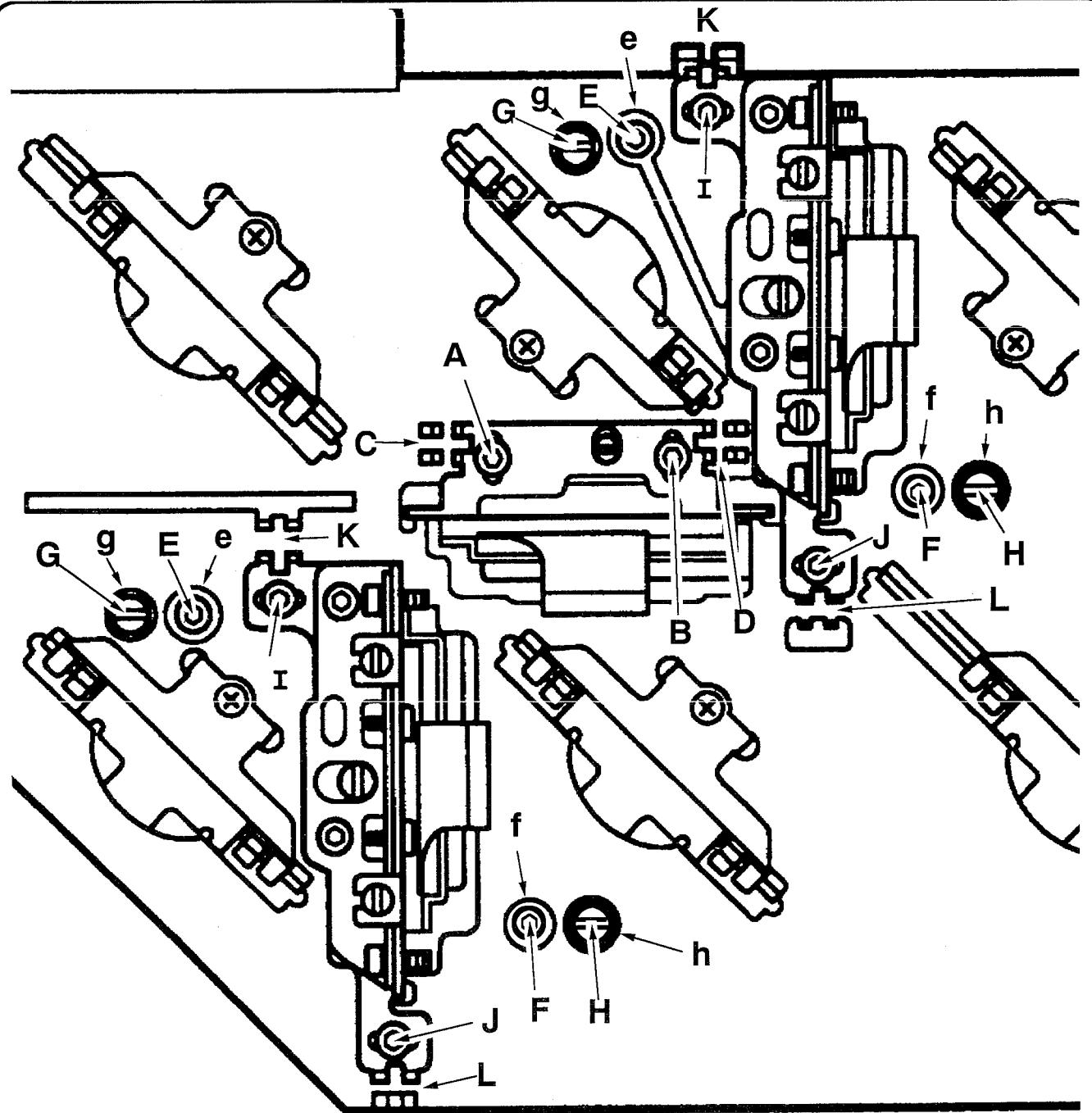
## G Panel Focus Adjustment

1. Switch the projector on and project the adjustment pattern on the screen.
2. Insert paper, etc. in R panel and B panel to block the R and B light so that only G light is projected.
3. Turn the zoom ring of the projection lens to the "Tele" position (to reduce image size) and turn the focus ring of the projection lens until the bottom section of the screen is in sharp focus.
4. Turn the zoom ring to "Wide" position (to increase image size) and confirm that the screen remains in focus. If it is in sharp focus, adjustment is complete. If not, follow the steps below.
5. Loosen the screws "A" and "B" (Fig.1) with the 2.5mm hex wrench.
6. Insert the slot type screwdriver in the slits "C" and "D" (Fig.1) and gently turn the screwdriver until the left and right sections of the screen are in sharp focus.
7. Tighten the screws "A" and "B" (previously loosened in step 5) and securely attach the panel unit.
8. Turn the zoom ring to the "Tele" position and check to see if sharp focus is retained. If in sharp focus, adjustment is complete. If not, repeat steps 3 to 8 above.

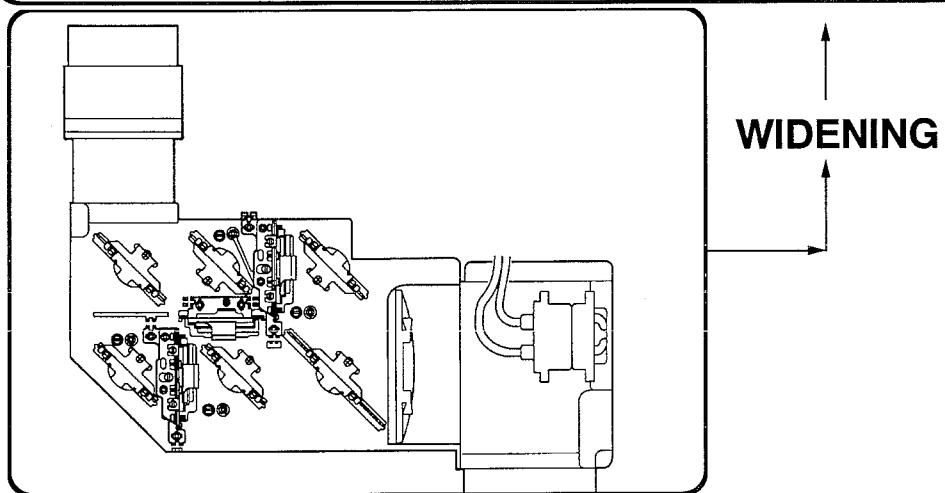
## R & B Panel Focus Adjustment

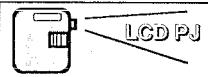
[ Before performing this adjustment, make sure G focus adjustment is complete.]

1. Switch the projector on and project the adjustment pattern on the screen.
2. Block unnecessary light by inserting paper, etc. in the panel so that only the R (or B) light is projected.
3. Insert the 2.5mm hex wrench in holes "e" and "f" and loosen the screws "E" and "F" (Fig. 1).
4. Insert the slot type screwdriver through holes "g" and "h" into the slits "G" and "H" and gently turn the screwdriver until the top right and left sections of the screen are in sharp focus.
5. Tighten the screws "E" and "F" (previously loosened in step 3 above) to securely attach the panel unit.
6. Loosen the screws "I" and "J" (Fig.1 ) with the 2.5mm hex wrench.
7. Insert the slot screwdriver in the slits "K" and "L" (Fig.1 ) and gently turn the screwdriver until the bottom left and right sections of the screen are in sharp focus.
8. Tighten the screws "I" and "J" (previously loosened in step 6) to securely attach the panel unit.
9. Compare the projected image with the G panel image. If the sizes of both images coincide with each other, adjustment is complete. If not, follow the steps below. (Change the input signal to a grid or similar pattern that facilitates easier size comparison.)
10. Project only the G panel and slightly adjust the lens focus to reduce the image size. Make sure that the surrounding area does not go out of focus.
11. Repeat from step 3 on.

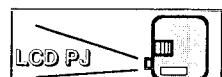


**FIG 1. FOCUS ADJUSTMENT**





# CONVERGENCE ADJUSTMENTS

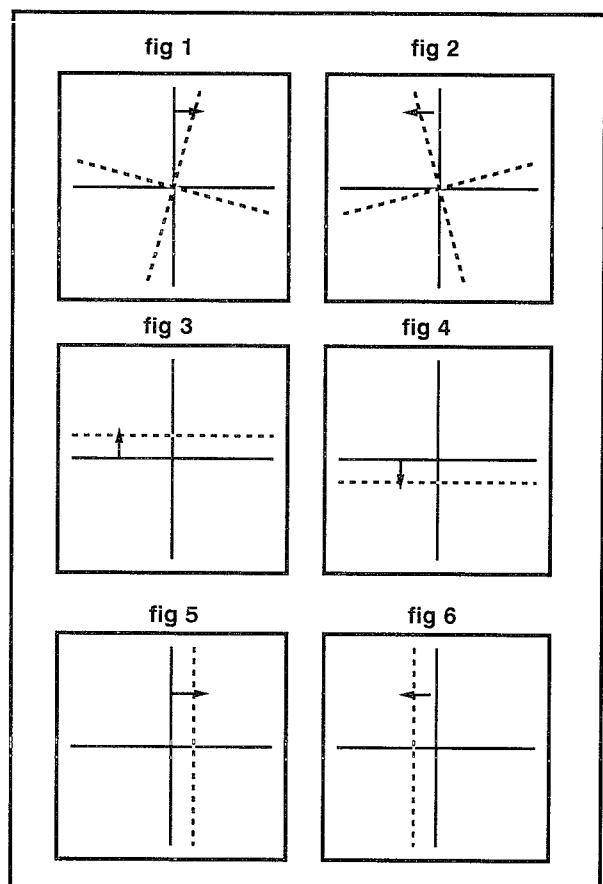


## Before Adjustment

Use a grid pattern for adjustment. First make a rough adjustment using a video signal and then fine adjust by using a computer signal.

## Image Movement According to Adjustment Screw Turning Direction

1. Simultaneously turning the convergence adjustment screw "C" clockwise and "B" counterclockwise turns the image clockwise. (Fig. 1)
2. Simultaneously turning adjustment screw "C" counterclockwise and "B" clockwise turns the image counter-clockwise. (Fig. 2)
3. Simultaneously turning adjustment screws "B" and "C" clockwise moves the image up. (Fig. 3)
4. Simultaneously turning adjustment screws "B" and "C" counterclockwise moves the image down. (Fig. 4)
5. Turning adjustment screw "D" clockwise moves the image right. (Fig. 5)
6. Turning adjustment screw "D" counterclockwise moves the image left. (Fig. 6)

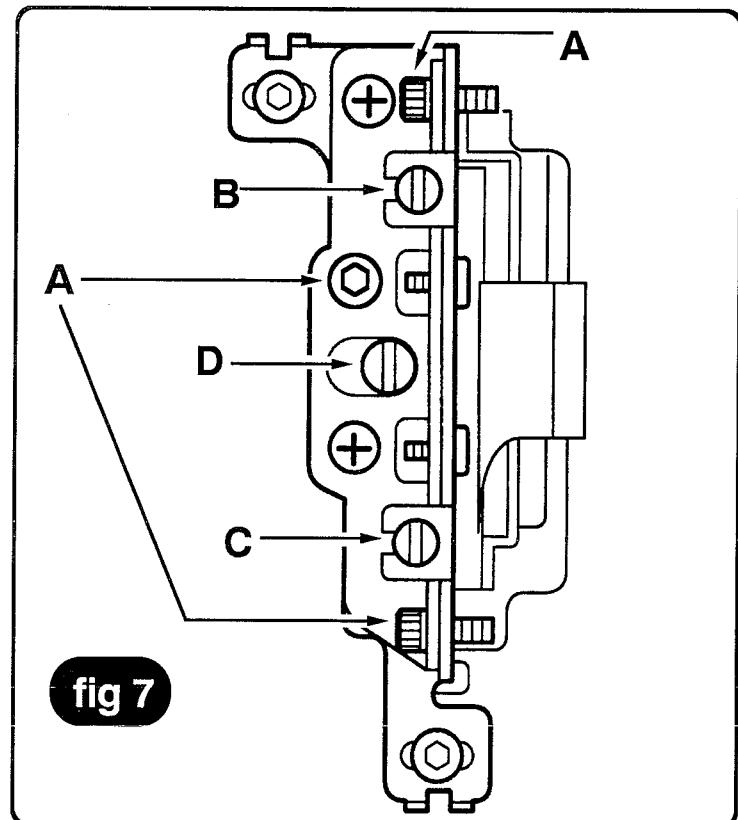


## Adjustment

For convergence adjustment, use G (green) as the reference standard. Align R (red) and B (blue) with G by adjusting the position and angle of the R and B liquid crystal panels. Screws "B," "C" and "D" are for convergence adjustment.

## R/B Panel Adjustment:

1. Switch the projector on and project a video signal (grid pattern) on the screen.
2. Insert paper, etc. into R (or B) panels to block the R (or B) light.
3. Loosen the 4 screws "A" (Fig.7 ) using the 2.5mm hex wrench.
4. Using the screws "B" and "C", align so that the R (or B) grid pattern vertical center line is parallel to the G grid pattern vertical center line. (Fig. 1 or 2)
5. Turn the screws "B" and "C" in the same direction to align the R (or B) horizontal center line on top of the G horizontal line. (Fig. 3 or 4)
6. Repeat steps 4 and 5 until the R (or B) horizontal line is aligned exactly on top of the G horizontal line.
7. Using the screw "D," align the R (or B) vertical center line on top of the G vertical line. (Fig.5 or 6)
8. By repeating steps 4 through 7, align the R (or B) grid pattern on top of the G grid pattern.
9. Input a computer signal (grid signal) and check the convergence in fine sync'd condition (grid vertical line is most clear). If not aligned, repeat steps 4 through 9.
10. Tighten the four screws "A" (previously loosened in step 3 above) with the 2.5mm hex wrench.
11. After tightening the screws, check convergence. If not aligned, repeat steps 2 through 10 above.





## CLEANING METHODS



After long periods (many years) of use, dust and particles and other contamination will accumulate on the LCD panel Ass'y (LCD panel and polarizing plate), lens, mirror, etc. and the picture will tend to darken and color blurring may occur.

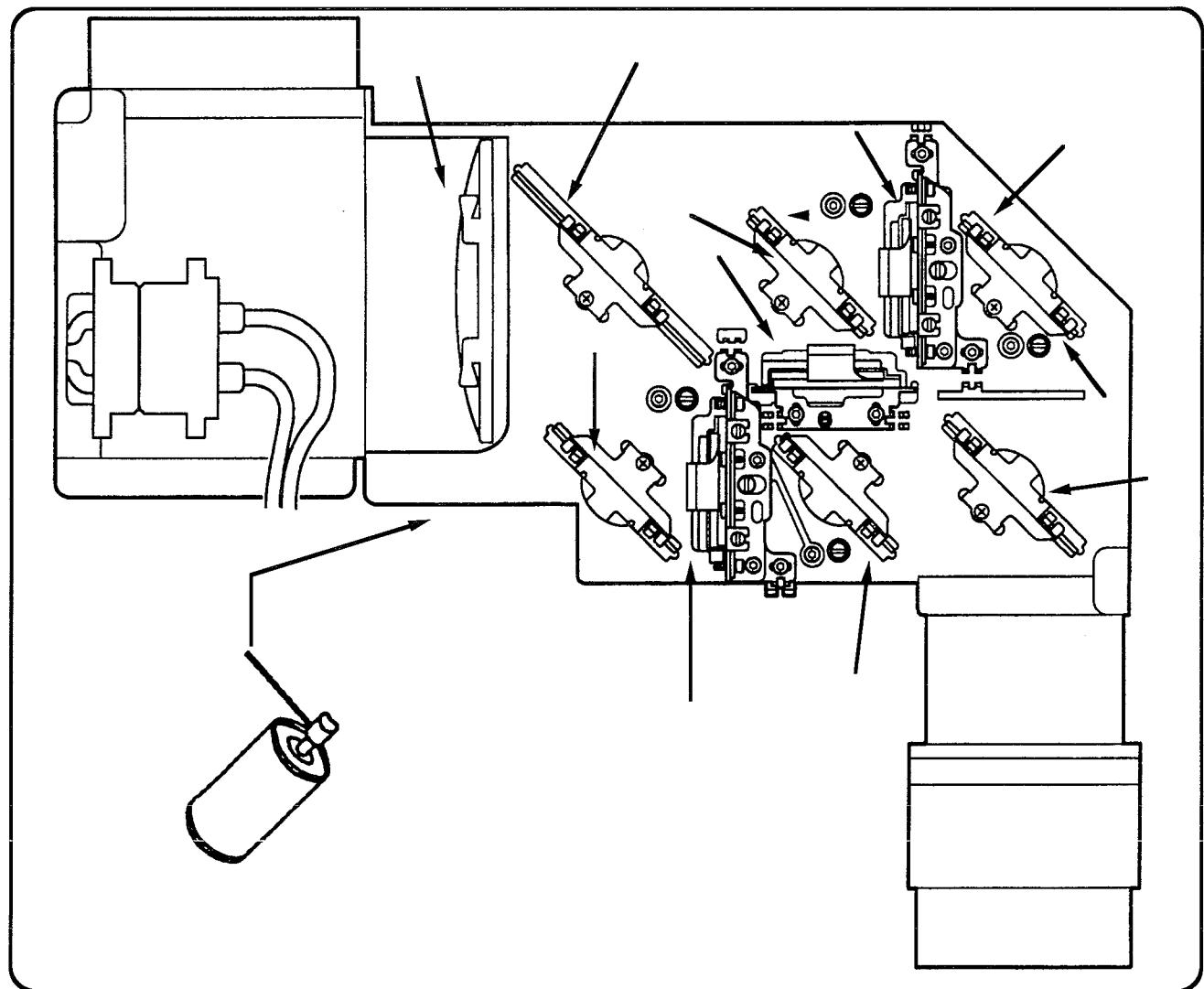
When this occurs, cleaning of the inside of the unit will be necessary. For dust and light accumulation of contamination, use an air spray to remove the dust. If the contamination cannot be removed by air spray, disassembly and cleaning of the unit will be necessary. Perform all cleaning according to the cleaning methods given below.

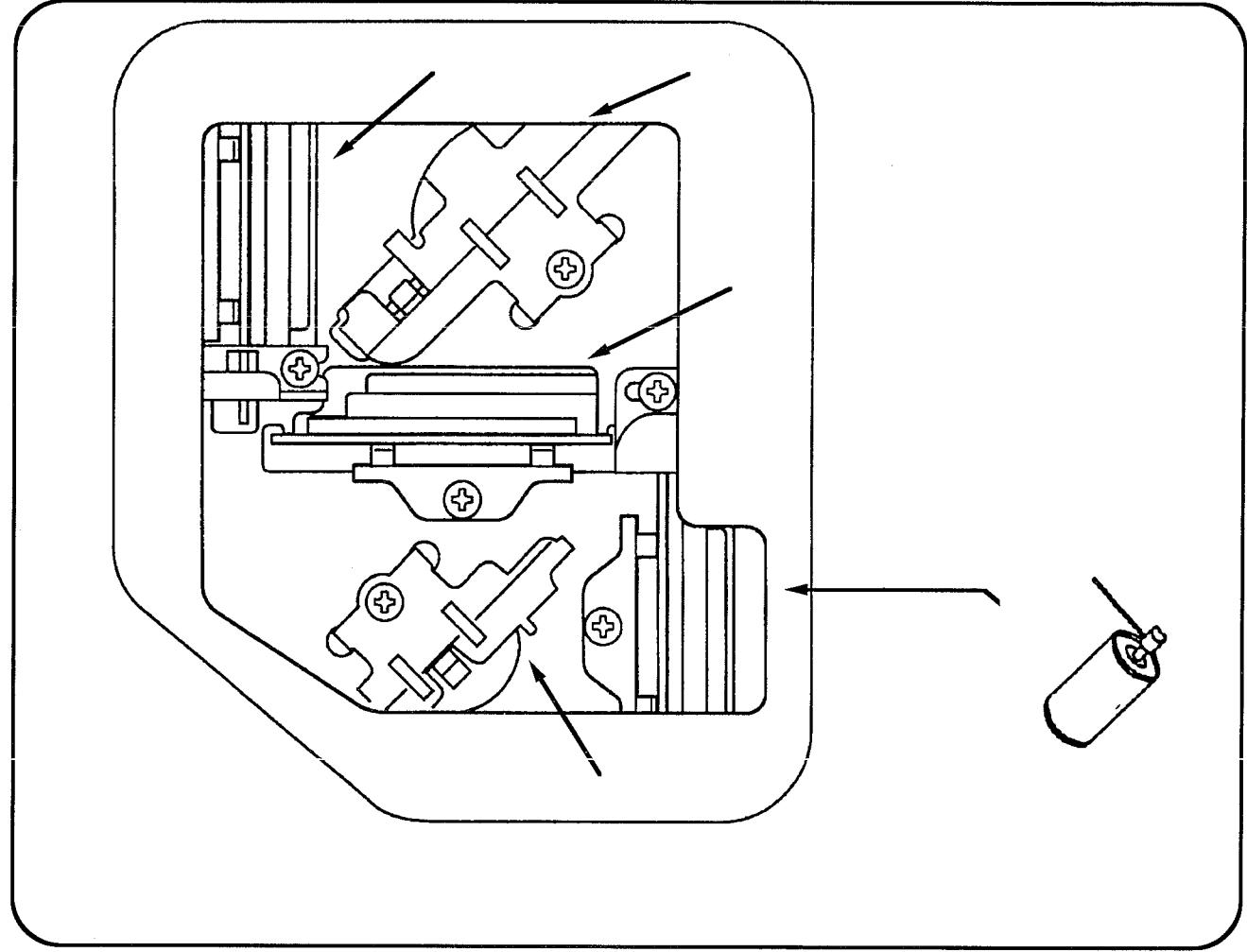
### Caution:

Use a commercial (insert gas) air spray designed for camera cleaning use. Never use any cleaner other than that specified for cleaning the LCD panel Ass'y (LCD panel and polarizing plate), lens, mirror, etc. Also, never scrape with any hard material as this will cause damage.

### Air Spray cleaning Method

Remove dust from the LCD panel Ass'y by inserting the air spray nozzle in the openings on both sides of the sets holding the LCD panel Ass'y. (Caution: Always use a nozzle made of resin. Also be very careful not to cause any damage to the LCD panel assembly parts with the nozzle tip.)





## **Disassembly cleaning Method**

After performing disassembly cleaning, adjustment of the unit will be necessary.

Disassembly cleaning should only be performed when there is considerable contamination which cannot be removed by air spray.

### **Caution:**

Never remove the mirror. The position of the mirror is precisely set at the factory. Perform all cleaning of the mirror with it attached to the unit.

### **● LCD Panels Ass'y (LCD panel and polarizing glass lens)**

Remove dust, etc. by wiping with a soft cloth. For heavy contamination, remove by moistening the cloth with alcohol.

### **Caution:**

Never use organic solvents (thinners, etc.) as their use will cause damage to these surfaces.

Never use water or other liquids on the LCD panels ass'y. If the liquid gets into the circuits, damage will result.

### **● Mirrors**

Remove dust, etc. by wiping with a soft cloth. For heavy contamination, remove by moistening the cloth with alcohol.

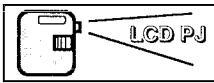
### **Caution:**

Never use organic solvents (thinners, etc.) as their use will cause damage to these surfaces.

## **Disassemble and clean the LCD panel units.**

Disassembly and assembly of the LCD panel units is performed according to the exploded view diagrams given for each panel, cleaning of the mirror is always performed with it attached to the main unit.

Perform the cleaning of each part according to the cleaning methods described below.



# SERVICE ADJUSTMENTS



## +5.2 VOLT ADJUSTMENT

EQUIPMENT ..... Digital voltmeter  
CONNECTIONS ..... C629 +  
Chassis Ground  
INPUT SIGNAL ..... Color bar signal  
  
SELECT VIDEO MODE ..... AV

ADJUSTMENT: Adjust VR601 to be  
 $5.2 \pm 0.05V$  DC.

## NTSC VCO ADJUSTMENT

EQUIPMENT ..... Digital voltmeter  
CONNECTIONS ..... TP47A  
Chassis Ground  
INPUT SIGNAL ..... Color bar signal

ADJUSTMENT: Adjust T4261 to be  
 $2.5 \pm 0.05V$  DC.

## PAL VCO ADJUSTMENT

EQUIPMENT ..... Digital voltmeter  
CONNECTIONS ..... TP47B  
Chassis Ground  
INPUT SIGNAL ..... Color bar signal

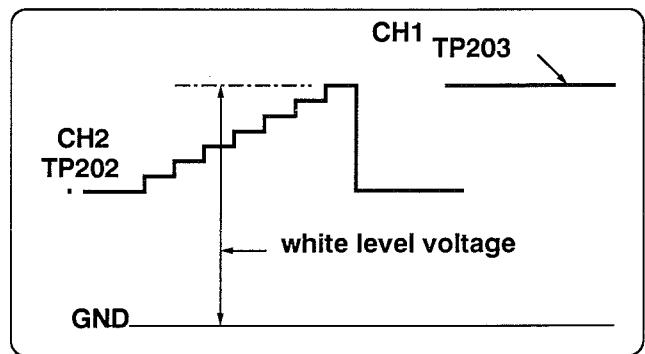
ADJUSTMENT: Adjust T4272 to be  
 $3.0 \pm 0.05V$  DC.

## BLACK LEVEL EXTENSION ADJUSTMENT

EQUIPMENT ..... Oscilloscope  
CONNECTIONS ..... CH1: TP203  
Chassis Ground  
CH2: TP202  
Chassis Ground  
  
INPUT SIGNAL ..... NTSC 16 step gray scale  
video signal

DIGITAL CONTROL ..... NORMAL

ADJUSTMENT: 1. By using VR251 adjust TP203 DC level  
voltage for same as TP202 white level  
voltage



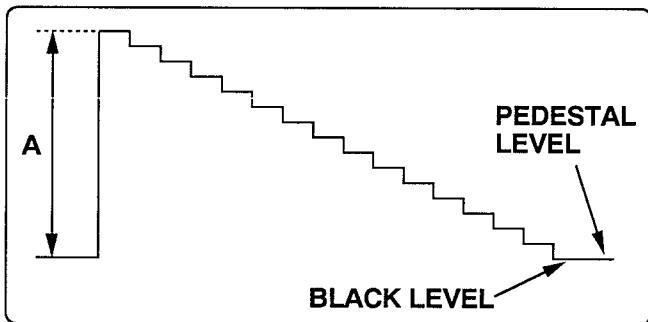
## VIDEO GAIN ADJUSTMENT

EQUIPMENT ... Oscilloscope  
CONNECTIONS ..... TP40R  
Chassis Ground  
TP40G  
Chassis Ground  
TP40B  
Chassis Ground

INPUT SIGNAL ..... 16 Step Gray Scale video signal (NTSC)

OTHER CONDITION ..... Adjust the 85BR data (Refer to IIC Data Adjustment on page 31) so that the pedestal level and the black level are equal.

ADJUSTMENT: By using 85GG, 85RG and 85BG data (Refer to IIC Data Adjustment on page 31.) adjust A to be  $0.28 \pm 0.01V$  p-p.



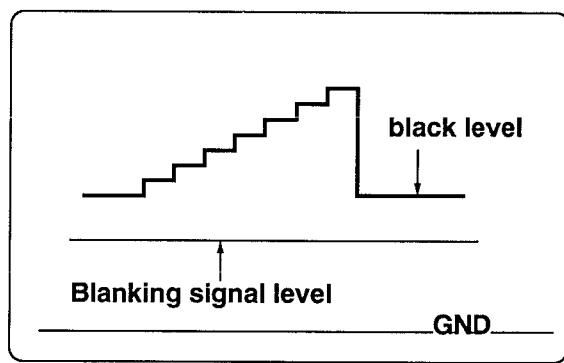
## BLANKING LEVEL ADJUSTMENT

EQUIPMENT ..... Oscilloscope  
CONNECTIONS ..... CH1: TP40G  
Chassis Ground

INPUT SIGNAL ..... NTSC 16 step gray scale video signal

DIGITAL CONTROL ..... NORMAL

ADJUSTMENT: 1. By using VR4091 adjust Blanking level voltage for same as Black level voltage



## SUB TINT SUB COLOR ADJUSTMENT

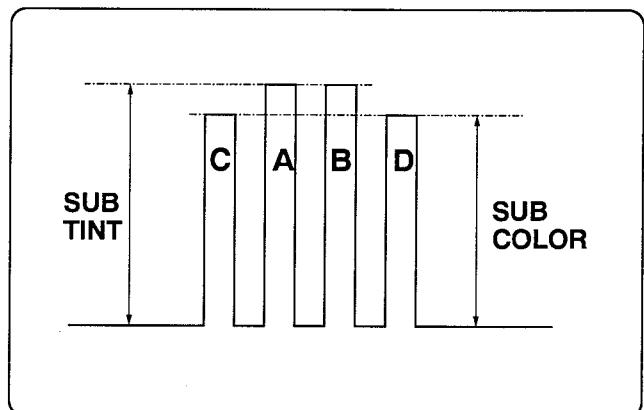
EQUIPMENT ..... Oscilloscope  
CONNECTIONS ..... CH1: TP40B  
Chassis Ground

INPUT SIGNAL ..... NTSC color bar signal

DIGITAL CONTROL ..... NORMAL

**SUB TINT**  
ADJUSTMENT: 1. By using STNT (refer to iic Data Adjustment on page 31) adjust the A level and the B levels are equal

**SUB COLOR**  
ADJUSTMENT: 1. By using SCOL (refer to iic Data Adjustment on page 31) adjust the C level and the D levels are equal

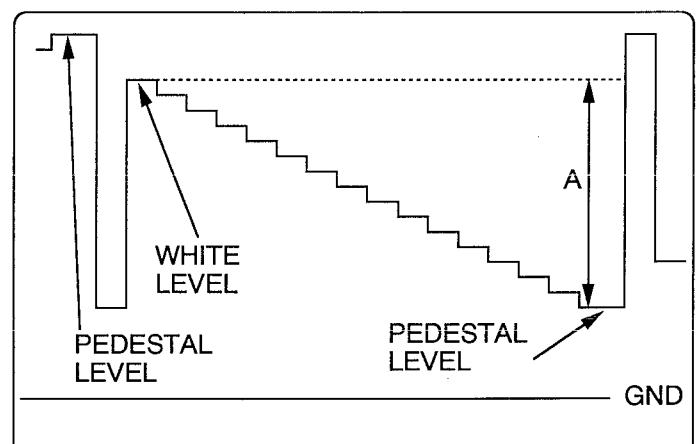
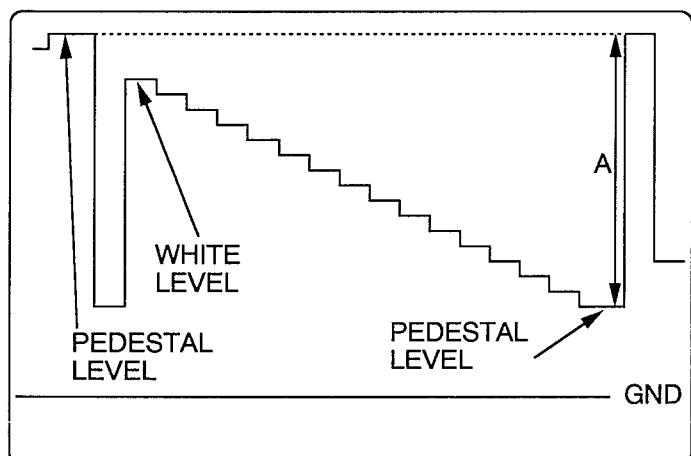


## G-DC ADJUSTMENT

EQUIPMENT ..... Oscilloscope  
CONNECTIONS ..... TP48G and ground

INPUT SIGNAL ..... 16 Step Gray Scale video signal (NTSC)

ADJUSTMENT: 1. By using VR4021 adjust A to be  $8.7 \pm 0.1V$  p-p.



## R VIDEO ADJUSTMENT -1

EQUIPMENT ..... Oscilloscope  
CONNECTIONS ..... TP48R and ground

INPUT SIGNAL ..... 16 Step Gray Scale video signal (NTSC)

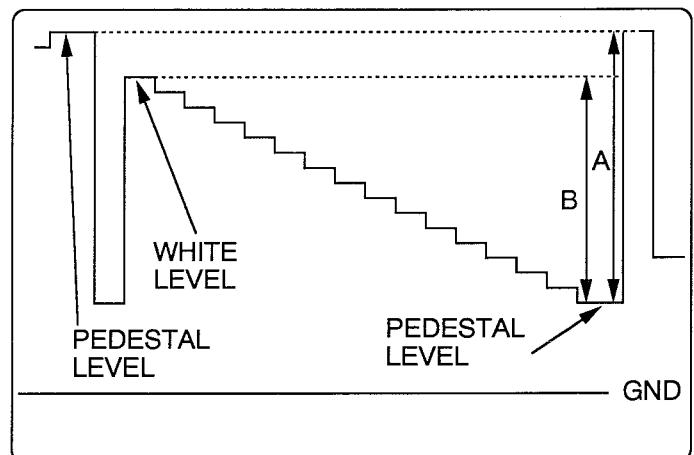
ADJUSTMENT: 1. By using VR4001 adjust A to be  $8.7 \pm 0.1V$  p-p.  
2. By using VR4062 adjust B to be  $2.5 \pm 0.1V$  p-p.

## GAMMA ADJUSTMENT

EQUIPMENT ..... Oscilloscope  
CONNECTIONS ..... TP48G and ground

INPUT SIGNAL ..... 16 Step Gray Scale video signal (NTSC)

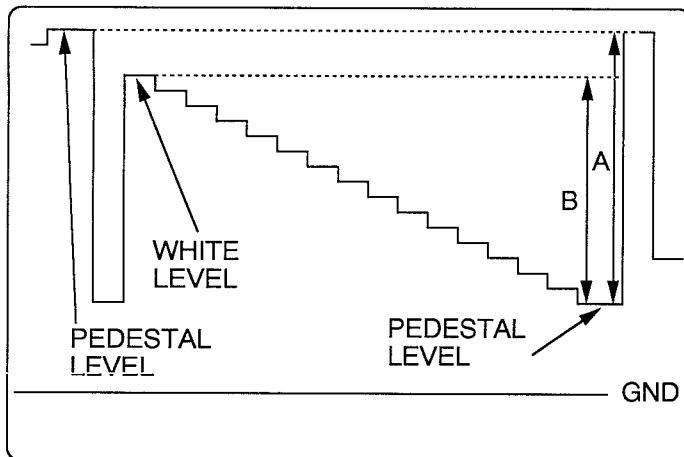
ADJUSTMENT: 1. By using VR4063 adjust A to be  $2.5 \pm 0.1V$  p-p.



## B VIDEO ADJUSTMENT-1

EQUIPMENT ..... Oscilloscope  
CONNECTIONS ..... TP48B and ground  
  
INPUT SIGNAL ..... 16 Step Gray Scale video signal (NTSC)

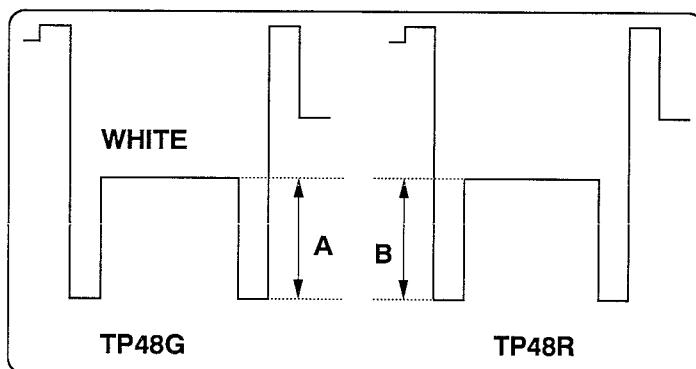
ADJUSTMENT: 1. By using VR4041 adjust A to be  $8.7 \pm 0.1V$  p-p.  
2. By using VR4061 adjust B to be  $2.5 \pm 0.1V$  p-p.



## R VIDEO ADJUSTMENT-2

EQUIPMENT ..... Oscilloscope  
CONNECTIONS ..... CH1: TP48G  
Chassis Ground  
CH2: TP48R  
Chassis Ground  
  
INPUT SIGNAL ..... NTSC 100% White video signal  
  
DIGITAL CONTROL ..... CONT.....Center  
..... BRIGHT.....Min

ADJUSTMENT: 1. By using VR4062 adjust TP48R (B) level voltage for same as TP48G (A) level voltage

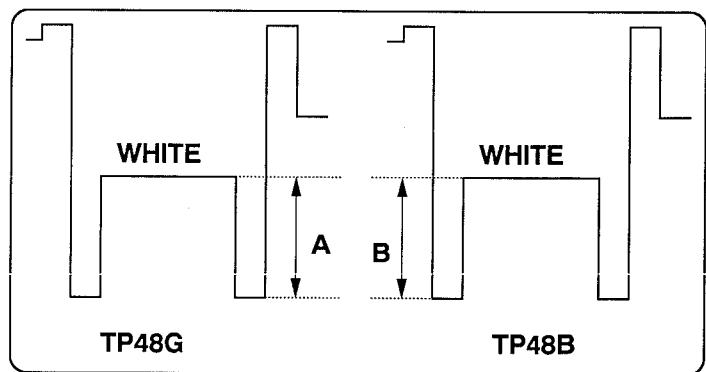


## B VIDEO ADJUSTMENT-2

EQUIPMENT ..... Oscilloscope  
CONNECTIONS ..... CH1: TP48G  
Chassis Ground  
CH2: TP48B  
Chassis Ground  
  
INPUT SIGNAL ..... NTSC 100% White video signal

DIGITAL CONTROL ..... CONT.....Center  
..... BRIGHT.....Min

ADJUSTMENT: 1. By using VR4061 adjust TP48B (B) level voltage for same as TP48G (A) level voltage



## R/G/B COMMON CENTER VOLTAGE ADJUSTMENTS

PICTURE CONDITION ..... Auto position

OTHER CONDITIONS:

R-COMMON; Cover the G and B panel to cut the light transit.  
G-COMMON; Cover the R and B panel to cut the light transit.  
B-COMMON; Cover the R and G panel to cut the light transit.

ADJUSTMENTS;

R-COMMON; Adjust VR4331 to get the darkness picture.  
G-COMMON; Adjust VR4301 to get the darkness picture.  
B-COMMON; Adjust VR4361 to get the darkness picture.

NOTE: Zoom is wide position. Start with G- COMMON Adj. to first.

## WHITE BALANCE ADJUSTMENT

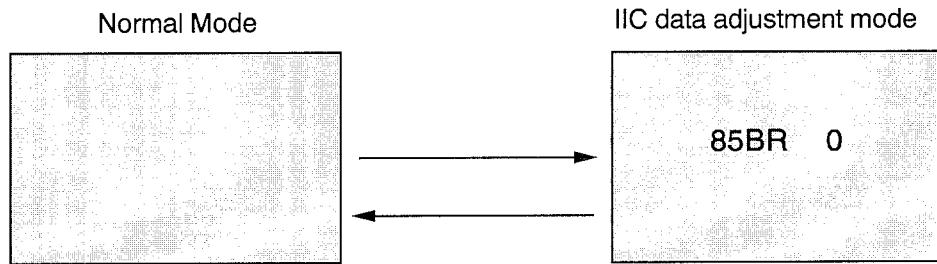
INPUT SIGNAL ..... 16 Step Gray Scale video signal (NTSC)

SELECT VIDEO MODE ..... AV

ADJUSTMENT: By using VR4001 (R-DC Level Adj.) and VR4041 (B-DC Level Adj.), adjust to be balanced Gray Scale.

## SERVICE MODE

It turns the mode from the normal mode to the "SERVICE MODE" that pushing "VOLUME +" key and "SETTING" key on the projector at a same time is continued during 3 seconds.



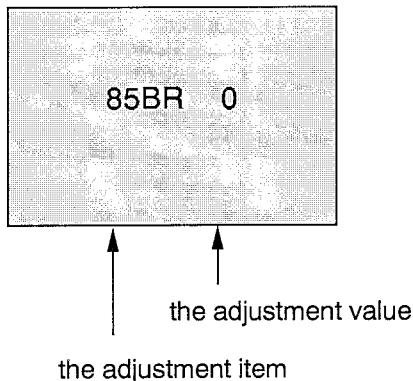
### IIC data adjustment

When replacement the electrical parts, readjust IIC data, if necessary.

Data for each item are adjusted by "VOLUME +/- " key and "LEVEL +/- " key on the remote control unit.

"VOLUME +" key and "VOLUME -" key change the adjustment item, and "LEVEL +" key and "LEVEL -" key change the adjustment value. The picture is changed after 2 or 3 seconds if the value is changed.

The picture for IIC data adjustment.



## IIC DATA ADJUSTMENT (MODE 0 ~ 19)

MODE No.	DISPLAY	ADJ. VALUE	ADJUSTMENT ITEM	FACTORY INITIAL VALUE
0	85BR	0 ~ 63	TDA4685 (IC304) Bright	5
1	85RG	0 ~ 63	TDA4685 (IC304) R Gain	10
2	85GG	0 ~ 63	TDA4685 (IC304) G Gain	10
3	85BG	0 ~ 63	TDA4685 (IC304) B Gain	10
4	20CR	0 ~ 63	CXA1420 (IC281) Control Reg.	17
5	20SL	0 ~ 63	CXA1420 (IC281) Slice	23
6	20SF	0 ~ 63	CXA1420 (IC281) Shrp Fo	10
7	20WT	0 ~ 63	CXA1420 (IC281) Waiting	37
8	HS60	0 ~ 63	TDA9160 (IC301) Horiz. Shift (60Hz)	10
9	HS50	0 ~ 63	TDA9160 (IC301) Horiz. Shift (50Hz)	10
10	SBRT	0 ~ 15	SUB BRIGHT	8
11	SCOL	0 ~ 15	SUB COLOR	13
12	SCON	0 ~ 15	SUB CONTRAST	8
13	STNT	0 ~ 15	SUB TINT	7
14	SSHPS	0 ~ 15	SUB SHARPNESS	15
15	HCTN	0 ~ 255	HORIZ. CENTER NTSC	225
16	HCTP	0 ~ 255	HORIZ. CENTER PAL	238
17	VCTN	0 ~ 31	VERTICAL CENTER NTSC	1
18	VCTP	0 ~ 31	VERTICAL CENTER PAL	7
19	ETC	0 ~ 15	PIXEL SYNC	12



# CHASSIS ELECTRICAL PARTS LIST



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

Note: Part order must contain Service Ref. No., Part No., and descriptions.

Read description in the Capacitor and Resister as follows:

CAPACITOR CERAMIC 100P K 50V

		Rated Voltage
Tolerance Symbols:		
Less than 10PF		
A: Not specified	B: $\pm 0.1\text{PF}$	C: $\pm 0.25\text{PF}$
D: $\pm 0.5\text{PF}$	F: $\pm 1\text{PF}$	G: $\pm 2\text{PF}$
R: $+0.25 - 0\text{PF}$	S: $+0 - 0.25\text{PF}$	E: $+0 - 1\text{PF}$
More than 10PF		
A: Not specified	B: $\pm 0.1\%$	C: $\pm 0.25\%$
D: $\pm 0.5\%$	F: $\pm 1\%$	G: $\pm 2\%$
H: $\pm 3\%$	J: $\pm 5\%$	K: $\pm 10\%$
L: $\pm 15\%$	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: $+80 - 20\%$

Rated value:P=pico farad,U=Micro farad

Material :

CERAMIC.....Ceramic  
MT-PAPER.....Metallized Paper  
POLYESTER.....Polyester  
MT-POLYEST.....Metallized Polyester  
POLYPRO.....Polypropylene  
MT-POLYPRO.....Metallized Polypropylene  
COMPO FILM.....Composite film  
MT-COMPO.....Metallized Composite  
STYRENE.....Styrene  
TA-SOLID.....Tantalum Solid  
AL-SOLID.....Aluminum Solid  
ELECT.....Electrolytic  
NP-ELECT.....Non-polarized Electrolytic  
OS-SOLID.....Aluminum Solid with Organic  
Semiconductive Electrolytic  
DL-ELECT.....Double Layered Electrolytic

RESISTER

CARBON 4.7K J A 1/4W

		Rated Wattage
Performance Symbols:		
A:General B:Non flammable Z:Low noise		
Other :Temperature coefficient		
Tolerance Symbols:		
A: $\pm 0.05\%$	B: $\pm 0.1\%$	C: $\pm 0.25\%$
F: $\pm 1\%$	G: $\pm 2\%$	J: $\pm 5\%$
M: $\pm 20\%$	P: $+5 - 15\%$	K: $\pm 10\%$

Rated value, ohms:  
K:1,000, M:1,000,000

Material :

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

Ref. No.	Part No.	Description
<b>IF THERE IS A PROBLEM IN THE LAMP BALLAST UNIT, ONLY USE THESE REPLACEMENT PARTS FOR BEST PERFORMANCE AND SAFETY.</b>		
$\Delta$ A701	610 260 7000	LAMP BALLAST ASS'Y
$\Delta$ Q701	405 105 6702	TR 2SK1181
$\Delta$ Q702	405 119 1809	TR 2SK2080
$\Delta$ Q703	405 119 1809	TR 2SK2080
$\Delta$ Q704	405 119 1809	TR 2SK2080
$\Delta$ Q705	405 119 1809	TR 2SK2080
$\Delta$ Q706	405 117 7100	TR 2SC3632-L
$\Delta$ Q731	406 011 2901	TR 2SC4304 LF639
$\Delta$ Q732	405 016 9700	TR 2SC3070-CTV
$\Delta$ Q733	405 004 4809	TR 2SA608-F-CTV-NP
	405 028 7909	TR 2SA608-G-CTV-NP
$\Delta$ RL701	645 006 8256	RELAY
$\Delta$ R701	402 068 3502	WIRE WOUND 4.7 JA 5W
	402 070 0100	WIRE WOUND 4.7 KA 5W
$\Delta$ R713	402 066 2002	WIRE WOUND 33 JA 3W
$\Delta$ D701	407 124 9801	DIODE RBV-608
$\Delta$ D704	407 146 8202	DIODE FMG-G36S
$\Delta$ D732	407 048 6108	ZENER DIODE EQA02-11A
$\Delta$ SW701	610 240 8171	REED SWITCH
$\Delta$ SW702	610 240 8171	REED SWITCH

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
<b>ASSY,PWB,A/V M4BA</b>			R1005	401 038 3603	MT-GLAZE 3.3K JA 1/10W
<b>610 258 0617 1AA0B10C0670A</b>			R1006	401 039 0403	MT-GLAZE 8.2K JA 1/10W
TRANSISTOR			R1007	401 037 5400	MT-GLAZE 1K JA 1/10W
Q1001	405 015 8704	TR 2SC2812-L6-TA	R1008	401 037 5400	MT-GLAZE 1K JA 1/10W
Q1002	405 015 8704	TR 2SC2812-L6-TA	R1009	401 038 7601	MT-GLAZE 560 JA 1/10W
Q1041	405 015 8704	TR 2SC2812-L6-TA	R1010	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
Q1042	405 015 8704	TR 2SC2812-L6-TA	R1011	401 038 0701	MT-GLAZE 2.2K JA 1/10W
Q1043	405 015 8704	TR 2SC2812-L6-TA	R1012	401 037 7800	MT-GLAZE 150 JA 1/10W
Q1044	405 015 8704	TR 2SC2812-L6-TA	R1013	401 037 7800	MT-GLAZE 150 JA 1/10W
Q1046	405 015 8704	TR 2SC2812-L6-TA	R1014	401 037 7800	MT-GLAZE 150 JA 1/10W
Q1047	405 015 8704	TR 2SC2812-L6-TA	R1016	401 037 7800	MT-GLAZE 150 JA 1/10W
Q1048	405 015 8704	TR 2SC2812-L6-TA	R1017	401 025 1308	CARBON 150 JA 1/6W
INTEGRATED CIRCUIT			R1018	401 087 6204	CARBON 0.000 ZA 1/6W
IC1001	409 221 1306	IC HCF0222	R1019	401 038 6208	MT-GLAZE 47 JA 1/10W
IC1002	409 146 7209	IC LA7222	R1021	401 024 6700	CARBON 100 JA 1/6W
CAPACITOR			R1022	401 037 7800	MT-GLAZE 150 JA 1/10W
C1001	403 069 9500	CERAMIC 0.01U Z 50V	R1023	401 037 7800	MT-GLAZE 150 JA 1/10W
C1002	403 193 7809	ELECT 100U M 16V	R1024	401 038 6604	MT-GLAZE 470K JA 1/10W
C1003	403 026 3008	CERAMIC 47P J 50V	R1026	401 038 9506	MT-GLAZE 75 JA 1/10W
C1004	403 239 5301	CERAMIC 160P J 50V	R1041	401 038 6604	MT-GLAZE 470K JA 1/10W
C1006	403 069 9500	CERAMIC 0.01U Z 50V	R1042	401 037 5400	MT-GLAZE 1K JA 1/10W
C1007	403 069 9500	CERAMIC 0.01U Z 50V	R1043	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
C1008	403 193 7809	ELECT 100U M 16V	R1044	401 038 6604	MT-GLAZE 470K JA 1/10W
C1009	403 193 7809	ELECT 100U M 16V	R1046	401 037 5400	MT-GLAZE 1K JA 1/10W
C1010	403 193 7809	ELECT 100U M 16V	R1047	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
C1011	403 069 9500	CERAMIC 0.01U Z 50V	R1048	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
C1012	403 069 9500	CERAMIC 0.01U Z 50V	R1051	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
C1013	403 163 8409	ELECT 47U M 16V	R1053	401 037 5202	MT-GLAZE 100 JA 1/10W
C1014	403 155 9209	NP-ELECT 22U M 16V	R1054	401 037 5707	MT-GLAZE 100K JA 1/10W
C1016	403 193 7809	ELECT 100U M 16V	R1056	401 038 9001	MT-GLAZE 680 JA 1/10W
C1017	403 069 9500	CERAMIC 0.01U Z 50V	R1057	401 038 0701	MT-GLAZE 2.2K JA 1/10W
C1018	403 069 9500	CERAMIC 0.01U Z 50V	R1058	401 037 5707	MT-GLAZE 100K JA 1/10W
C1019	403 069 9500	CERAMIC 0.01U Z 50V	R1059	401 037 5707	MT-GLAZE 100K JA 1/10W
C1020	403 193 7809	ELECT 100U M 16V	R1061	401 037 5707	MT-GLAZE 100K JA 1/10W
C1041	403 189 2405	ELECT 10U M 16V	R1062	401 037 5707	MT-GLAZE 100K JA 1/10W
C1042	403 189 2405	ELECT 10U M 16V	R1063	401 038 7809	MT-GLAZE 56K JA 1/10W
C1043	403 189 2405	ELECT 10U M 16V	R1064	401 038 7700	MT-GLAZE 5.6K JA 1/10W
C1046	403 085 4107	NP-ELECT 10U M 16V	R1066	401 037 5202	MT-GLAZE 100 JA 1/10W
C1047	403 069 9500	CERAMIC 0.01U Z 50V	R1067	401 037 5707	MT-GLAZE 100K JA 1/10W
C1048	403 193 7809	ELECT 100U M 16V	R1068	401 038 9001	MT-GLAZE 680 JA 1/10W
C1049	403 189 2405	ELECT 10U M 16V	R1069	401 038 0701	MT-GLAZE 2.2K JA 1/10W
C1052	403 085 4107	NP-ELECT 10U M 16V	R1071	401 037 5707	MT-GLAZE 100K JA 1/10W
C1053	403 069 1702	CERAMIC 1000P K 50V	R1072	401 037 5707	MT-GLAZE 100K JA 1/10W
C1101	403 069 9500	CERAMIC 0.01U Z 50V	R1073	401 037 5707	MT-GLAZE 100K JA 1/10W
RESISTOR			R1074	401 037 5707	MT-GLAZE 100K JA 1/10W
R1001	401 037 5608	MT-GLAZE 10K JA 1/10W	R1075	401 037 8005	MT-GLAZE 15K JA 1/10W
R1002	401 037 5608	MT-GLAZE 10K JA 1/10W	R1076	401 038 7809	MT-GLAZE 56K JA 1/10W
R1004	401 038 9001	MT-GLAZE 680 JA 1/10W	R1077	401 038 7700	MT-GLAZE 5.6K JA 1/10W
			R1078	401 037 5608	MT-GLAZE 10K JA 1/10W
			R1079	401 038 7700	MT-GLAZE 5.6K JA 1/10W
			R1081	401 037 5608	MT-GLAZE 10K JA 1/10W
			R1082	401 037 5004	MT-GLAZE 0.000 ZA 1/10W

Ref. No.	Part No.	Description		Ref. No.	Part No.	Description	
R1083	401 037 5004	MT-GLAZE	0.000 ZA 1/10W			407 071 1002	ZENER DIODE DZD15Z-TA
R1084	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	D1006	407 071 0807	ZENER DIODE DZD15X-TA	
R1086	401 037 5004	MT-GLAZE	0.000 ZA 1/10W		407 071 0906	ZENER DIODE DZD15Y-TA	
R1092	401 037 5004	MT-GLAZE	0.000 ZA 1/10W		407 071 1002	ZENER DIODE DZD15Z-TA	
R1093	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	D1007	407 071 0807	ZENER DIODE DZD15X-TA	
R1094	401 037 5004	MT-GLAZE	0.000 ZA 1/10W		407 071 0906	ZENER DIODE DZD15Y-TA	
R1096	401 037 5004	MT-GLAZE	0.000 ZA 1/10W		407 071 1002	ZENER DIODE DZD15Z-TA	
R1101	401 037 6704	MT-GLAZE	1.2K JA 1/10W	D1008	407 071 0807	ZENER DIODE DZD15X-TA	
R1102	401 037 5608	MT-GLAZE	10K JA 1/10W		407 071 0906	ZENER DIODE DZD15Y-TA	
R1103	401 038 3504	MT-GLAZE	330 JA 1/10W		407 071 1002	ZENER DIODE DZD15Z-TA	
R1104	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	D1009	407 071 0807	ZENER DIODE DZD15X-TA	
R1108	401 037 5202	MT-GLAZE	100 JA 1/10W		407 071 0906	ZENER DIODE DZD15Y-TA	
R1109	401 037 5202	MT-GLAZE	100 JA 1/10W		407 071 1002	ZENER DIODE DZD15Z-TA	
R1111	401 037 5202	MT-GLAZE	100 JA 1/10W	D1011	407 071 0807	ZENER DIODE DZD15X-TA	
R1112	401 037 6704	MT-GLAZE	1.2K JA 1/10W		407 071 0906	ZENER DIODE DZD15Y-TA	
R1118	401 037 5004	MT-GLAZE	0.000 ZA 1/10W		407 071 1002	ZENER DIODE DZD15Z-TA	
R1119	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	D1012	407 071 0807	ZENER DIODE DZD15X-TA	
R1121	401 037 5004	MT-GLAZE	0.000 ZA 1/10W		407 071 0906	ZENER DIODE DZD15Y-TA	
R1122	401 037 5004	MT-GLAZE	0.000 ZA 1/10W		407 071 1002	ZENER DIODE DZD15Z-TA	
R1123	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	D1013	407 071 0807	ZENER DIODE DZD15X-TA	
R1124	401 037 5004	MT-GLAZE	0.000 ZA 1/10W		407 071 0906	ZENER DIODE DZD15Y-TA	
R1126	401 037 5004	MT-GLAZE	0.000 ZA 1/10W		407 071 1002	ZENER DIODE DZD15Z-TA	
R1127	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	D1014	407 071 0807	ZENER DIODE DZD15X-TA	
R1128	401 037 5004	MT-GLAZE	0.000 ZA 1/10W		407 071 0906	ZENER DIODE DZD15Y-TA	
R1129	401 037 5004	MT-GLAZE	0.000 ZA 1/10W		407 071 1002	ZENER DIODE DZD15Z-TA	
R1131	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	D1016	407 071 0807	ZENER DIODE DZD15X-TA	
R1132	401 037 5004	MT-GLAZE	0.000 ZA 1/10W		407 071 0906	ZENER DIODE DZD15Y-TA	
					407 071 1002	ZENER DIODE DZD15Z-TA	
COIL				D1017	407 071 0807	ZENER DIODE DZD15X-TA	
L1001	645 003 6910	INDUCTOR, 10U J			407 071 0906	ZENER DIODE DZD15Y-TA	
L1002	645 003 6965	INDUCTOR, 120U K			407 071 1002	ZENER DIODE DZD15Z-TA	
L1007	645 003 3308	FILTER, EMI 60PF		D1041	407 071 0807	ZENER DIODE DZD15X-TA	
L1011	645 003 3308	FILTER, EMI 60PF			407 071 0906	ZENER DIODE DZD15Y-TA	
L1012	645 003 3308	FILTER, EMI 60PF			407 071 1002	ZENER DIODE DZD15Z-TA	
L1013	645 003 3308	FILTER, EMI 60PF		D1042	407 071 0807	ZENER DIODE DZD15X-TA	
L1101	645 003 3308	FILTER, EMI 60PF			407 071 0906	ZENER DIODE DZD15Y-TA	
L1102	645 003 3308	FILTER, EMI 60PF			407 071 1002	ZENER DIODE DZD15Z-TA	
L1103	645 003 3308	FILTER, EMI 60PF		D1043	407 071 0807	ZENER DIODE DZD15X-TA	
L1104	645 003 3308	FILTER, EMI 60PF			407 071 0906	ZENER DIODE DZD15Y-TA	
					407 071 1002	ZENER DIODE DZD15Z-TA	
DIODE				D1044	407 071 0807	ZENER DIODE DZD15X-TA	
D1001	407 071 0807	ZENER DIODE DZD15X-TA			407 071 0906	ZENER DIODE DZD15Y-TA	
	407 071 0906	ZENER DIODE DZD15Y-TA			407 071 1002	ZENER DIODE DZD15Z-TA	
	407 071 1002	ZENER DIODE DZD15Z-TA		D1046	407 071 0807	ZENER DIODE DZD15X-TA	
D1002	407 071 0807	ZENER DIODE DZD15X-TA			407 071 0906	ZENER DIODE DZD15Y-TA	
	407 071 0906	ZENER DIODE DZD15Y-TA			407 071 1002	ZENER DIODE DZD15Z-TA	
	407 071 1002	ZENER DIODE DZD15Z-TA		D1047	407 071 0807	ZENER DIODE DZD15X-TA	
D1003	407 071 0807	ZENER DIODE DZD15X-TA			407 071 0906	ZENER DIODE DZD15Y-TA	
	407 071 0906	ZENER DIODE DZD15Y-TA			407 071 1002	ZENER DIODE DZD15Z-TA	
	407 071 1002	ZENER DIODE DZD15Z-TA		D1048	407 071 0807	ZENER DIODE DZD15X-TA	
D1004	407 071 0807	ZENER DIODE DZD15X-TA			407 071 0906	ZENER DIODE DZD15Y-TA	
	407 071 0906	ZENER DIODE DZD15Y-TA			407 071 1002	ZENER DIODE DZD15Z-TA	

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	
D1049	407 071 0807	ZENER DIODE DZD15X-TA	K10F	645 000 2670	PLUG, 17P	
	407 071 0906	ZENER DIODE DZD15Y-TA	K10G	645 000 2670	PLUG, 17P	
	407 071 1002	ZENER DIODE DZD15Z-TA	K10I	645 005 8073	PLUG, 9P	
D1051	407 071 0807	ZENER DIODE DZD15X-TA	SW1101	610 011 1790	SWITCH, PUSH	
	407 071 0906	ZENER DIODE DZD15Y-TA	WA-2	610 012 5926	TERMINAL	
	407 071 1002	ZENER DIODE DZD15Z-TA	WA-4	645 004 5387	FIXER CABLE TIES, L100	
D1052	407 071 0807	ZENER DIODE DZD15X-TA	<b>ASSY,PWB,SIGNAL P4BA</b>			
	407 071 0906	ZENER DIODE DZD15Y-TA	<b>610 258 5216 1AA0B10C07200</b>			
D1053	407 071 0807	ZENER DIODE DZD15X-TA	TRANSISTOR			
	407 071 0906	ZENER DIODE DZD15Y-TA	Q101	405 015 8704	TR 2SC2812-L6-TA	
	407 071 1002	ZENER DIODE DZD15Z-TA	Q1302	405 015 8704	TR 2SC2812-L6-TA	
D1054	407 004 8009	DIODE DSB015-TA	Q1303	405 002 6706	TR 2SA1179-M6-TA	
D1056	407 071 0807	ZENER DIODE DZD15X-TA	Q1332	405 015 8704	TR 2SC2812-L6-TA	
	407 071 0906	ZENER DIODE DZD15Y-TA	Q1333	405 002 6706	TR 2SA1179-M6-TA	
	407 071 1002	ZENER DIODE DZD15Z-TA	Q1362	405 015 8704	TR 2SC2812-L6-TA	
D1057	407 071 0807	ZENER DIODE DZD15X-TA	Q1363	405 002 6706	TR 2SA1179-M6-TA	
	407 071 0906	ZENER DIODE DZD15Y-TA	Q201	405 015 8704	TR 2SC2812-L6-TA	
D1058	407 071 1002	ZENER DIODE DZD15Z-TA	Q202	405 015 8704	TR 2SC2812-L6-TA	
	407 071 0807	ZENER DIODE DZD15X-TA	Q203	405 015 8704	TR 2SC2812-L6-TA	
	407 071 0906	ZENER DIODE DZD15Y-TA	Q251	405 015 8704	TR 2SC2812-L6-TA	
D1059	407 071 1002	ZENER DIODE DZD15Z-TA	Q252	405 015 8704	TR 2SC2812-L6-TA	
D1061	407 071 0807	ZENER DIODE DZD15X-TA	Q271	405 015 8704	TR 2SC2812-L6-TA	
	407 071 0906	ZENER DIODE DZD15Y-TA	Q281	405 002 6706	TR 2SA1179-M6-TA	
	407 071 1002	ZENER DIODE DZD15Z-TA	Q301	405 015 8704	TR 2SC2812-L6-TA	
D1101	407 071 0807	ZENER DIODE DZD15X-TA	Q302	405 002 6706	TR 2SA1179-M6-TA	
	407 071 0906	ZENER DIODE DZD15Y-TA	Q303	405 015 8704	TR 2SC2812-L6-TA	
	407 071 1002	ZENER DIODE DZD15Z-TA	Q304	405 015 8704	TR 2SC2812-L6-TA	
D1102	407 071 0807	ZENER DIODE DZD15X-TA	Q311	405 002 6706	TR 2SA1179-M6-TA	
	407 071 0906	ZENER DIODE DZD15Y-TA	Q312	405 015 8704	TR 2SC2812-L6-TA	
	407 071 1002	ZENER DIODE DZD15Z-TA	Q411	405 002 6706	TR 2SA1179-M6-TA	
D1103	407 071 0807	ZENER DIODE DZD15X-TA	Q412	405 015 8704	TR 2SC2812-L6-TA	
	407 071 0906	ZENER DIODE DZD15Y-TA	Q431	405 002 6706	TR 2SA1179-M6-TA	
	407 071 1002	ZENER DIODE DZD15Z-TA	Q432	405 015 8704	TR 2SC2812-L6-TA	
D1104	407 071 0807	ZENER DIODE DZD15X-TA	Q451	405 002 6706	TR 2SA1179-M6-TA	
	407 071 0906	ZENER DIODE DZD15Y-TA	Q452	405 015 8704	TR 2SC2812-L6-TA	
	407 071 1002	ZENER DIODE DZD15Z-TA	Q6001	405 018 2402	TR 2SC3398-TA	
D1106	407 071 0807	ZENER DIODE DZD15X-TA	Q6002	405 018 2402	TR 2SC3398-TA	
	407 071 0906	ZENER DIODE DZD15Y-TA	Q6003	405 018 2402	TR 2SC3398-TA	
	407 071 1002	ZENER DIODE DZD15Z-TA	Q6004	405 002 6706	TR 2SA1179-M6-TA	
D1107	407 071 0807	ZENER DIODE DZD15X-TA	Q801	405 015 8704	TR 2SC2812-L6-TA	
	407 071 0906	ZENER DIODE DZD15Y-TA	Q802	405 015 8704	TR 2SC2812-L6-TA	
	407 071 1002	ZENER DIODE DZD15Z-TA	Q803	405 015 8704	TR 2SC2812-L6-TA	
	MISCELLANEOUS			Q806	405 015 8704	TR 2SC2812-L6-TA
	IC1101	407 105 8700	PHOTO COUPLE PC113B	Q807	405 015 8704	TR 2SC2812-L6-TA
		610 048 4603	RC PREAMP 411-1E	INTEGRATED CIRCUIT		
K10A	645 013 4074	TERMINAL, BOARD	IC101	409 073 1509	IC AN5265	
K10B	645 005 0244	TERMINAL, BOARD	IC1201	409 352 6201	IC UPC659AGS	
K10C	645 000 2571	JACK, PHONE D8. 0	IC1202	409 251 1406	IC UPD42102G-3	
K10D	645 000 2571	JACK, PHONE D8. 0	IC1203	409 251 1406	IC UPD42102G-3	

Ref. No.	Part No.	Description			Ref. No.	Part No.	Description		
IC1204	409 251 1406	IC	UPD42102G-3		C1236	403 093 8302	OS-SOLID	47U M	10V
IC1231	409 352 6201	IC	UPC659AGS		C1237	403 192 5905	CERAMIC	0.1U K	25V
IC1232	409 251 1406	IC	UPD42102G-3		C1239	403 192 5905	CERAMIC	0.1U K	25V
IC1233	409 251 1406	IC	UPD42102G-3		C1241	403 121 3408	ELECT	2.2U M	50V
IC1234	409 364 8101	IC	M66250FP		C1242	403 192 5905	CERAMIC	0.1U K	25V
IC1261	409 352 6201	IC	UPC659AGS		C1243	403 192 5905	CERAMIC	0.1U K	25V
IC1262	409 251 1406	IC	UPD42102G-3		C1244	403 093 8302	OS-SOLID	47U M	10V
IC1263	409 251 1406	IC	UPD42102G-3		C1246	403 192 5905	CERAMIC	0.1U K	25V
IC1264	409 364 8101	IC	M66250FP		C1247	403 192 5905	CERAMIC	0.1U K	25V
IC1281	409 369 9806	IC	LC21026A-X74		C1248	403 192 5905	CERAMIC	0.1U K	25V
IC1291	410 153 2200	IC	MB40978PF-G-BND		C1249	403 192 5905	CERAMIC	0.1U K	25V
IC1292	409 305 7903	IC	MC74HC244FR-TP-T1		C1252	403 192 5905	CERAMIC	0.1U K	25V
IC1293	409 305 7903	IC	MC74HC244FR-TP-T1		C1253	403 121 2302	ELECT	470U M	10V
IC251	409 357 2208	IC	EL2210CS		C1254	403 192 5905	CERAMIC	0.1U K	25V
IC281	409 284 0704	IC	CXA1420P		C1256	403 121 2302	ELECT	470U M	10V
IC301	409 346 1106	IC	TDA9160A/N3		C1257	403 093 6407	OS-SOLID	100U M	10V
IC303	409 291 0605	IC	TDA4661/V2		C1258	403 192 5905	CERAMIC	0.1U K	25V
IC304	409 284 0803	IC	TDA4685/V1		C1261	403 121 3408	ELECT	2.2U M	50V
IC801	410 255 0104	IC	M37210M3-627SP		C1262	403 121 3408	ELECT	2.2U M	50V
IC802	409 243 4309	IC	MN1380-S		C1263	403 192 5905	CERAMIC	0.1U K	25V
IC803	409 257 7204	IC	X24C02P		C1264	403 192 5905	CERAMIC	0.1U K	25V
CAPACITOR									
C101	403 125 5606	ELECT	100U M	16V	C1266	403 093 8302	OS-SOLID	47U M	10V
C102	403 069 9500	CERAMIC	0.01U Z	50V	C1267	403 192 5905	CERAMIC	0.1U K	25V
C103	403 140 9207	NP-ELECT	10U M	16V	C1269	403 192 5905	CERAMIC	0.1U K	25V
C106	403 109 6308	ELECT	1U M	50V	C1271	403 121 3408	ELECT	2.2U M	50V
C107	403 109 6308	ELECT	1U M	50V	C1272	403 192 5905	CERAMIC	0.1U K	25V
C108	403 134 5505	ELECT	10U M	25V	C1273	403 192 5905	CERAMIC	0.1U K	25V
C109	403 107 9905	ELECT	10U M	16V	C1274	403 093 8302	OS-SOLID	47U M	10V
C111	403 067 7805	MT-COMPO	0.47U J	50V	C1276	403 192 5905	CERAMIC	0.1U K	25V
C112	403 218 8101	ELECT	1000U M	25V	C1277	403 192 5905	CERAMIC	0.1U K	25V
C113	403 199 9708	ELECT	470U M	25V	C1278	403 192 5905	CERAMIC	0.1U K	25V
C1201	403 191 8808	ELECT	2.2U M	50V	C1279	403 192 5905	CERAMIC	0.1U K	25V
C1202	403 191 8808	ELECT	2.2U M	50V	C1280	403 093 6407	OS-SOLID	100U M	10V
C1203	403 192 5905	CERAMIC	0.1U K	25V	C1281	403 192 5905	CERAMIC	0.1U K	25V
C1204	403 192 5905	CERAMIC	0.1U K	25V	C1282	403 192 5905	CERAMIC	0.1U K	25V
C1206	403 163 8409	ELECT	47U M	16V	C1283	403 192 5905	CERAMIC	0.1U K	25V
C1207	403 192 5905	CERAMIC	0.1U K	25V	C1284	403 192 5905	CERAMIC	0.1U K	25V
C1209	403 192 5905	CERAMIC	0.1U K	25V	C1285	403 192 5905	CERAMIC	0.1U K	25V
C1211	403 191 8808	ELECT	2.2U M	50V	C1286	403 192 5905	CERAMIC	0.1U K	25V
C1212	403 192 5905	CERAMIC	0.1U K	25V	C1287	403 192 5905	CERAMIC	0.1U K	25V
C1213	403 192 5905	CERAMIC	0.1U K	25V	C1288	403 192 5905	CERAMIC	0.1U K	25V
C1214	403 093 8302	OS-SOLID	47U M	10V	C1289	403 192 5905	CERAMIC	0.1U K	25V
C1216	403 192 5905	CERAMIC	0.1U K	25V	C1291	403 093 8302	OS-SOLID	47U M	10V
C1217	403 192 5905	CERAMIC	0.1U K	25V	C1292	403 192 5905	CERAMIC	0.1U K	25V
C1218	403 192 5905	CERAMIC	0.1U K	25V	C1293	403 093 8302	OS-SOLID	47U M	10V
C1219	403 192 5905	CERAMIC	0.1U K	25V	C1294	403 192 5905	CERAMIC	0.1U K	25V
C1231	403 121 3408	ELECT	2.2U M	50V	C1296	403 192 5905	CERAMIC	0.1U K	25V
C1232	403 121 3408	ELECT	2.2U M	50V	C1297	403 094 1609	OS-SOLID	3.3U M	16V
C1233	403 192 5905	CERAMIC	0.1U K	25V	C1298	403 192 5905	CERAMIC	0.1U K	25V
C1234	403 192 5905	CERAMIC	0.1U K	25V	C1299	403 192 5905	CERAMIC	0.1U K	25V
					C1301	610 012 3991	JUNPER LEAD		
					C1303	403 192 5905	CERAMIC	0.1U K	25V

Ref. No.	Part No.	Description			Ref. No.	Part No.	Description		
C1306	610 012 3991	JUNPER LEAD			C347	403 192 5905	CERAMIC	0.1U K	25V
C1331	610 012 3991	JUNPER LEAD			C348	403 192 5905	CERAMIC	0.1U K	25V
C1333	403 192 5905	CERAMIC	0.1U K	25V	C349	403 067 7805	MT-COMPO	0.47U J	50V
C1336	610 012 3991	JUNPER LEAD			C351	403 192 5905	CERAMIC	0.1U K	25V
C1361	610 012 3991	JUNPER LEAD			C352	403 192 5905	CERAMIC	0.1U K	25V
C1363	403 192 5905	CERAMIC	0.1U K	25V	C353	403 192 5905	CERAMIC	0.1U K	25V
C1366	610 012 3991	JUNPER LEAD			C354	403 109 6308	ELECT	1U M	50V
C1392	403 192 5905	CERAMIC	0.1U K	25V	C356	403 067 7300	MT-COMPO	0.33U J	50V
C1393	403 130 2805	ELECT	220U M	10V	C357	403 067 6709	MT-COMPO	0.22U J	50V
C1394	403 093 6407	OS-SOLID	100U M	10V	C358	403 067 6709	MT-COMPO	0.22U J	50V
C1396	403 192 5905	CERAMIC	0.1U K	25V	C359	403 067 6709	MT-COMPO	0.22U J	50V
C251	403 069 9500	CERAMIC	0.01U Z	50V	C361	403 069 9500	CERAMIC	0.01U Z	50V
C252	403 125 5606	ELECT	100U M	16V	C362	403 193 7809	ELECT	100U M	16V
C253	403 069 9500	CERAMIC	0.01U Z	50V	C381	403 192 5905	CERAMIC	0.1U K	25V
C254	403 026 2803	CERAMIC	47P J	50V	C383	403 192 5905	CERAMIC	0.1U K	25V
C256	403 109 6308	ELECT	1U M	50V	C386	403 192 5905	CERAMIC	0.1U K	25V
C258	403 140 9207	NP-ELECT	10U M	16V	C388	403 192 5905	CERAMIC	0.1U K	25V
C271	403 069 9500	CERAMIC	0.01U Z	50V	C391	403 192 5905	CERAMIC	0.1U K	25V
C272	403 107 9905	ELECT	10U M	16V	C401	403 192 5905	CERAMIC	0.1U K	25V
C273	403 069 9500	CERAMIC	0.01U Z	50V	C411	403 107 9905	ELECT	10U M	16V
C281	403 046 9905	ELECT	4.7U M	25V	C412	403 192 5905	CERAMIC	0.1U K	25V
C282	403 130 2904	ELECT	0.47U M	50V	C413	403 140 9207	NP-ELECT	10U M	16V
C283	403 140 9207	NP-ELECT	10U M	16V	C431	403 107 9905	ELECT	10U M	16V
C284	403 140 9207	NP-ELECT	10U M	16V	C432	403 192 5905	CERAMIC	0.1U K	25V
C286	403 134 5901	ELECT	33U M	16V	C433	403 140 9207	NP-ELECT	10U M	16V
C287	403 140 9207	NP-ELECT	10U M	16V	C451	403 107 9905	ELECT	10U M	16V
C288	403 140 9207	NP-ELECT	10U M	16V	C452	403 192 5905	CERAMIC	0.1U K	25V
C291	403 107 9905	ELECT	10U M	16V	C453	403 140 9207	NP-ELECT	10U M	16V
C292	403 107 9905	ELECT	10U M	16V	C6051	403 192 5905	CERAMIC	0.1U K	25V
C293	403 107 9905	ELECT	10U M	16V	C801	403 121 3002	ELECT	4.7U M	25V
C298	403 192 5905	CERAMIC	0.1U K	25V	C802	403 121 3002	ELECT	4.7U M	25V
C299	403 134 9602	ELECT	47U M	16V	C806	403 192 5905	CERAMIC	0.1U K	25V
C301	403 121 2609	ELECT	220U M	16V	C807	403 192 5905	CERAMIC	0.1U K	25V
C302	403 192 5905	CERAMIC	0.1U K	25V	C811	403 135 5009	ELECT	47U M	10V
C303	403 192 5905	CERAMIC	0.1U K	25V	C812	403 192 5905	CERAMIC	0.1U K	25V
C304	403 192 5905	CERAMIC	0.1U K	25V	C813	403 014 3805	CERAMIC	18P J	50V
C306	403 163 8409	ELECT	47U M	16V	C814	403 014 3805	CERAMIC	18P J	50V
C307	403 060 6300	POLYESTER	3300P K	50V	C816	403 192 5905	CERAMIC	0.1U K	25V
C308	403 067 7805	MT-COMPO	0.47U J	50V	C831	403 107 9905	ELECT	10U M	16V
C309	403 192 5905	CERAMIC	0.1U K	25V	C832	403 192 5905	CERAMIC	0.1U K	25V
C310	403 154 2102	NP-ELECT	1U M	50V	C841	403 192 5905	CERAMIC	0.1U K	25V
C312	403 134 4706	NP-ELECT	2.2U M	50V	C842	403 107 9905	ELECT	10U M	16V
C313	403 067 5603	MT-COMPO	0.1U J	50V	C844	403 121 3408	ELECT	2.2U M	50V
C314	403 060 6300	POLYESTER	3300P K	50V	C846	403 023 4404	CERAMIC	330P J	50V
C316	403 067 5603	MT-COMPO	0.1U J	50V	C847	403 023 4404	CERAMIC	330P J	50V
C317	403 014 3607	CERAMIC	18P J	50V	C851	403 069 9500	CERAMIC	0.01U Z	50V
C318	403 067 5603	MT-COMPO	0.1U J	50V	RESISTOR				
C323	403 014 3607	CERAMIC	18P J	50V	R101	401 037 5004	MT-GLAZE	0.000 ZA	1/10W
C327	403 121 2609	ELECT	220U M	16V	R102	401 038 5102	MT-GLAZE	3.9K JA	1/10W
C337	403 192 5905	CERAMIC	0.1U K	25V	R103	401 039 0304	MT-GLAZE	820 JA	1/10W
C338	403 192 5905	CERAMIC	0.1U K	25V	R106	401 038 9001	MT-GLAZE	680 JA	1/10W

Ref. No.	Part No.	Description		Ref. No.	Part No.	Description	
R107	401 037 8005	MT-GLAZE	15K JA 1/10W	R255	401 038 5300	MT-GLAZE	39K JA 1/10W
R108	401 061 8903	OXIDE-MT	4.7 JA 1W	R256	401 037 9200	MT-GLAZE	1.8K JA 1/10W
R111	402 003 0009	FUSIBLE RES	10 J- 2W	R257	401 037 9200	MT-GLAZE	1.8K JA 1/10W
R112	401 060 2704	OXIDE-MT	220 JA 1W	R258	401 037 5707	MT-GLAZE	100K JA 1/10W
R1202	401 037 5608	MT-GLAZE	10K JA 1/10W	R271	401 038 7809	MT-GLAZE	56K JA 1/10W
R1203	401 038 3504	MT-GLAZE	330 JA 1/10W	R272	401 037 5608	MT-GLAZE	10K JA 1/10W
R1232	401 037 5608	MT-GLAZE	10K JA 1/10W	R273	401 038 6505	MT-GLAZE	47K JA 1/10W
R1233	401 038 3504	MT-GLAZE	330 JA 1/10W	R274	401 037 5400	MT-GLAZE	1K JA 1/10W
R1262	401 037 5608	MT-GLAZE	10K JA 1/10W	R275	401 038 2309	MT-GLAZE	270K JA 1/10W
R1263	401 038 3504	MT-GLAZE	330 JA 1/10W	R276	401 037 6704	MT-GLAZE	1.2K JA 1/10W
R1281	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	R277	401 037 5400	MT-GLAZE	1K JA 1/10W
R1283	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	R281	401 038 7601	MT-GLAZE	560 JA 1/10W
R1286	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	R282	401 037 5400	MT-GLAZE	1K JA 1/10W
R1288	401 038 6307	MT-GLAZE	470 JA 1/10W	R283	401 038 7205	MT-GLAZE	5.1K JA 1/10W
R1289	401 038 6307	MT-GLAZE	470 JA 1/10W	R284	401 037 5400	MT-GLAZE	1K JA 1/10W
R1291	401 038 6307	MT-GLAZE	470 JA 1/10W	R286	401 037 8104	MT-GLAZE	150K JA 1/10W
R1292	401 038 6307	MT-GLAZE	470 JA 1/10W	R287	401 092 2505	MT-GLAZE	5.6K FA 1/10W
R1302	401 037 5202	MT-GLAZE	100 JA 1/10W	R291	401 009 8705	CARBON	39 JB 1/2W
R1304	401 038 5102	MT-GLAZE	3.9K JA 1/10W	R301	401 038 5300	MT-GLAZE	39K JA 1/10W
R1309	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	R304	401 037 8005	MT-GLAZE	15K JA 1/10W
R1311	401 037 5400	MT-GLAZE	1K JA 1/10W	R305	401 094 1902	MT-GLAZE	10M JA 1/10W
R1312	401 037 5400	MT-GLAZE	1K JA 1/10W	R306	401 037 5400	MT-GLAZE	1K JA 1/10W
R1317	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	R307	401 038 9803	MT-GLAZE	75K JA 1/10W
R1318	401 037 5400	MT-GLAZE	1K JA 1/10W	R308	401 038 2200	MT-GLAZE	27K JA 1/10W
R1319	401 037 5400	MT-GLAZE	1K JA 1/10W	R309	401 037 9309	MT-GLAZE	18K JA 1/10W
R1332	401 037 5202	MT-GLAZE	100 JA 1/10W	R311	401 038 6307	MT-GLAZE	470 JA 1/10W
R1334	401 038 5102	MT-GLAZE	3.9K JA 1/10W	R312	401 038 3504	MT-GLAZE	330 JA 1/10W
R1339	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	R313	401 038 7601	MT-GLAZE	560 JA 1/10W
R1341	401 037 5400	MT-GLAZE	1K JA 1/10W	R314	401 038 7502	MT-GLAZE	56 JA 1/10W
R1342	401 037 5400	MT-GLAZE	1K JA 1/10W	R316	401 037 5400	MT-GLAZE	1K JA 1/10W
R1347	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	R321	401 037 5004	MT-GLAZE	0.000 ZA 1/10W
R1348	401 037 5400	MT-GLAZE	1K JA 1/10W	R323	401 037 5004	MT-GLAZE	0.000 ZA 1/10W
R1349	401 037 5400	MT-GLAZE	1K JA 1/10W	R331	401 037 5400	MT-GLAZE	1K JA 1/10W
R1362	401 037 5202	MT-GLAZE	100 JA 1/10W	R332	401 038 6307	MT-GLAZE	470 JA 1/10W
R1364	401 038 5102	MT-GLAZE	3.9K JA 1/10W	R333	401 038 6307	MT-GLAZE	470 JA 1/10W
R1369	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	R337	401 016 2604	CARBON	220 JA 1/4W
R1371	401 037 5400	MT-GLAZE	1K JA 1/10W	R341	401 037 7909	MT-GLAZE	1.5K JA 1/10W
R1372	401 037 5400	MT-GLAZE	1K JA 1/10W	R342	401 038 9209	MT-GLAZE	6.8K JA 1/10W
R1377	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	R343	401 039 0502	MT-GLAZE	82K JA 1/10W
R1378	401 037 5400	MT-GLAZE	1K JA 1/10W	R344	401 037 8005	MT-GLAZE	15K JA 1/10W
R1379	401 037 5400	MT-GLAZE	1K JA 1/10W	R410	401 037 6704	MT-GLAZE	1.2K JA 1/10W
R201	401 038 9001	MT-GLAZE	680 JA 1/10W	R411	401 037 9200	MT-GLAZE	1.8K JA 1/10W
R202	401 038 2101	MT-GLAZE	2.7K JA 1/10W	R412	401 037 5400	MT-GLAZE	1K JA 1/10W
R203	401 037 5202	MT-GLAZE	100 JA 1/10W	R413	401 037 5400	MT-GLAZE	1K JA 1/10W
R204	401 037 5400	MT-GLAZE	1K JA 1/10W	R418	401 037 5400	MT-GLAZE	1K JA 1/10W
R205	401 037 5608	MT-GLAZE	10K JA 1/10W	R419	401 037 5400	MT-GLAZE	1K JA 1/10W
R206	401 037 9200	MT-GLAZE	1.8K JA 1/10W	R430	401 037 6704	MT-GLAZE	1.2K JA 1/10W
R207	401 038 2200	MT-GLAZE	27K JA 1/10W	R431	401 037 9200	MT-GLAZE	1.8K JA 1/10W
R251	401 037 5400	MT-GLAZE	1K JA 1/10W	R432	401 037 5400	MT-GLAZE	1K JA 1/10W
R252	401 038 0701	MT-GLAZE	2.2K JA 1/10W	R433	401 037 5400	MT-GLAZE	1K JA 1/10W
R253	401 037 5400	MT-GLAZE	1K JA 1/10W	R438	401 037 5400	MT-GLAZE	1K JA 1/10W
R254	401 038 2101	MT-GLAZE	2.7K JA 1/10W	R439	401 037 5400	MT-GLAZE	1K JA 1/10W

Ref. No.	Part No.	Description		Ref. No.	Part No.	Description	
R450	401 037 6704	MT-GLAZE	1.2K JA 1/10W	R841	401 037 5400	MT-GLAZE	1K JA 1/10W
R451	401 037 9200	MT-GLAZE	1.8K JA 1/10W	R842	401 037 5400	MT-GLAZE	1K JA 1/10W
R452	401 037 5400	MT-GLAZE	1K JA 1/10W	R843	401 037 5400	MT-GLAZE	1K JA 1/10W
R453	401 037 5400	MT-GLAZE	1K JA 1/10W	R844	401 037 5400	MT-GLAZE	1K JA 1/10W
R458	401 037 5400	MT-GLAZE	1K JA 1/10W	R846	401 037 5400	MT-GLAZE	1K JA 1/10W
R459	401 037 5400	MT-GLAZE	1K JA 1/10W	R847	401 037 5202	MT-GLAZE	100 JA 1/10W
R6001	401 038 5003	MT-GLAZE	390 JA 1/10W	R848	401 037 5608	MT-GLAZE	10K JA 1/10W
R6002	401 037 5400	MT-GLAZE	1K JA 1/10W	R850	401 037 5004	MT-GLAZE	0.000 ZA 1/10W
R6003	401 037 5400	MT-GLAZE	1K JA 1/10W	R851	401 037 5608	MT-GLAZE	10K JA 1/10W
R6004	401 038 5003	MT-GLAZE	390 JA 1/10W	R852	401 037 5608	MT-GLAZE	10K JA 1/10W
R6006	401 037 5608	MT-GLAZE	10K JA 1/10W	R854	401 026 9600	CARBON	470 JA 1/6W
R6007	401 037 6803	MT-GLAZE	12K JA 1/10W	R856	401 037 5608	MT-GLAZE	10K JA 1/10W
R6008	401 038 6406	MT-GLAZE	4.7K JA 1/10W	R857	401 038 6406	MT-GLAZE	4.7K JA 1/10W
R6050	401 038 2309	MT-GLAZE	270K JA 1/10W	R858	401 038 6406	MT-GLAZE	4.7K JA 1/10W
R6051	401 038 2200	MT-GLAZE	27K JA 1/10W	R859	401 037 9309	MT-GLAZE	18K JA 1/10W
R6052	401 037 5608	MT-GLAZE	10K JA 1/10W	R861	401 037 5400	MT-GLAZE	1K JA 1/10W
R6053	401 038 7700	MT-GLAZE	5.6K JA 1/10W	R862	401 037 5400	MT-GLAZE	1K JA 1/10W
R6054	401 038 9704	MT-GLAZE	7.5K JA 1/10W	R863	401 038 6406	MT-GLAZE	4.7K JA 1/10W
R6056	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	R864	401 037 5400	MT-GLAZE	1K JA 1/10W
R6057	401 038 3207	MT-GLAZE	300K JA 1/10W	R866	401 038 6406	MT-GLAZE	4.7K JA 1/10W
R6058	401 037 5608	MT-GLAZE	10K JA 1/10W	R867	401 037 5400	MT-GLAZE	1K JA 1/10W
R6059	401 038 7700	MT-GLAZE	5.6K JA 1/10W	R868	401 038 6406	MT-GLAZE	4.7K JA 1/10W
R6061	401 038 3603	MT-GLAZE	3.3K JA 1/10W	R869	401 037 5400	MT-GLAZE	1K JA 1/10W
R6062	401 038 0701	MT-GLAZE	2.2K JA 1/10W	R871	401 037 5608	MT-GLAZE	10K JA 1/10W
R6063	401 037 9200	MT-GLAZE	1.8K JA 1/10W	R872	401 037 5608	MT-GLAZE	10K JA 1/10W
R6065	401 037 5202	MT-GLAZE	100 JA 1/10W	R873	401 037 5608	MT-GLAZE	10K JA 1/10W
R801	401 037 5608	MT-GLAZE	10K JA 1/10W	R874	401 037 5400	MT-GLAZE	1K JA 1/10W
R802	401 037 5608	MT-GLAZE	10K JA 1/10W	R876	401 038 7601	MT-GLAZE	560 JA 1/10W
R803	401 037 5608	MT-GLAZE	10K JA 1/10W	R881	401 037 5608	MT-GLAZE	10K JA 1/10W
R804	401 037 5400	MT-GLAZE	1K JA 1/10W	R883	401 037 5608	MT-GLAZE	10K JA 1/10W
R806	401 037 8005	MT-GLAZE	15K JA 1/10W	R886	401 038 7700	MT-GLAZE	5.6K JA 1/10W
R807	401 038 2101	MT-GLAZE	2.7K JA 1/10W	R888	401 038 0701	MT-GLAZE	2.2K JA 1/10W
R808	401 037 5400	MT-GLAZE	1K JA 1/10W	R892	401 038 0701	MT-GLAZE	2.2K JA 1/10W
R811	401 037 5400	MT-GLAZE	1K JA 1/10W	R893	401 038 0701	MT-GLAZE	2.2K JA 1/10W
R813	401 038 9209	MT-GLAZE	6.8K JA 1/10W	R894	401 038 0701	MT-GLAZE	2.2K JA 1/10W
R818	401 037 5004	MT-GLAZE	0.000 ZA 1/10W			VARIABLE RESISTOR	
R821	401 037 5608	MT-GLAZE	10K JA 1/10W	VR251	645 002 8182	VR, SEMI, 5K S	
R822	401 037 5608	MT-GLAZE	10K JA 1/10W			COIL	
R824	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	L101	645 006 3336	FILTER, EMI 1000PF	
R826	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	L102	645 006 3336	FILTER, EMI 1000PF	
R827	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	L103	645 006 3367	FILTER, EMI 22000PF	
R828	401 037 5608	MT-GLAZE	10K JA 1/10W	L1201	645 008 3143	FILTER, EMI 22PF	
R830	401 037 6704	MT-GLAZE	1.2K JA 1/10W	L1202	645 006 3367	FILTER, EMI 22000PF	
R831	401 037 5608	MT-GLAZE	10K JA 1/10W	L1203	645 006 3367	FILTER, EMI 22000PF	
R832	401 038 6406	MT-GLAZE	4.7K JA 1/10W	L1205	645 008 2047	INDUCTOR, 12U J	
R833	401 037 5400	MT-GLAZE	1K JA 1/10W	L1211	645 003 1267	INDUCTOR, 120 OHM	
R834	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	L1212	645 003 1267	INDUCTOR, 120 OHM	
R835	401 037 7800	MT-GLAZE	150 JA 1/10W	L1213	645 003 1267	INDUCTOR, 120 OHM	
R836	401 037 5608	MT-GLAZE	10K JA 1/10W	L1214	645 003 1267	INDUCTOR, 120 OHM	
R837	401 037 5400	MT-GLAZE	1K JA 1/10W	L1216	645 003 1267	INDUCTOR, 120 OHM	
R838	401 037 5608	MT-GLAZE	10K JA 1/10W				
R839	401 037 5608	MT-GLAZE	10K JA 1/10W				

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
L1217	645 003 1267	INDUCTOR, 120 OHM	D102	407 004 8009	DIODE DSB015-TA
L1231	645 008 3143	FILTER, EMI 22PF	D103	407 071 8803	ZENER DIODE DZD9.1X-TA
L1235	645 008 2047	INDUCTOR, 12U J		407 071 8902	ZENER DIODE DZD9.1Y-TA
L1251	645 003 1267	INDUCTOR, 120 OHM	D104	407 071 0807	ZENER DIODE DZD15X-TA
L1252	645 003 1267	INDUCTOR, 120 OHM		407 071 0906	ZENER DIODE DZD15Y-TA
L1253	645 003 1267	INDUCTOR, 120 OHM	D251	407 004 8009	DIODE DSB015-TA
L1254	645 003 1267	INDUCTOR, 120 OHM	D252	407 004 8009	DIODE DSB015-TA
L1256	645 003 1267	INDUCTOR, 120 OHM	D253	407 004 8009	DIODE DSB015-TA
L1257	645 003 1267	INDUCTOR, 120 OHM	D254	407 004 8009	DIODE DSB015-TA
L1258	645 003 1267	INDUCTOR, 120 OHM	D256	407 004 8009	DIODE DSB015-TA
L1261	645 008 3143	FILTER, EMI 22PF	D281	407 071 8902	ZENER DIODE DZD9.1Y-TA
L1265	645 008 2047	INDUCTOR, 12U J	D301	407 071 8803	ZENER DIODE DZD9.1X-TA
L1281	645 006 3367	FILTER, EMI 22000PF		407 071 8902	ZENER DIODE DZD9.1Y-TA
L1291	645 006 3367	FILTER, EMI 22000PF	D302	407 071 8803	ZENER DIODE DZD9.1X-TA
L1292	645 006 3367	FILTER, EMI 22000PF		407 071 8902	ZENER DIODE DZD9.1Y-TA
L1293	645 008 3174	FILTER, EMI 22000PF	D303	407 071 8803	ZENER DIODE DZD9.1X-TA
L1301	645 008 3143	FILTER, EMI 22PF		407 071 8902	ZENER DIODE DZD9.1Y-TA
L1311	645 003 1267	INDUCTOR, 120 OHM	D304	407 071 8803	ZENER DIODE DZD9.1X-TA
L1312	645 003 1267	INDUCTOR, 120 OHM		407 071 8902	ZENER DIODE DZD9.1Y-TA
L1313	645 003 1267	INDUCTOR, 120 OHM	D306	407 071 8803	ZENER DIODE DZD9.1X-TA
L1321	645 003 1267	INDUCTOR, 120 OHM		407 071 8902	ZENER DIODE DZD9.1Y-TA
L1322	645 003 1267	INDUCTOR, 120 OHM	D311	407 071 0807	ZENER DIODE DZD15X-TA
L1323	645 003 1267	INDUCTOR, 120 OHM		407 071 0906	ZENER DIODE DZD15Y-TA
L1324	645 003 1267	INDUCTOR, 120 OHM	D331	407 071 6502	ZENER DIODE DZD5.1Y-TA
L1331	645 008 3143	FILTER, EMI 22PF	D6001	407 098 7001	LED SLP-277B-51
L1361	645 008 3143	FILTER, EMI 22PF	D6001A	610 229 8888	LED HOLDER-S2AS
L1391	645 006 3367	FILTER, EMI 22000PF	D6002	407 110 8801	LED SLP-177B-51
L251	645 003 1267	INDUCTOR, 120 OHM	D6002A	610 229 8888	LED HOLDER-S2AS
L252	645 003 1267	INDUCTOR, 120 OHM	D6003	407 108 3405	LED SLP-477B-51
L253	645 003 1267	INDUCTOR, 120 OHM	D6003A	610 229 8888	LED HOLDER-S2AS
L301	610 012 3991	JUNPER LEAD	D6004	407 110 8801	LED SLP-177B-51
L302	645 006 3381	FILTER, EMI 47PF	D6004A	610 229 8888	LED HOLDER-S2AS
L303	645 006 3367	FILTER, EMI 22000PF	D6006	407 004 8009	DIODE DSB015-TA
L304	645 006 3381	FILTER, EMI 47PF	D803	407 071 8803	ZENER DIODE DZD9.1X-TA
L306	645 006 3381	FILTER, EMI 47PF		407 071 8902	ZENER DIODE DZD9.1Y-TA
L307	645 006 3381	FILTER, EMI 47PF	D812	407 071 8803	ZENER DIODE DZD9.1X-TA
L311	610 012 3991	JUNPER LEAD		407 071 8902	ZENER DIODE DZD9.1Y-TA
L312	610 012 3991	JUNPER LEAD	D817	407 071 8803	ZENER DIODE DZD9.1X-TA
L381	645 006 3367	FILTER, EMI 22000PF		407 071 8902	ZENER DIODE DZD9.1Y-TA
L382	645 006 3367	FILTER, EMI 22000PF	D821	407 071 8803	ZENER DIODE DZD9.1X-TA
L401	610 012 3991	JUNPER LEAD		407 071 8902	ZENER DIODE DZD9.1Y-TA
L801	645 003 6910	INDUCTOR, 10U J	D882	407 004 8009	DIODE DSB015-TA
L802	645 003 6910	INDUCTOR, 10U J	D883	407 004 8009	DIODE DSB015-TA
L803	645 003 6910	INDUCTOR, 10U J	D884	407 004 8009	DIODE DSB015-TA
L811	610 012 3991	JUNPER LEAD			MISCELLANEOUS
L821	645 003 1267	INDUCTOR, 120 OHM	TH801	407 163 5802	THERMISTOR NB225LBSZ
L822	645 003 1267	INDUCTOR, 120 OHM	IC101A	610 245 1979	AUDIO HEATSINK-E2KA
L823	645 003 1267	INDUCTOR, 120 OHM	IC101B	411 003 8908	SCR PAN+SW 3X6
L824	645 003 1267	INDUCTOR, 120 OHM	IC101C	411 004 4404	NUT HEX 3
				411 054 7509	NUT HEX 3
DIODE			IC801A	610 237 0980	IC SOCKET
D101	407 071 0005	ZENER DIODE DZD12X-TA			

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
TP201	645 000 0409	TERMINAL			<b>ASSY,PWB,POWER P4BA</b>
TP202	645 000 0409	TERMINAL			<b>610 258 5223 1AA0B10C07300</b>
TP203	645 000 0409	TERMINAL			
TP204	645 000 0409	TERMINAL			TRANSISTOR
TP309	645 000 0409	TERMINAL	Q601	406 000 6804	TR 2SA1015-GR(SAN)
TP310	645 000 0409	TERMINAL		405 001 7407	TR 2SA1015-0(SAN)
TP312	645 000 0409	TERMINAL		405 001 7605	TR 2SA1015-Y(SAN)
TP401	645 000 0409	TERMINAL		405 004 3109	TR 2SA564A-Q(CU)
TP402	645 000 0409	TERMINAL		405 004 3208	TR 2SA564A-R(CU)
TP403	645 000 0409	TERMINAL		405 004 4205	TR 2SA608-E-CTV-NP
KG301	645 008 3396	PLUG, MINICONNECTOR 1P		405 004 4809	TR 2SA608-F-CTV-NP
K1A	645 000 2700	SOCKET, 17P		405 006 1103	TR 2SA933-Q
K1B	645 004 2898	PLUG, 3P		405 006 1202	TR 2SA933-R
K12A	645 004 2942	PLUG, 8P	0602	405 016 9700	TR 2SC3070-CTV
K12B	645 004 2928	PLUG, 6P	0603	405 022 8506	TR 2SD1710-CTV-YB
K12C	645 004 2959	PLUG, 9P	0604	405 011 7305	TR 2SC1740-Q
K3A	645 000 2700	SOCKET, 17P		405 011 7404	TR 2SC1740-R
K3B	645 004 2959	PLUG, 9P		405 011 7503	TR 2SC1740-S
K8A	645 005 8394	SOCKET, 9P		405 012 2002	TR 2SC1815-GR
K8B	645 004 2898	PLUG, 3P		405 012 2101	TR 2SC1815-0
K8C	645 004 2904	PLUG, 4P		405 012 2309	TR 2SC1815-Y
K8D	645 004 2898	PLUG, 3P		405 019 1909	TR 2SC536-E-NP
K8F	645 004 2911	PLUG, 5P		405 019 2708	TR 2SC536-F-NP
K8G	645 004 2942	PLUG, 8P		405 019 3804	TR 2SC536-G-NP
K8HS	610 009 7919	SOCKET-2P		405 020 7501	TR 2SC945A-PA
K8HS1	610 010 0862	TERMINAL PLUG		405 020 7709	TR 2SC945A-QA
K8HS2	610 010 0862	TERMINAL PLUG		405 020 7907	TR 2SC945A-RA
K8HTB	645 004 5387	FIXER CABLE TIES, L100	0606	405 059 9903	TR 2SD1913-R-RA
K9HS	610 009 7797	SOCKET, 2P		405 060 0005	TR 2SD1913-S-RA
K9HS1	610 009 5984	TERMINAL			INTEGRATED CIRCUIT
K9HS2	610 009 5984	TERMINAL	IC602	409 180 2307	IC UPC1093J
PC801	408 016 8803	PC PC113 (VDE0884)			
SW6050	645 003 4701	SWITCH, PUSH 1P-1TX1			CAPACITOR
SW6052	645 003 4701	SWITCH, PUSH 1P-1TX1	△C601	404 065 7804	MT-POLYEST 0.47U M 275V
SW6053	645 003 4701	SWITCH, PUSH 1P-1TX1	△C603	404 008 2606	CERAMIC 1000P M 400V
SW6054	645 003 4701	SWITCH, PUSH 1P-1TX1		404 071 3401	CERAMIC 1000P M 400V
SW6055	645 003 4701	SWITCH, PUSH 1P-1TX1	C604	404 008 2606	CERAMIC 1000P M 400V
SW6056	645 003 4701	SWITCH, PUSH 1P-1TX1		404 071 3401	CERAMIC 1000P M 400V
SW6057	645 003 4701	SWITCH, PUSH 1P-1TX1	C606	404 008 2606	CERAMIC 1000P M 400V
SW6058	645 003 4701	SWITCH, PUSH 1P-1TX1		404 071 3401	CERAMIC 1000P M 400V
SW6059	645 003 4701	SWITCH, PUSH 1P-1TX1	C607	404 008 2606	CERAMIC 1000P M 400V
WA-2	610 012 5926	TERMINAL		404 071 3401	CERAMIC 1000P M 400V
X1301	645 002 2593	FILTER, TRANS-6. 3MHZ	C608	403 076 7100	CERAMIC 1000P M 1K
X1331	645 002 2593	FILTER, TRANS-6. 3MHZ	C609	403 076 7100	CERAMIC 1000P M 1K
X1361	645 002 2593	FILTER, TRANS-6. 3MHZ	C610	404 066 1603	MT-POLYEST 0.1U M 275V
X301	610 239 3347	CRYSTAL OSCILLATOR	C611	403 076 7100	CERAMIC 1000P M 1K
X304	610 240 5408	CRYSTAL OSCILLATOR	△C612	403 076 7100	CERAMIC 1000P M 1K
X411	645 002 2593	FILTER, TRANS-6. 3MHZ	△C613	404 047 1806	ELECT 100U M 400V
X431	645 002 2593	FILTER, TRANS-6. 3MHZ	C614	403 194 6900	MT-POLYPRO 0.01U J 800V
X451	645 002 2593	FILTER, TRANS-6. 3MHZ	C616	403 165 8605	CERAMIC 470P K 2K
X801	645 006 1752	OSC, CERAMIC 4. 000MHZ		403 077 7901	CERAMIC 470P K 2K

Ref. No.	Part No.	Description			Ref. No.	Part No.	Description	
C617	403 058 9306	POLYESTER	0.018U J	50V			TRANSFORMER	
	403 178 9507	POLYESTER	0.018U J	50V	△T601	645 013 0052	TRANS, POWER, PULSE	
C618	403 056 9704	POLYESTER	0.01U J	50V			COIL	
	403 178 9309	POLYESTER	0.01U J	50V	△L601	610 240 9123	LINE FILTER	
C619	404 008 2606	CERAMIC	1000P M	400V	△L602	610 031 6317	LINE FILTER	
	404 071 3401	CERAMIC	1000P M	400V	△L603	610 031 5945	LINE FILTER	
C621	404 008 2606	CERAMIC	1000P M	400V	△L604	610 032 1243	INDUCTOR, 150U K	
	404 071 3401	CERAMIC	1000P M	400V				
C622	403 134 6403	ELECT	2200U M	16V				
C623	403 160 8808	ELECT	4700U M	25V				
C628	403 126 4608	ELECT	100U M	25V	DIODE			
C629	403 160 5005	ELECT	4700U M	10V	DB601	407 141 1000	DIODE RBV-408	
C631	403 067 7805	MT-COMPO	0.47U J	50V	D601	407 007 9904	DIODE GMA01	
C632	403 110 1705	ELECT	2200U M	25V		407 012 4406	DIODE 1SS133	
C634	403 148 0107	ELECT	1000U M	16V	D602	407 012 5809	DIODE 1SS176	
C635	403 126 4509	ELECT	100U M	16V		407 013 1008	DIODE 1S1553	
						407 013 4306	DIODE 1S2076A	
						407 013 6508	DIODE 1S2471	
RESISTOR					D603	407 007 6903	DIODE ES1Z	
RC605	401 008 8607	CARBON	220K JA	1/2W	D604	407 054 3207	ZENER DIODE RD12EB2	
△R601	402 000 8305	SOLID	5.6M KA	1/2W		407 164 6907	ZENER DIODE UZ-12BCB	
R602	402 000 8305	SOLID	5.6M KA	1/2W	D605	407 007 9904	DIODE GMA01	
R603	401 169 4906	WIRE WOUND	3.9 KB	2W		407 012 4406	DIODE 1SS133	
R608	401 008 2605	CARBON	180K JA	1/2W		407 012 5809	DIODE 1SS176	
R609	401 069 8806	OXIDE-MT	82K JA	2W	D606	407 013 1008	DIODE 1S1553	
R610	401 069 8806	OXIDE-MT	82K JA	2W		407 013 4306	DIODE 1S2076A	
R611	401 068 6902	OXIDE-MT	56 JA	2W		407 013 6508	DIODE 1S2471	
R612	401 008 2605	CARBON	180K JA	1/2W	D607	407 116 3404	DIODE RU1P	
R613	401 025 8208	CARBON	22K JA	1/6W	D608	407 103 1604	DIODE RU4YX LF-J3	
R614	401 024 7400	CARBON	10K JA	1/6W	D609	407 118 2306	DIODE FML-12S LF-F	
R616	401 069 6208	OXIDE-MT	82 JA	2W	D609A	610 247 2677	HEAT SINK-S7VA	
R617	401 024 6700	CARBON	100 JA	1/6W	D609B	610 014 5818	WASHER	
R619	401 016 3304	CARBON	2.2K GA	1/4W	D609C	411 045 2209	SCR PAN+SW 3X10	
R621	401 025 7805	CARBON	2.2K JA	1/6W	D609D	411 004 4404	NUT HEX 3	
R622	401 024 7004	CARBON	1K JA	1/6W		411 054 7509	NUT HEX 3	
R623	401 024 7400	CARBON	10K JA	1/6W	D610	407 116 3404	DIODE RU1P	
R627	401 024 7400	CARBON	10K JA	1/6W	D611	407 007 7405	DIODE EU1	
R628	401 027 7209	CARBON	7.5K JA	1/6W	D612	407 118 2306	DIODE FML-12S LF-F	
R629	401 026 0607	CARBON	270 JA	1/6W	D612A	610 247 2677	HEAT SINK-S7VA	
R631	401 024 7004	CARBON	1K JA	1/6W	D612B	610 014 5818	WASHER	
R632	401 024 7400	CARBON	10K JA	1/6W	D612C	411 045 2209	SCR PAN+SW 3X10	
R633	401 024 7400	CARBON	10K JA	1/6W	D612D	411 004 4404	NUT HEX 3	
R634	401 066 5204	OXIDE-MT	22 JA	2W		411 054 7509	NUT HEX 3	
R636	401 009 5803	CARBON	330 JA	1/2W	D613	407 007 9904	DIODE GMA01	
R637	402 067 6603	FUSIBLE RES	2.7 J-	1/4W		407 012 4406	DIODE 1SS133	
R643	401 064 3806	OXIDE-MT	1 JA	2W		407 012 5809	DIODE 1SS176	
					D614	407 007 9904	DIODE GMA01	
VARISTOR						407 012 4406	DIODE 1SS133	
△VA601	407 130 2902	VARISTOR ENC471D-14A				407 012 5809	DIODE 1SS176	
VARIABLE RESISTOR					D616	407 005 7308	DIODE EM01Z	
VR601	645 006 2728	VR, SEMI, 2K S			D617	407 005 7308	DIODE EM01Z	
					D618	407 005 7308	DIODE EM01Z	
					D619	407 005 7308	DIODE EM01Z	

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
D621	407 057 4003	ZENER DIODE RD6. 8EB1	Q4236	405 002 6706	TR 2SA1179-M6-TA
	407 164 9908	ZENER DIODE UZ-6. 8BCA	Q4237	405 015 8704	TR 2SC2812-L6-TA
D627	407 057 4003	ZENER DIODE RD6. 8EB1	Q4238	405 015 8704	TR 2SC2812-L6-TA
	407 164 9908	ZENER DIODE UZ-6. 8BCA	Q4301	405 015 8704	TR 2SC2812-L6-TA
D631	407 057 6304	ZENER DIODE RD7. 5EB1	Q4302	405 003 5609	TR 2SA1318-S
	407 151 8808	ZENER DIODE UZ-7. 5BCA		405 003 5708	TR 2SA1318-T
D632	407 057 6304	ZENER DIODE RD7. 5EB1	Q4331	405 015 8704	TR 2SC2812-L6-TA
	407 151 8808	ZENER DIODE UZ-7. 5BCA	Q4332	405 003 5609	TR 2SA1318-S
				405 003 5708	TR 2SA1318-T
MISCELLANEOUS			Q4361	405 015 8704	TR 2SC2812-L6-TA
△RL601	645 002 1855	RELAY	Q4362	405 003 5609	TR 2SA1318-S
Q603A	610 247 7733	HEAT SINK A-G8DA		405 003 5708	TR 2SA1318-T
Q603B	610 080 3145	WASHER TO-3PM	Q4391	405 015 8704	TR 2SC2812-L6-TA
Q603C	411 045 2803	SCR PAN+SW 3X12	INTEGRATED CIRCUIT		
Q603D	411 004 4404	NUT HEX 3	IC4001	409 247 5302	IC M51406FP
Q606A	610 247 2677	HEAT SINK-S7VA	IC4002	409 196 6108	IC MC74HC4053F
Q606B	610 014 5818	WASHER	IC4161	409 083 8000	IC LA6082M-TP-T1
Q606C	411 045 2209	SCR PAN+SW 3X10	IC4162	409 083 8000	IC LA6082M-TP-T1
Q606D	411 004 4404	NUT HEX 3	IC4201	409 364 7807	IC LC21016A-X12
	411 054 7509	NUT HEX 3	IC4231	409 111 9306	IC LA7213
K6A-1	645 008 4058	TERMINAL, PLUG	IC4261	409 305 7804	IC MC74HCU04FR-TP-T1
K6A-2	645 008 4058	TERMINAL, PLUG	IC4271	409 305 7804	IC MC74HCU04FR-TP-T1
K6A-3	645 008 4058	TERMINAL, PLUG	IC4301	409 364 7609	IC ET1011TOA
K6B-1	645 008 4058	TERMINAL, PLUG	IC4331	409 364 7609	IC ET1011TOA
K6B-2	645 008 4058	TERMINAL, PLUG	IC4361	409 364 7609	IC ET1011TOA
K6C-1	645 008 4058	TERMINAL, PLUG	IC4391	409 051 2900	IC TC4053BF-TP1
K6C-2	645 008 4058	TERMINAL, PLUG	CAPACITOR		
K6C-3	645 008 4058	TERMINAL, PLUG	C4001	403 109 6308	ELECT 1U M 50V
K6D	645 004 2935	PLUG, 7P	C4002	403 085 4008	NP-ELECT 10U M 16V
K6E	645 004 2898	PLUG, 3P	C4004	403 069 9500	CERAMIC 0.01U Z 50V
K6F	645 004 2898	PLUG, 3P	C4021	403 109 6308	ELECT 1U M 50V
K6G	645 004 2898	PLUG, 3P	C4022	403 085 4008	NP-ELECT 10U M 16V
K6I	610 014 2886	TERMINAL	C4024	403 069 9500	CERAMIC 0.01U Z 50V
K6I-1	610 012 5926	TERMINAL	C4041	403 109 6308	ELECT 1U M 50V
K6L-1	645 008 4058	TERMINAL, PLUG	C4042	403 085 4008	NP-ELECT 10U M 16V
K6L-2	645 008 4058	TERMINAL, PLUG	C4044	403 069 9500	CERAMIC 0.01U Z 50V
K6M-1	645 008 4058	TERMINAL, PLUG	C4061	403 070 2606	CERAMIC 0.1U Z 50V
K6M-2	645 008 4058	TERMINAL, PLUG	C4062	403 069 9500	CERAMIC 0.01U Z 50V
△PC601	408 016 8803	PC PC113 (VDE0884)	C4063	403 070 2606	CERAMIC 0.1U Z 50V
			C4064	403 070 2606	CERAMIC 0.1U Z 50V
<b>ASSY,PWB,TM P4BA</b>			C4066	403 125 5606	ELECT 100U M 16V
<b>610 258 5711 1AA0B10C0760A</b>			C4067	403 135 5009	ELECT 47U M 10V
TRANSISTOR			C4068	403 070 2606	CERAMIC 0.1U Z 50V
Q4101	405 015 8704	TR 2SC2812-L6-TA	C4069	403 028 4102	CERAMIC 56P J 50V
Q4121	405 015 8704	TR 2SC2812-L6-TA	C4072	403 121 2401	ELECT 22U M 16V
Q4141	405 015 8704	TR 2SC2812-L6-TA	C4073	403 069 9500	CERAMIC 0.01U Z 50V
Q4221	405 015 8704	TR 2SC2812-L6-TA	C4076	403 070 2606	CERAMIC 0.1U Z 50V
Q4231	405 015 8704	TR 2SC2812-L6-TA	C4077	403 107 9509	ELECT 100U M 10V
Q4232	405 015 8704	TR 2SC2812-L6-TA	C4078	403 070 2606	CERAMIC 0.1U Z 50V
Q4233	405 015 8704	TR 2SC2812-L6-TA	C4079	403 070 2606	CERAMIC 0.1U Z 50V
Q4234	405 015 8704	TR 2SC2812-L6-TA			

Ref. No.	Part No.	Description			Ref. No.	Part No.	Description		
C4081	403 070 2606	CERAMIC	0.1U Z	50V	C4283	403 063 5102	POLYESTER	8200P J	50V
C4082	403 134 9602	ELECT	47U M	16V	C4284	403 067 5702	MT-COMPO	1U J	50V
C4083	403 107 9905	ELECT	10U M	16V	C4291	403 070 2606	CERAMIC	0.1U Z	50V
C4084	403 070 2606	CERAMIC	0.1U Z	50V	C4292	403 093 6209	OS-SOLID	10U M	10V
C4102	403 085 7405	NP-ELECT	10U M	25V	C4293	403 070 2606	CERAMIC	0.1U Z	50V
C4122	403 085 7405	NP-ELECT	10U M	25V	C4294	403 093 6209	OS-SOLID	10U M	10V
C4142	403 085 7405	NP-ELECT	10U M	25V	C4301	403 094 4204	OS-SOLID	47U M	20V
C4161	403 070 2606	CERAMIC	0.1U Z	50V	C4302	403 070 2606	CERAMIC	0.1U Z	50V
C4162	403 085 7405	NP-ELECT	10U M	25V	C4303	403 070 2606	CERAMIC	0.1U Z	50V
C4164	403 070 2606	CERAMIC	0.1U Z	50V	C4304	403 093 8302	OS-SOLID	47U M	10V
C4166	403 070 2606	CERAMIC	0.1U Z	50V	C4306	403 070 2606	CERAMIC	0.1U Z	50V
C4167	403 070 2606	CERAMIC	0.1U Z	50V	C4307	403 070 2606	CERAMIC	0.1U Z	50V
C4168	403 129 5701	ELECT	47U M	25V	C4308	403 070 2606	CERAMIC	0.1U Z	50V
C4169	403 070 2606	CERAMIC	0.1U Z	50V	C4309	403 070 2606	CERAMIC	0.1U Z	50V
C4171	403 070 2606	CERAMIC	0.1U Z	50V	C4311	403 070 2606	CERAMIC	0.1U Z	50V
C4172	403 129 5701	ELECT	47U M	25V	C4312	403 070 2606	CERAMIC	0.1U Z	50V
C4182	403 070 2606	CERAMIC	0.1U Z	50V	C4313	403 070 2606	CERAMIC	0.1U Z	50V
C4183	403 070 2606	CERAMIC	0.1U Z	50V	C4314	403 094 8004	OS-SOLID	10U M	25V
C4201	403 070 2606	CERAMIC	0.1U Z	50V	C4321	403 129 5701	ELECT	47U M	25V
C4202	403 067 5603	MT-COMPO	0.1U J	50V	C4322	403 070 2606	CERAMIC	0.1U Z	50V
C4203	403 070 2606	CERAMIC	0.1U Z	50V	C4323	403 085 7405	NP-ELECT	10U M	25V
C4204	403 070 2606	CERAMIC	0.1U Z	50V	C4331	403 094 4204	OS-SOLID	47U M	20V
C4206	403 093 6407	OS-SOLID	100U M	10V	C4332	403 070 2606	CERAMIC	0.1U Z	50V
C4207	403 070 2606	CERAMIC	0.1U Z	50V	C4333	403 070 2606	CERAMIC	0.1U Z	50V
C4208	403 093 6407	OS-SOLID	100U M	10V	C4334	403 093 8302	OS-SOLID	47U M	10V
C4209	403 070 2606	CERAMIC	0.1U Z	50V	C4336	403 070 2606	CERAMIC	0.1U Z	50V
C4211	403 070 2606	CERAMIC	0.1U Z	50V	C4337	403 070 2606	CERAMIC	0.1U Z	50V
C4221	403 073 3501	CERAMIC	390P K	50V	C4338	403 070 2606	CERAMIC	0.1U Z	50V
C4222	403 070 2606	CERAMIC	0.1U Z	50V	C4339	403 070 2606	CERAMIC	0.1U Z	50V
C4231	403 067 7805	MT-COMPO	0.47U J	50V	C4341	403 070 2606	CERAMIC	0.1U Z	50V
C4232	403 061 2400	POLYESTER	3900P K	50V	C4342	403 070 2606	CERAMIC	0.1U Z	50V
C4234	403 070 2606	CERAMIC	0.1U Z	50V	C4343	403 070 2606	CERAMIC	0.1U Z	50V
C4236	403 093 8302	OS-SOLID	47U M	10V	C4344	403 094 8004	OS-SOLID	10U M	25V
C4238	403 056 7304	POLYESTER	1000P J	50V	C4351	403 129 5701	ELECT	47U M	25V
C4241	403 086 5400	NP-ELECT	2.2U M	50V	C4352	403 070 2606	CERAMIC	0.1U Z	50V
C4242	403 056 7304	POLYESTER	1000P J	50V	C4353	403 085 7405	NP-ELECT	10U M	25V
C4243	403 125 5606	ELECT	100U M	16V	C4361	403 094 4204	OS-SOLID	47U M	20V
C4261	403 018 0503	CERAMIC	22P J	50V	C4362	403 070 2606	CERAMIC	0.1U Z	50V
C4262	403 214 5203	POLYESTER	0.012U J	50V	C4363	403 070 2606	CERAMIC	0.1U Z	50V
C4263	403 115 1908	CERAMIC	6P D	50V	C4364	403 093 8302	OS-SOLID	47U M	10V
C4264	403 006 6203	CERAMIC	1P C	50V	C4366	403 070 2606	CERAMIC	0.1U Z	50V
C4266	403 059 3808	POLYESTER	2200P K	50V	C4367	403 070 2606	CERAMIC	0.1U Z	50V
C4267	403 059 0104	POLYESTER	0.018U K	50V	C4368	403 070 2606	CERAMIC	0.1U Z	50V
C4268	403 063 5102	POLYESTER	8200P J	50V	C4369	403 070 2606	CERAMIC	0.1U Z	50V
C4269	403 067 5702	MT-COMPO	1U J	50V	C4371	403 070 2606	CERAMIC	0.1U Z	50V
C4276	403 018 0503	CERAMIC	22P J	50V	C4372	403 070 2606	CERAMIC	0.1U Z	50V
C4277	403 214 5203	POLYESTER	0.012U J	50V	C4373	403 070 2606	CERAMIC	0.1U Z	50V
C4278	403 012 7300	CERAMIC	15P J	50V	C4374	403 094 8004	OS-SOLID	10U M	25V
C4279	403 161 6704	CERAMIC	9P D	50V	C4381	403 129 5701	ELECT	47U M	25V
C4280	403 021 0200	CERAMIC	3P C	50V	C4382	403 070 2606	CERAMIC	0.1U Z	50V
C4281	403 061 8303	POLYESTER	4700P K	50V	C4383	403 085 7405	NP-ELECT	10U M	25V
C4282	403 059 0104	POLYESTER	0.018U K	50V	C4391	403 070 2606	CERAMIC	0.1U Z	50V

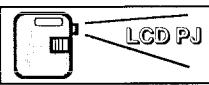
Ref. No.	Part No.	Description			Ref. No.	Part No.	Description		
C4392	403 094 8004	OS-SOLID	10U M	25V	R4146	401 037 5707	MT-GLAZE	100K JA 1/10W	
C4401	403 070 2606	CERAMIC	0.1U Z	50V	R4147	401 089 2907	MT-GLAZE	4.7K GA 1/10W	
C4406	403 070 2606	CERAMIC	0.1U Z	50V	R4161	401 089 2907	MT-GLAZE	4.7K GA 1/10W	
C4411	403 070 2606	CERAMIC	0.1U Z	50V	R4162	401 038 6406	MT-GLAZE	4.7K JA 1/10W	
C4413	403 070 2606	CERAMIC	0.1U Z	50V	R4163	401 037 5707	MT-GLAZE	100K JA 1/10W	
C4414	403 109 5608	ELECT	100U M	25V	R4164	401 037 6803	MT-GLAZE	12K JA 1/10W	
C4421	403 070 2606	CERAMIC	0.1U Z	50V	R4166	401 089 2907	MT-GLAZE	4.7K GA 1/10W	
C4423	403 070 2606	CERAMIC	0.1U Z	50V	R4167	401 089 2907	MT-GLAZE	4.7K GA 1/10W	
C4424	403 093 6407	OS-SOLID	100U M	10V	R4171	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	
RESISTOR					R4201	401 037 5608	MT-GLAZE	10K JA 1/10W	
R4001	401 037 5004	MT-GLAZE	0.000 ZA	1/10W	R4202	401 037 9309	MT-GLAZE	18K JA 1/10W	
R4003	401 037 5400	MT-GLAZE	1K JA	1/10W	R4203	401 037 5103	MT-GLAZE	10 JA 1/10W	
R4006	401 038 0701	MT-GLAZE	2.2K JA	1/10W	R4204	401 038 9407	MT-GLAZE	680K JA 1/10W	
R4007	401 038 9001	MT-GLAZE	680 JA	1/10W	R4206	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	
R4021	401 037 5004	MT-GLAZE	0.000 ZA	1/10W	R4208	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	
R4023	401 037 5400	MT-GLAZE	1K JA	1/10W	R4209	401 038 7601	MT-GLAZE	560 JA 1/10W	
R4026	401 038 0701	MT-GLAZE	2.2K JA	1/10W	R4211	401 038 7601	MT-GLAZE	560 JA 1/10W	
R4027	401 038 9001	MT-GLAZE	680 JA	1/10W	R4216	401 037 5707	MT-GLAZE	100K JA 1/10W	
R4041	401 037 5004	MT-GLAZE	0.000 ZA	1/10W	R4217	401 037 5707	MT-GLAZE	100K JA 1/10W	
R4043	401 037 5400	MT-GLAZE	1K JA	1/10W	R4218	401 038 0701	MT-GLAZE	2.2K JA 1/10W	
R4046	401 038 0701	MT-GLAZE	2.2K JA	1/10W	R4221	401 038 5102	MT-GLAZE	3.9K JA 1/10W	
R4047	401 038 9001	MT-GLAZE	680 JA	1/10W	R4222	401 038 6406	MT-GLAZE	4.7K JA 1/10W	
R4061	401 037 5202	MT-GLAZE	100 JA	1/10W	R4223	401 037 8005	MT-GLAZE	15K JA 1/10W	
R4062	401 038 0701	MT-GLAZE	2.2K JA	1/10W	R4231	401 038 6307	MT-GLAZE	470 JA 1/10W	
R4063	401 038 0800	MT-GLAZE	22K JA	1/10W	R4232	401 038 2101	MT-GLAZE	2.7K JA 1/10W	
R4064	401 038 3702	MT-GLAZE	33K JA	1/10W	R4233	401 037 5806	MT-GLAZE	1M JA 1/10W	
R4066	401 037 5202	MT-GLAZE	100 JA	1/10W	R4234	401 037 5608	MT-GLAZE	10K JA 1/10W	
R4067	401 038 0701	MT-GLAZE	2.2K JA	1/10W	R4236	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	
R4069	401 037 5004	MT-GLAZE	0.000 ZA	1/10W	R4237	401 037 5608	MT-GLAZE	10K JA 1/10W	
R4071	401 037 5004	MT-GLAZE	0.000 ZA	1/10W	R4238	401 039 0403	MT-GLAZE	8.2K JA 1/10W	
R4073	401 038 2200	MT-GLAZE	27K JA	1/10W	R4239	401 038 6307	MT-GLAZE	470 JA 1/10W	
R4074	401 038 0206	MT-GLAZE	20K JA	1/10W	R4240	401 038 6307	MT-GLAZE	470 JA 1/10W	
R4075	401 038 0800	MT-GLAZE	22K JA	1/10W	R4241	401 038 2309	MT-GLAZE	270K JA 1/10W	
R4076	401 037 5004	MT-GLAZE	0.000 ZA	1/10W	R4242	401 038 2309	MT-GLAZE	270K JA 1/10W	
R4081	401 037 5400	MT-GLAZE	1K JA	1/10W	R4243	401 038 3504	MT-GLAZE	330 JA 1/10W	
R4082	401 038 5300	MT-GLAZE	39K JA	1/10W	R4244	401 038 6307	MT-GLAZE	470 JA 1/10W	
R4084	401 037 5202	MT-GLAZE	100 JA	1/10W	R4246	401 037 8005	MT-GLAZE	15K JA 1/10W	
R4086	401 037 5004	MT-GLAZE	0.000 ZA	1/10W	R4247	401 037 5608	MT-GLAZE	10K JA 1/10W	
R4088	401 037 5004	MT-GLAZE	0.000 ZA	1/10W	R4251	401 037 5202	MT-GLAZE	100 JA 1/10W	
R4091	401 037 7909	MT-GLAZE	1.5K JA	1/10W	R4252	401 037 5400	MT-GLAZE	1K JA 1/10W	
R4092	401 037 5004	MT-GLAZE	0.000 ZA	1/10W	R4253	401 038 6406	MT-GLAZE	4.7K JA 1/10W	
R4101	401 037 5400	MT-GLAZE	1K JA	1/10W	R4254	401 037 8005	MT-GLAZE	15K JA 1/10W	
R4104	401 038 0701	MT-GLAZE	2.2K JA	1/10W	R4256	401 037 5400	MT-GLAZE	1K JA 1/10W	
R4106	401 037 5707	MT-GLAZE	100K JA	1/10W	R4261	401 038 7502	MT-GLAZE	56 JA 1/10W	
R4107	401 089 2907	MT-GLAZE	4.7K GA	1/10W	R4262	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	
R4121	401 037 5400	MT-GLAZE	1K JA	1/10W	R4263	401 037 5707	MT-GLAZE	100K JA 1/10W	
R4124	401 038 0701	MT-GLAZE	2.2K JA	1/10W	R4264	401 038 6307	MT-GLAZE	470 JA 1/10W	
R4126	401 037 5707	MT-GLAZE	100K JA	1/10W	R4266	401 037 8104	MT-GLAZE	150K JA 1/10W	
R4127	401 089 2907	MT-GLAZE	4.7K GA	1/10W	R4267	401 039 0403	MT-GLAZE	8.2K JA 1/10W	
R4141	401 037 5400	MT-GLAZE	1K JA	1/10W	R4268	401 037 6506	MT-GLAZE	12 JA 1/10W	
R4144	401 038 0701	MT-GLAZE	2.2K JA	1/10W	R4276	401 038 7502	MT-GLAZE	56 JA 1/10W	
					R4277	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	

Ref. No.	Part No.	Description		Ref. No.	Part No.	Description	
R4278	401 037 5707	MT-GLAZE	100K JA 1/10W	R4411	401 021 7205	CARBON	6.8 JB 1/4W
R4279	401 037 6506	MT-GLAZE	12 JA 1/10W			VARIABLE RESISTOR	
R4281	401 038 6307	MT-GLAZE	470 JA 1/10W	VR4001	645 002 7703	VR, SEMI, 10K S	
R4282	401 037 8104	MT-GLAZE	150K JA 1/10W	VR4021	645 002 7703	VR, SEMI, 10K S	
R4283	401 039 0403	MT-GLAZE	8.2K JA 1/10W	VR4041	645 002 7703	VR, SEMI, 10K S	
R4291	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	VR4061	645 006 2728	VR, SEMI, 2K S	
R4292	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	VR4062	645 006 2728	VR, SEMI, 2K S	
R4293	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	VR4063	645 002 7703	VR, SEMI, 10K S	
R4306	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	VR4091	610 234 7265	VR B-1K	
R4307	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	VR4301	645 006 2728	VR, SEMI, 2K S	
R4308	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	VR4331	645 006 2728	VR, SEMI, 2K S	
R4309	401 038 7700	MT-GLAZE	5.6K JA 1/10W	VR4361	645 006 2728	VR, SEMI, 2K S	
R4311	401 038 3603	MT-GLAZE	3.3K JA 1/10W				
R4312	401 037 5004	MT-GLAZE	0.000 ZA 1/10W				
R4321	401 038 9308	MT-GLAZE	68K JA 1/10W			TRANSFORMER	
R4322	401 038 6505	MT-GLAZE	47K JA 1/10W	T4261	645 002 2609	TRANS, OSC, 25MHZ	
R4323	401 038 0701	MT-GLAZE	2.2K JA 1/10W	T4272	645 002 2609	TRANS, OSC, 25MHZ	
R4324	401 038 0701	MT-GLAZE	2.2K JA 1/10W				
R4326	401 037 6704	MT-GLAZE	1.2K JA 1/10W			COIL	
R4327	401 037 6704	MT-GLAZE	1.2K JA 1/10W	L4201	645 006 3367	FILTER, EMI 22000PF	
R4329	401 038 7809	MT-GLAZE	56K JA 1/10W	L4251	645 003 1267	INDUCTOR, 120 OHM	
R4336	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	L4252	645 003 1267	INDUCTOR, 120 OHM	
R4337	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	L4253	645 003 1267	INDUCTOR, 120 OHM	
R4338	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	L4254	645 003 1267	INDUCTOR, 120 OHM	
R4339	401 038 7700	MT-GLAZE	5.6K JA 1/10W	L4256	645 003 1267	INDUCTOR, 120 OHM	
R4341	401 038 3603	MT-GLAZE	3.3K JA 1/10W	L4257	645 003 1267	INDUCTOR, 120 OHM	
R4342	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	L4258	645 003 1267	INDUCTOR, 120 OHM	
R4351	401 038 9308	MT-GLAZE	68K JA 1/10W	L4259	645 003 1267	INDUCTOR, 120 OHM	
R4352	401 038 6505	MT-GLAZE	47K JA 1/10W	L4261	645 003 1267	INDUCTOR, 120 OHM	
R4353	401 038 0701	MT-GLAZE	2.2K JA 1/10W	L4262	645 003 1267	INDUCTOR, 120 OHM	
R4354	401 038 0701	MT-GLAZE	2.2K JA 1/10W	L4263	645 003 1267	INDUCTOR, 120 OHM	
R4356	401 037 6704	MT-GLAZE	1.2K JA 1/10W	L4264	645 003 1267	INDUCTOR, 120 OHM	
R4357	401 037 6704	MT-GLAZE	1.2K JA 1/10W	L4265	645 003 1267	INDUCTOR, 120 OHM	
R4359	401 038 7809	MT-GLAZE	56K JA 1/10W	L4266	645 003 1267	INDUCTOR, 120 OHM	
R4366	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	L4267	401 037 5202	MT-GLAZE	100 JA 1/10W
R4367	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	L4268	401 037 5202	MT-GLAZE	100 JA 1/10W
R4368	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	L4269	401 037 5202	MT-GLAZE	100 JA 1/10W
R4369	401 038 7700	MT-GLAZE	5.6K JA 1/10W	L4271	645 003 1267	INDUCTOR, 120 OHM	
R4371	401 038 3603	MT-GLAZE	3.3K JA 1/10W	L4272	645 003 1267	INDUCTOR, 120 OHM	
R4372	401 037 5004	MT-GLAZE	0.000 ZA 1/10W	L4273	645 003 1267	INDUCTOR, 120 OHM	
R4381	401 038 9308	MT-GLAZE	68K JA 1/10W	L4291	645 008 3174	FILTER, EMI 22000PF	
R4382	401 038 6505	MT-GLAZE	47K JA 1/10W	L4292	645 008 3174	FILTER, EMI 22000PF	
R4383	401 038 0701	MT-GLAZE	2.2K JA 1/10W	L4301	645 006 3367	FILTER, EMI 22000PF	
R4384	401 038 0701	MT-GLAZE	2.2K JA 1/10W	L4302	645 006 3367	FILTER, EMI 22000PF	
R4386	401 037 6704	MT-GLAZE	1.2K JA 1/10W	L4304	610 012 3991	JUNPER LEAD	
R4387	401 037 6704	MT-GLAZE	1.2K JA 1/10W	L4305	645 003 1267	INDUCTOR, 120 OHM	
R4389	401 038 7809	MT-GLAZE	56K JA 1/10W	L4306	645 003 1267	INDUCTOR, 120 OHM	
R4391	401 038 0800	MT-GLAZE	22K JA 1/10W	L4307	645 003 1267	INDUCTOR, 120 OHM	
R4392	401 038 0800	MT-GLAZE	22K JA 1/10W	L4308	645 003 1267	INDUCTOR, 120 OHM	
R4393	401 038 0800	MT-GLAZE	22K JA 1/10W	L4309	645 003 1267	INDUCTOR, 120 OHM	
R4394	401 037 5608	MT-GLAZE	10K JA 1/10W	L4311	645 003 1267	INDUCTOR, 120 OHM	
R4396	401 037 5608	MT-GLAZE	10K JA 1/10W	L4312	645 003 1267	INDUCTOR, 120 OHM	

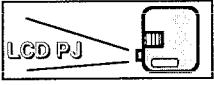
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
L4313	645 003 1267	INDUCTOR, 120 OHM	L4381	645 003 1267	INDUCTOR, 120 OHM
L4314	645 003 1267	INDUCTOR, 120 OHM	L4382	645 003 1267	INDUCTOR, 120 OHM
L4316	645 003 1267	INDUCTOR, 120 OHM	L4383	645 003 1267	INDUCTOR, 120 OHM
L4317	645 003 1267	INDUCTOR, 120 OHM	L4384	645 003 1267	INDUCTOR, 120 OHM
L4318	645 003 1267	INDUCTOR, 120 OHM	L4386	645 003 1267	INDUCTOR, 120 OHM
L4319	645 003 1267	INDUCTOR, 120 OHM	L4387	645 003 1267	INDUCTOR, 120 OHM
L4321	645 003 1267	INDUCTOR, 120 OHM	L4391	645 008 3174	FILTER, EMI 22000PF
L4322	645 003 1267	INDUCTOR, 120 OHM	L4401	645 008 3174	FILTER, EMI 22000PF
L4323	645 003 1267	INDUCTOR, 120 OHM	L4406	645 008 3174	FILTER, EMI 22000PF
L4324	645 003 1267	INDUCTOR, 120 OHM	L4421	645 006 3367	FILTER, EMI 22000PF
L4326	645 003 1267	INDUCTOR, 120 OHM	L4661	610 012 3991	JUNPER LEAD
L4327	645 003 1267	INDUCTOR, 120 OHM	L4662	610 012 3991	JUNPER LEAD
L4328	401 037 5004	MT-GLAZE 0.000 ZA 1/10W	L6061	610 012 3991	JUNPER LEAD
L4331	645 006 3367	FILTER, EMI 22000PF			
L4332	645 006 3367	FILTER, EMI 22000PF	D1ODE		
L4334	610 012 3991	JUNPER LEAD	D4091	407 004 8009	DIODE DSB015-TA
L4335	645 003 1267	INDUCTOR, 120 OHM	D4203	407 004 8009	DIODE DSB015-TA
L4336	645 003 1267	INDUCTOR, 120 OHM	D4261	407 091 2102	VARACTOR DI SVC201SPA
L4337	645 003 1267	INDUCTOR, 120 OHM	D4271	407 091 2102	VARACTOR DI SVC201SPA
L4338	645 003 1267	INDUCTOR, 120 OHM			
L4339	645 003 1267	INDUCTOR, 120 OHM	MISCELLANEOUS		
L4341	645 003 1267	INDUCTOR, 120 OHM	TP40B	645 000 0409	TERMINAL
L4342	645 003 1267	INDUCTOR, 120 OHM	TP40G	645 000 0409	TERMINAL
L4343	645 003 1267	INDUCTOR, 120 OHM	TP40R	645 000 0409	TERMINAL
L4344	645 003 1267	INDUCTOR, 120 OHM	TP41	645 000 0409	TERMINAL
L4346	645 003 1267	INDUCTOR, 120 OHM	TP42	645 000 0409	TERMINAL
L4347	645 003 1267	INDUCTOR, 120 OHM	TP43G	645 000 0409	TERMINAL
L4348	645 003 1267	INDUCTOR, 120 OHM	TP44B	645 000 0409	TERMINAL
L4349	645 003 1267	INDUCTOR, 120 OHM	TP44G	645 000 0409	TERMINAL
L4351	645 003 1267	INDUCTOR, 120 OHM	TP44R	645 000 0409	TERMINAL
L4352	645 003 1267	INDUCTOR, 120 OHM	TP45	645 000 0409	TERMINAL
L4353	645 003 1267	INDUCTOR, 120 OHM	TP46A	645 000 0409	TERMINAL
L4354	645 003 1267	INDUCTOR, 120 OHM	TP46B	645 000 0409	TERMINAL
L4356	645 003 1267	INDUCTOR, 120 OHM	TP46C	645 000 0409	TERMINAL
L4357	645 003 1267	INDUCTOR, 120 OHM	TP47A	645 000 0409	TERMINAL
L4358	401 037 5004	MT-GLAZE 0.000 ZA 1/10W	TP47B	645 000 0409	TERMINAL
L4361	645 006 3367	FILTER, EMI 22000PF	TP48B	645 000 0409	TERMINAL
L4362	645 006 3367	FILTER, EMI 22000PF	TP48G	645 000 0409	TERMINAL
L4364	610 012 3991	JUNPER LEAD	TP48R	645 000 0409	TERMINAL
L4365	645 003 1267	INDUCTOR, 120 OHM	TP49B	645 000 0409	TERMINAL
L4366	645 003 1267	INDUCTOR, 120 OHM	TP49G	645 000 0409	TERMINAL
L4367	645 003 1267	INDUCTOR, 120 OHM	TP49R	645 000 0409	TERMINAL
L4368	645 003 1267	INDUCTOR, 120 OHM	K40A	645 004 2942	PLUG, 8P
L4369	645 003 1267	INDUCTOR, 120 OHM	K42A	645 004 2928	PLUG, 6P
L4371	645 003 1267	INDUCTOR, 120 OHM	K42B	645 004 2959	PLUG, 9P
L4372	645 003 1267	INDUCTOR, 120 OHM	K42C	645 004 2942	PLUG, 8P
L4373	645 003 1267	INDUCTOR, 120 OHM	K42D	645 004 2911	PLUG, 5P
L4374	645 003 1267	INDUCTOR, 120 OHM	K43B	645 003 3957	SOCKET, 30P
L4376	645 003 1267	INDUCTOR, 120 OHM	K43G	645 003 3957	SOCKET, 30P
L4377	645 003 1267	INDUCTOR, 120 OHM	K43R	645 003 3957	SOCKET, 30P
L4378	645 003 1267	INDUCTOR, 120 OHM	K44A	645 004 2942	PLUG, 8P
L4379	645 003 1267	INDUCTOR, 120 OHM			

Ref. No.	Part No.	Description		Ref. No.	Part No.	Description			
<b>ASSY,PWB,SUB- POWER P4BA</b>				C027	403 192 5905	CERAMIC	0.1U K 25V		
<b>610 258 5728 1AA0B10C0760B</b>				C029	403 134 5505	ELECT	10U M 25V		
VARIABLE RESISTOR				C031	403 192 5905	CERAMIC	0.1U K 25V		
VA2001	407 130 2902	VARISTOR ENC471D-14A		C032	403 109 5608	ELECT	100U M 25V		
VA2001A	610 250 8703	COVER, CONDENCER-G8DV		C033	403 192 5905	CERAMIC	0.1U K 25V		
MISCELLANEOUS				C034	403 135 3302	ELECT	1000U M 6.3V		
F2000	423 022 2102	FUSE 250V 4A		C036	403 192 5905	CERAMIC	0.1U K 25V		
F2000A	645 000 5077	HOLDER, FUSE		C037	403 135 3302	ELECT	1000U M 6.3V		
F2000B	645 000 5077	HOLDER, FUSE		C041	403 192 5905	CERAMIC	0.1U K 25V		
F2000C	610 258 4370	LABEL FUSE-P6BA		C042	403 192 5905	CERAMIC	0.1U K 25V		
SW2001	645 005 0510	SWITCH, POWER 2P-2TX2		C043	403 134 9602	ELECT	47U M 16V		
<b>ASSY,PWB,LOW +B POW P4BA</b>				C044	403 129 5701	ELECT	47U M 25V		
<b>610 258 5735 1AA0B10C0760C</b>				RESISTOR					
TRANSISTOR				R002	402 070 7000	FUSIBLE RES	47 J- 2W		
Q001	405 015 8704	TR 2SC2812-L6-TA		R004	401 037 5004	MT-GLAZE	0.000 ZA 1/10W		
Q002	405 015 8704	TR 2SC2812-L6-TA		R006	402 062 3607	FUSIBLE RES	18 J- 2W		
Q003	405 015 8704	TR 2SC2812-L6-TA		R008	402 072 1907	FUSIBLE RES	56 J- 2W		
INTEGRATED CIRCUIT				R010	402 072 1907	FUSIBLE RES	56 J- 2W		
IC001	409 124 5302	IC L78M05T		R011	401 038 3108	MT-GLAZE	30K JA 1/10W		
IC002	409 199 0806	IC TA79L015P		R012	401 038 4204	MT-GLAZE	36K JA 1/10W		
IC003	409 225 2309	IC PQ12RF11		R013	401 038 0701	MT-GLAZE	2.2K JA 1/10W		
IC004	409 314 1008	IC PQ30RV31		R016	401 037 8005	MT-GLAZE	15K JA 1/10W		
IC006	409 343 5107	IC PQ15RF15		R017	401 038 9209	MT-GLAZE	6.8K JA 1/10W		
IC007	409 141 0502	IC TA79L008P		R018	401 013 4304	CARBON	120 JB 1/4W		
CAPACITOR				R020	401 038 0701	MT-GLAZE	2.2K JA 1/10W		
C001	403 125 5606	ELECT 100U M 16V		R021	401 038 5003	MT-GLAZE	390 JA 1/10W		
C002	403 192 5905	CERAMIC 0.1U K 25V		COIL					
C003	403 192 5905	CERAMIC 0.1U K 25V		L002	610 031 1541	INDUCTOR, 270U K			
C004	403 107 9509	ELECT 100U M 10V		L003	610 031 1541	INDUCTOR, 270U K			
C006	403 109 5608	ELECT 100U M 25V		DIODE					
C007	403 192 5905	CERAMIC 0.1U K 25V		D002	407 004 8009	DIODE DSB015-TA			
C008	403 192 5905	CERAMIC 0.1U K 25V		D003	407 004 8009	DIODE DSB015-TA			
C009	403 134 9602	ELECT 47U M 16V		D004	407 004 8009	DIODE DSB015-TA			
C011	403 111 8604	ELECT 470U M 25V		D006	407 004 8009	DIODE DSB015-TA			
C012	403 192 5905	CERAMIC 0.1U K 25V		D007	407 004 8009	DIODE DSB015-TA			
C013	403 192 5905	CERAMIC 0.1U K 25V		D008	407 071 3303	ZENER DIODE DZD20Y-TA			
C014	403 111 8604	ELECT 470U M 25V		D009	407 071 3402	ZENER DIODE DZD20Z-TA			
C016	403 109 5707	ELECT 220U M 25V		D010	407 004 8009	DIODE DSB015-TA			
C017	403 192 5905	CERAMIC 0.1U K 25V		D011	407 004 8009	DIODE DSB015-TA			
C018	403 192 5905	CERAMIC 0.1U K 25V		MISCELLANEOUS					
C019	403 121 2609	ELECT 220U M 16V		K01A	645 004 2935	PLUG, 7P			
C021	403 109 5707	ELECT 220U M 25V		K01B	645 004 2942	PLUG, 8P			
C022	403 192 5905	CERAMIC 0.1U K 25V		K01C	645 004 2959	PLUG, 9P			
C023	403 192 5905	CERAMIC 0.1U K 25V							
C024	403 121 2609	ELECT 220U M 16V							
C026	403 135 3302	ELECT 1000U M 6.3V							

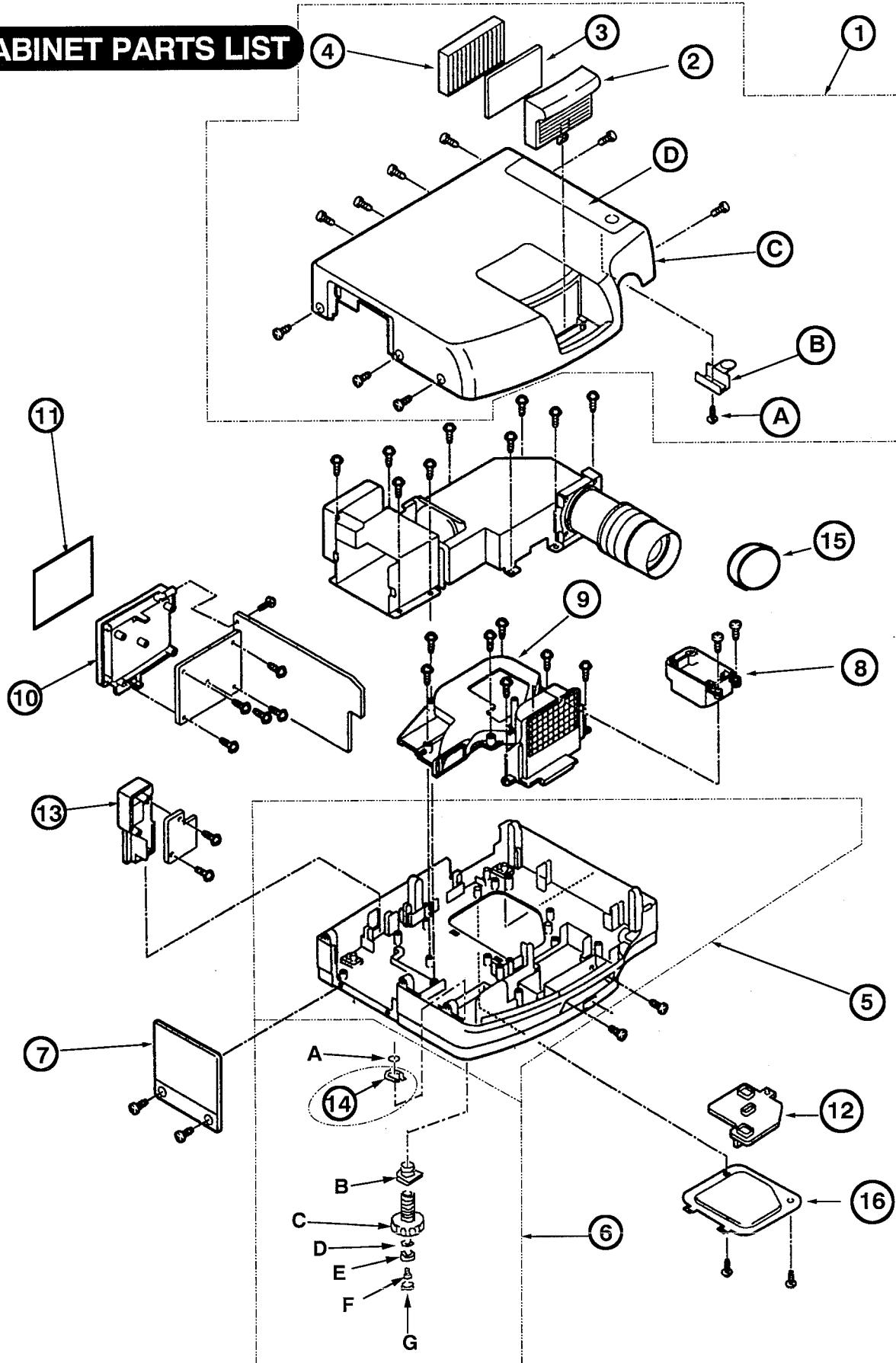
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
<b>OUT OF CIRCUIT PCB</b>					
COIL					
L901	645 012 5768	INDUCTOR, 40M			
L902	610 239 1312	AC SOCKET			
L903	645 003 3810	CORE, FERRITE			
L904	645 003 3810	CORE, FERRITE			
MISCELLANEOUS					
△LP901	610 257 6269	METAL HALIDE LAMP ASS'Y ✓			
EL901	610 260 6720	LCD PANEL (R)			
EL902	610 260 6737	LCD PANEL (G)			
EL903	610 260 6744	LCD PANEL (B)			
△FN901	645 011 7022	MOTOR, FAN DC 6.0W			
△FN902	645 011 7039	MOTOR, FAN DC 2.64W			
SP901	610 055 5471	SPEAKER			
	610 055 5464	SPEAKER			
SW904	610 229 8505	SWITCH, REED			
SW905	610 233 0632	SWITCH, REED			
T901	645 013 5422	TRANS, POWER			
T901A	645 003 3810	CORE, FERRITE			
<b>ACCESSORIES</b>					
△	610 239 1374	AC POWER CORD PLC-400P			
△	645 000 1642	AC POWER CORD PLC-400PB			
△	or 645 000 4520	AC POWER CORD PLC-400PB			
△	645 002 6812	AC POWER CORD PLC-400PP			
△	or 645 002 7765	AC POWER CORD PLC-400PP			
	645 015 3976	RC CABLE			
	or 610 234 0969	RC CABLE			
AA9901	645 016 6648	RC TRANSMITTER			
A9901E	610 233 5026	RC BATTERY COVER			
	610 259 4928	OWNER'S MANUAL PLC-400P			
	610 259 4935	OWNER'S MANUAL PLC-400PB			
	610 259 4935	OWNER'S MANUAL PLC-400PP			



# CABINET & OPTICAL PARTS LIST



## CABINET PARTS LIST

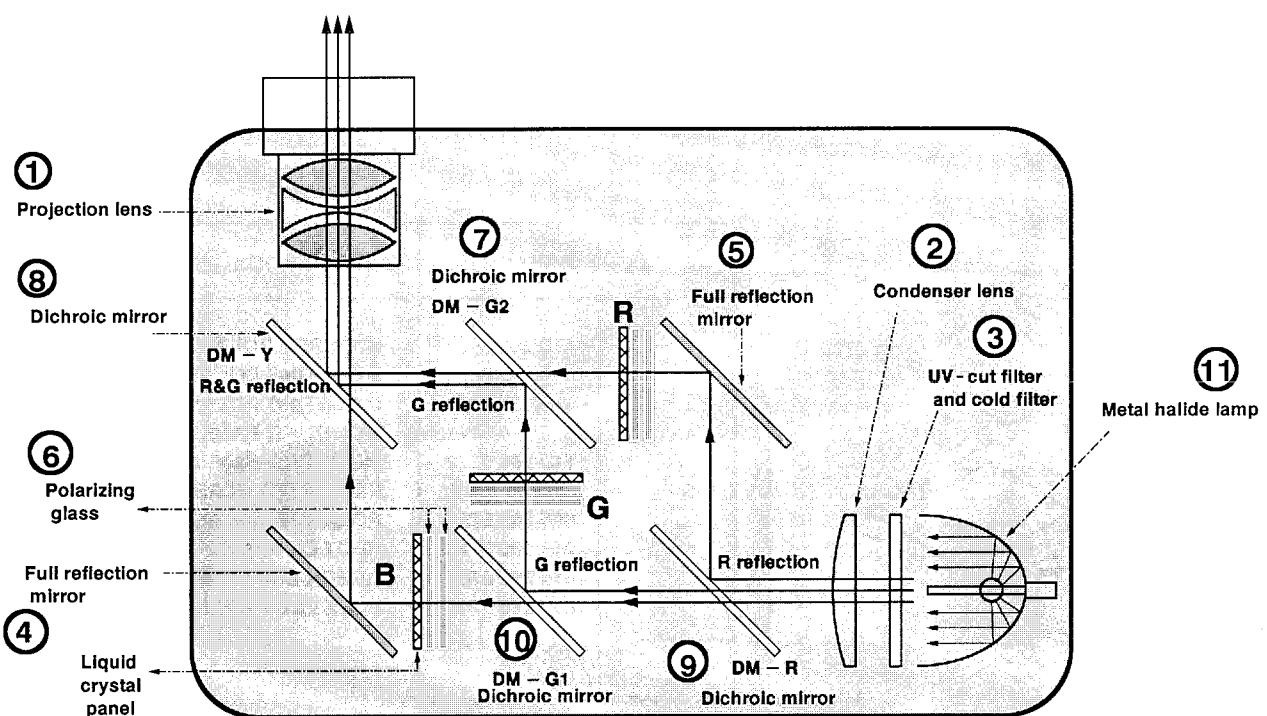


## CABINET PARTS LIST

KEY NO	PART NO	DESCRIPTION
1.	610 259 5604	TOP CABINET ASS'Y (INCLUDED A-D)
A.	412 018 8402	SCREW 3X 10MM
B.	610 253 0391	ON/OFF BUTTON
C.	610 260 4535	TOP CABINET
D.	610 259 5772	DECORATION PLATE
2.	610 259 5819	AIR FILTER COVER
3.	610 258 1003	SPONGE
4.	610 253 0933	AIR FILTER
5.	610 260 4559	BOTTOM CABINET
6.	610 239 9899	LEG. ASS'Y (2USED) INCLUDED A AND C-G
A.	411 165 5302	STOPPER
B.	412 045 2206	SPECIAL NUT
C.	610 239 9974	LEG.-A
D.	411 152 6701	WASHIER.-A
E.	610 239 9981	LEG.-B
F.	411 156 6806	SCREW 3 × 10MM
G.	610 240 0021	CUSHION
7.	610 259 5710	LAMP COVER
8.	610 253 0971	SPEAKER HOLDER
9.	610 253 0483	MOUNTING DUCT – A
10.	610 253 0506	PANEL AV
11.	610 259 5796	DECORATION PLATE AV
12.	610 259 6137	MOUNTING DUCT – CR
13.	610 260 3835	PANEL AC
14.	411 165 5401	LEG.STOPPER(2USED)
15.	610 258 6688	LENS COVER
16.	610 256 7335	COVER BOTTOM

P4BA/BB/BC

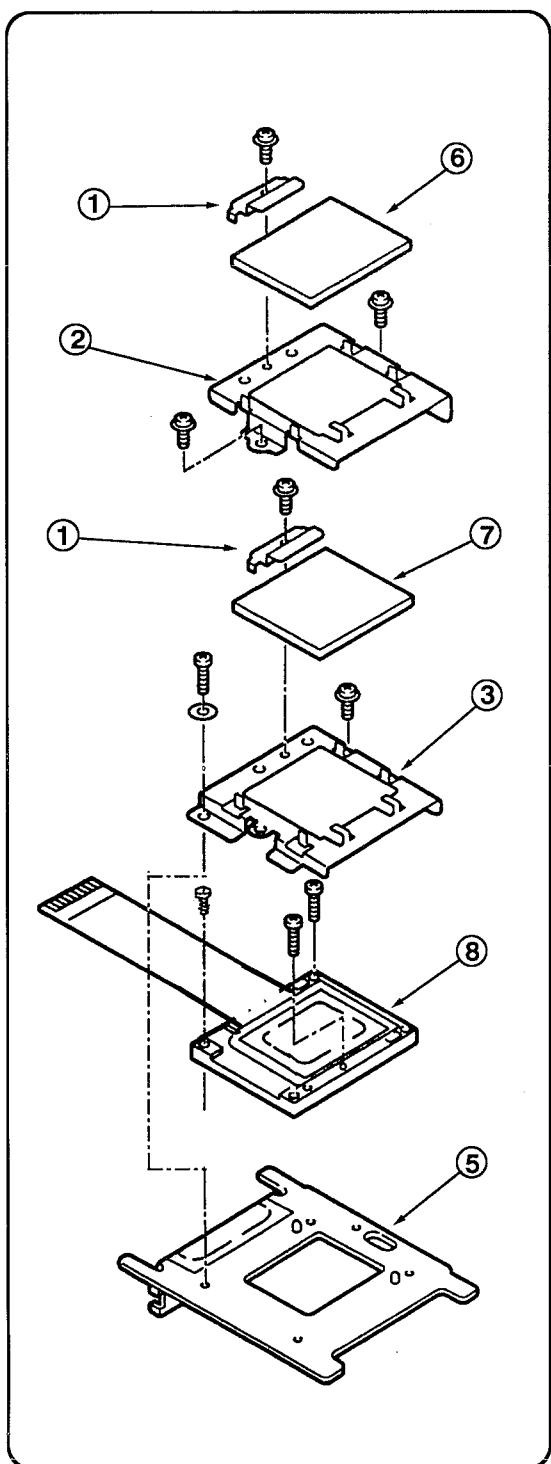
## OPTICAL PARTS LIST



## OPTICAL PARTS LIST

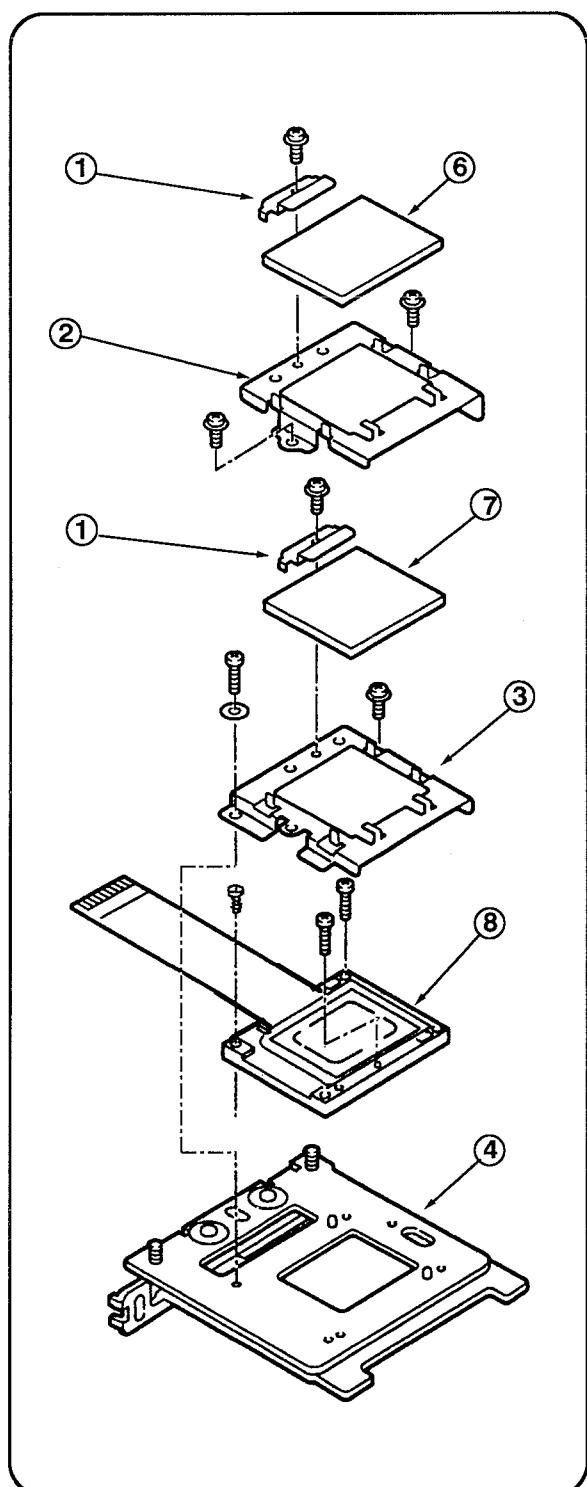
KEY NO.	PART NO.	DESCRIPTION
1.	645 009 9755	PROJECTION LENS
2.	645 015 9541	CONDENSER LENS
3.	645 009 9724	UV CUT FILTER
4.	645 009 9731	MIRROR (FOR BLUE)
5.	645 009 9748	MIRROR (FULL REFLECTION)
6.	_____	POLARIZING GLASS (SEE LCD PANEL PARTS LIST)
7.	645 015 7813	MIRROR (DICHROIC-G2)
8.	645 015 7837	MIRROR (DICHROIC-Y)
9.	645 015 7844	MIRROR (DICHROIC-R)
10.	645 015 7820	MIRROR (DICHROIC-G1)
11.	_____	METAL HALIDE LAMP (SEE ELECTRICAL PARTS LIST) LAMP ASS'Y (LP901)

## G LCD PANEL ASS'Y PARTS LIST

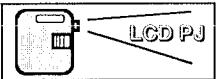


KEY NO.	PART NO.	DESCRIPTION
1.	610 252 8428	STOPPER POLARIZED GLASS
2.	610 252 8459	MOUNTING POLARIZED GLASS IN
3.	610 259 3433	MOUNTING POLARIZED GLASS OUT
4.	610 259 3297	MOUNTING PANEL B/R
5.	610 260 5372	MOUNTING PANEL G
6.	645 009 9786	POLARIZED GLASS IN
7.	645 009 9793	POLARIZED GLASS OUT
8.	610 260 6720 610 260 6737 610 260 6744	RED LCD PANEL GREEN LCD PANEL BLUE LCD PANEL

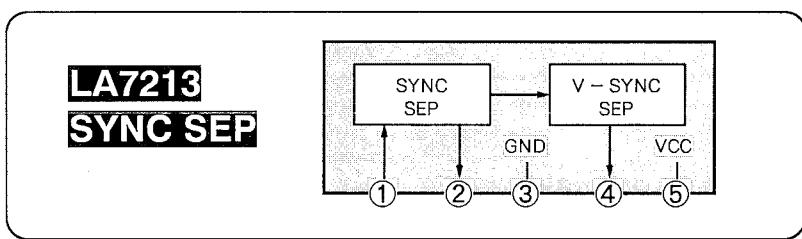
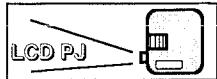
## B & R LCD PANEL ASS'Y PARTS LIST



KEY NO.	PART NO.	DESCRIPTION
1.	610 252 8428	STOPPER POLARIZED GLASS
2.	610 252 8459	MOUNTING POLARIZED GLASS IN
3.	610 259 3433	MOUNTING POLARIZED GLASS OUT
4.	610 259 3297	MOUNTING PANEL B/R
5.	610 260 5372	MOUNTING PANEL G
6.	645 009 9786	POLARIZED GLASS IN
7.	645 009 9793	POLARIZED GLASS OUT
8.	610 260 6720	RED LCD PANEL
	610 260 6737	GREEN LCD PANEL
	610 260 6744	BLUE LCD PANEL

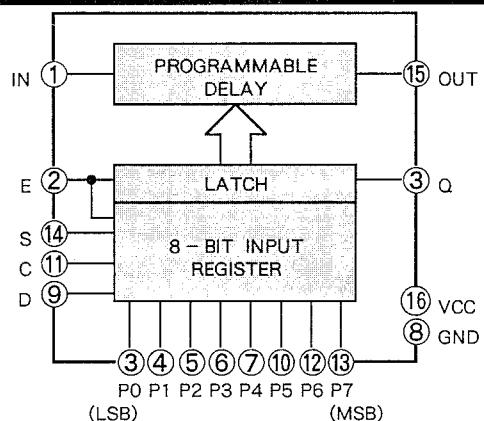


# [ IC INTERNAL BLOCK DIAGRAMS ]



**DS1020D - 025/DS1020S - 25**

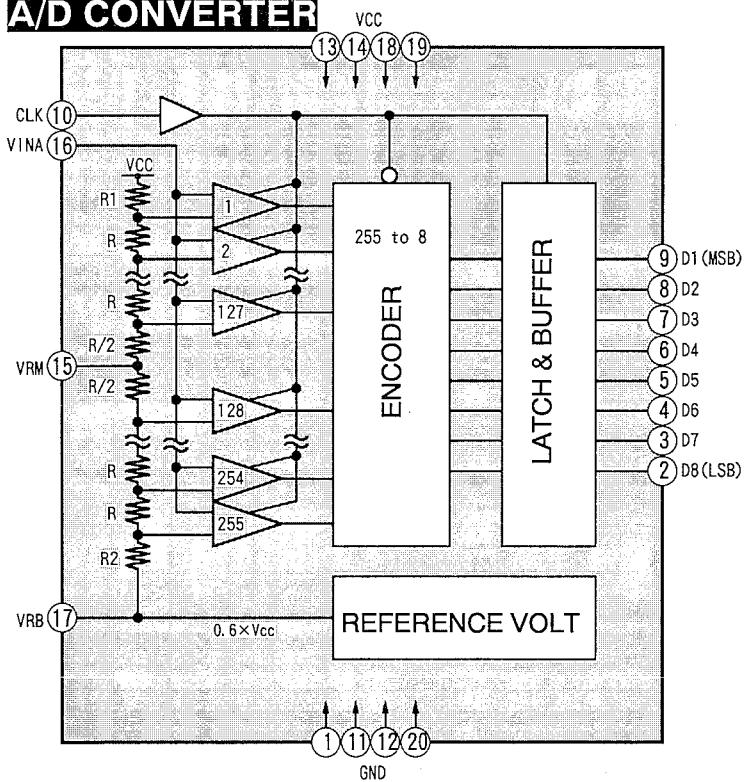
## PROGRAMMABLE 8Bit DELAY LINE



IN	Delay Input
P0 – P7	Parallel Program Pins
GND	Ground
OUT	Delay Output
VCC	+ 5 Volts
S	Mode Select
E	Enable
C	Serial Port Clock
Q	Serial Data Output
D	Serial Data Input

**MB40558PF**

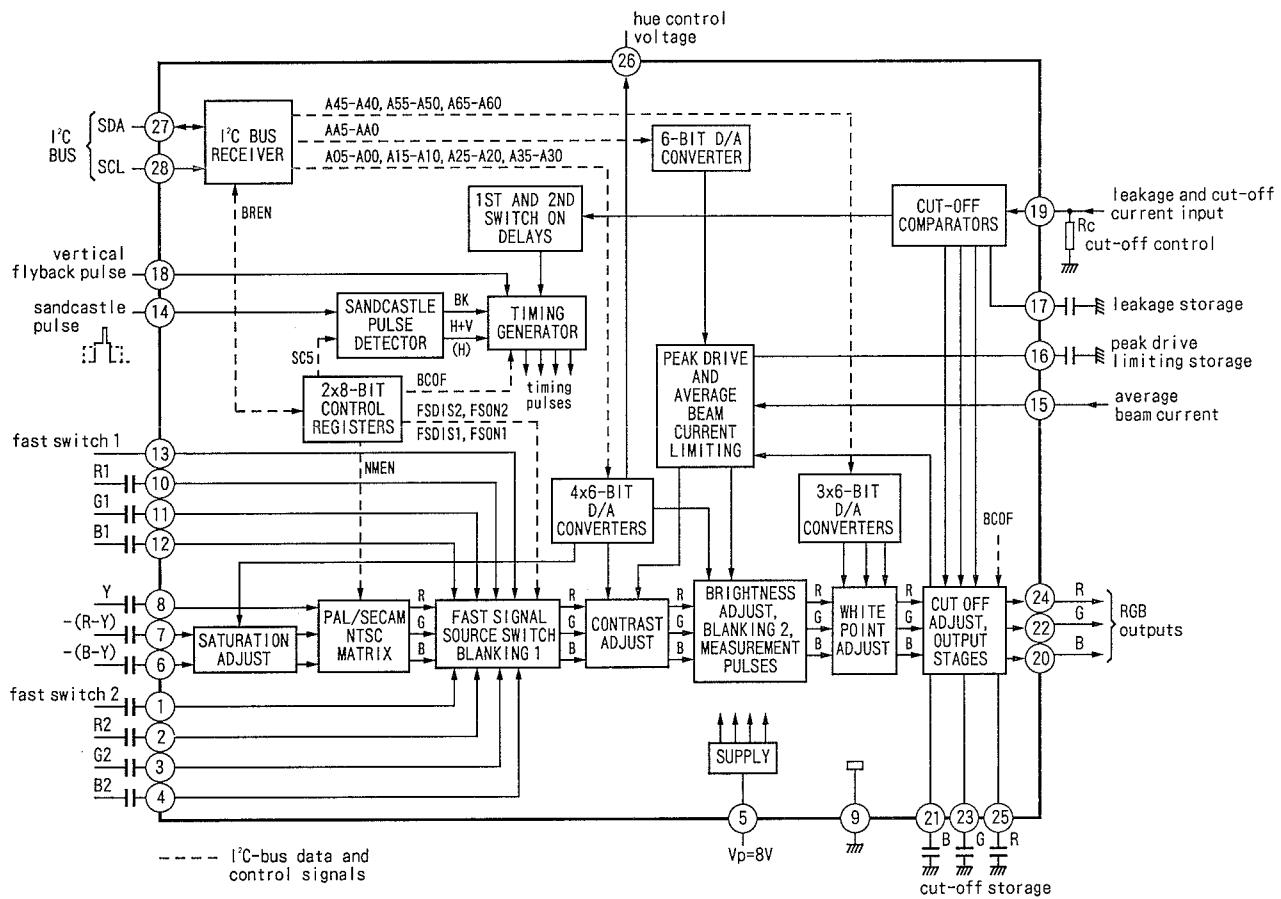
## A/D CONVERTER



VINA	ANALOG SIG IN
CLK	CLOCK IN
D1~D8	DIGITAL SIG OUT
VRB	REF VOLT OUT
VRM	
VCC	VCC
GND	GROUND

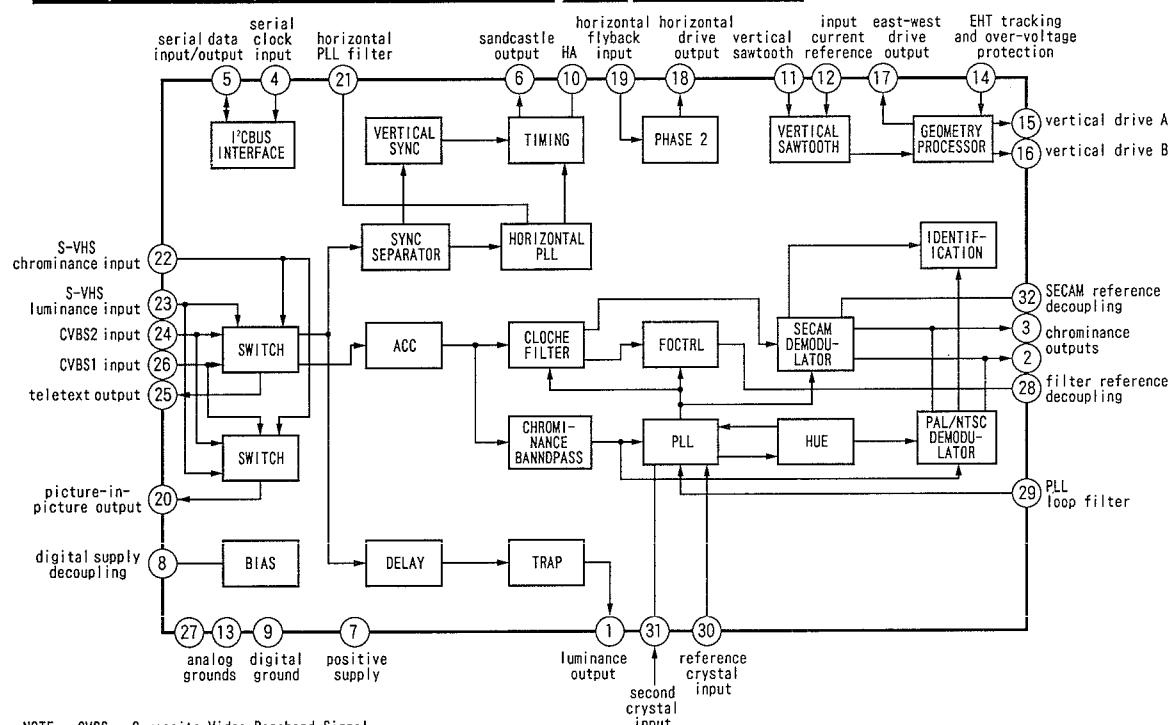
## TDA4685

### Video Processor, with automatic cut – off control

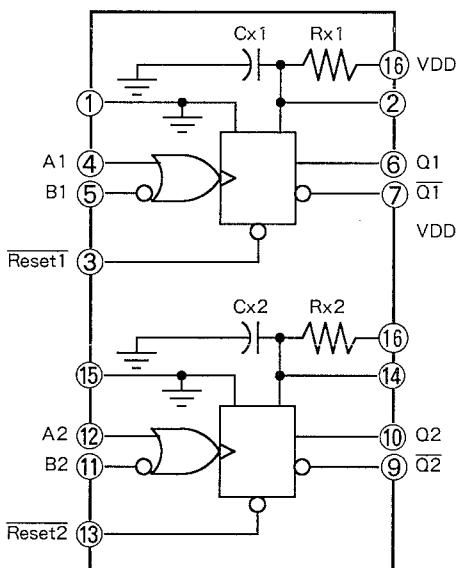


## TDA9160

### PAL/SECAM/NTSC decoder/sync processor



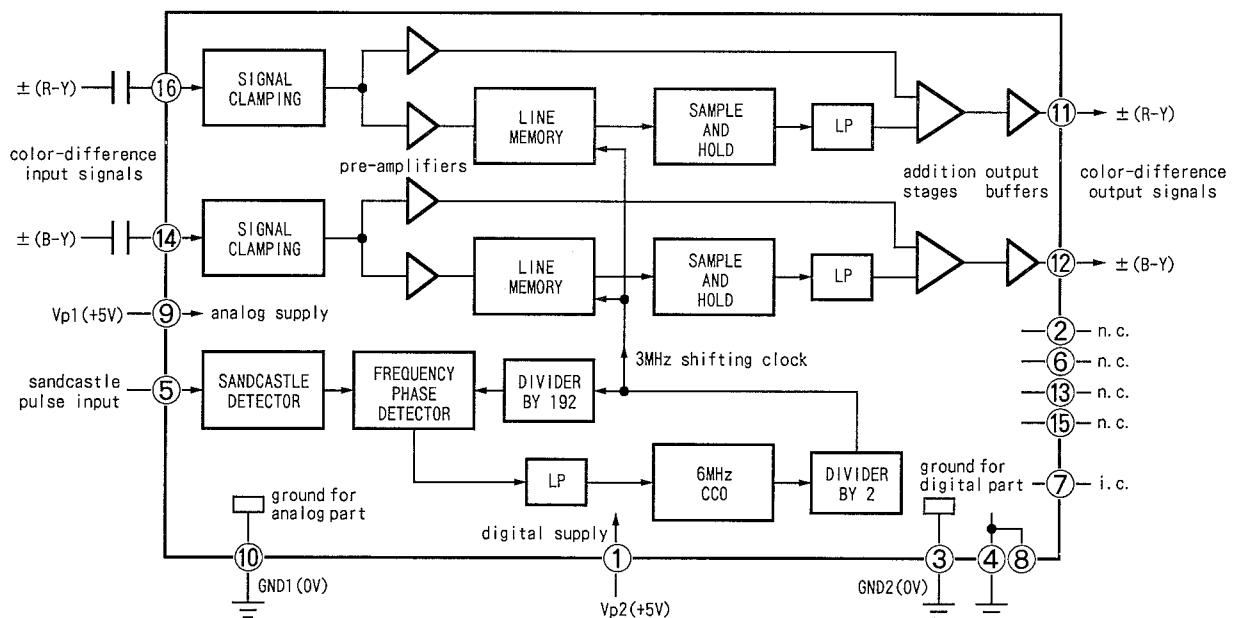
## MC14528BCP



FUNCTION TABLE

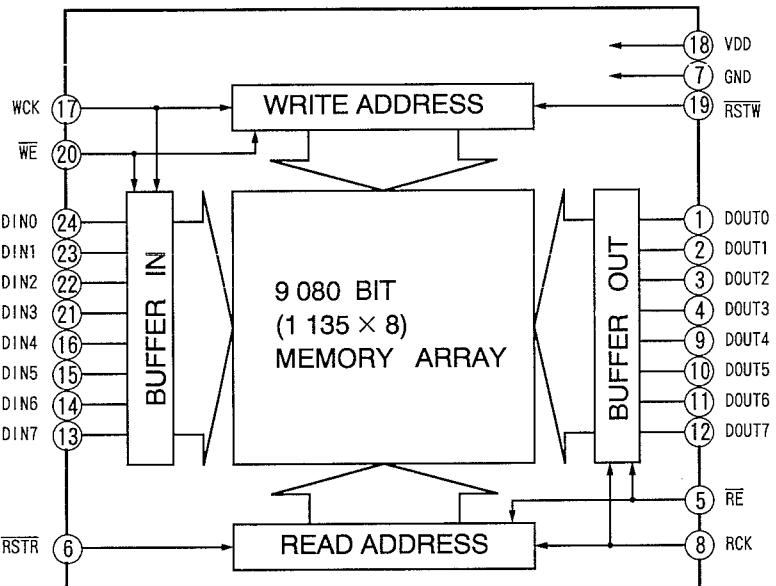
Inputs		Outputs	
Reset	A	B	Q    Q̄
H	/	H	/    /
H	L	/	/    /
H	/	L	Not Triggered
H	H	/	Not Triggered
H	L, H, /	H	Not Triggered
H	L	L, H, /	Not Triggered
L	X	X	L    H
	X	X	Not Triggered

## TDA4661/V2 DELAY LINE



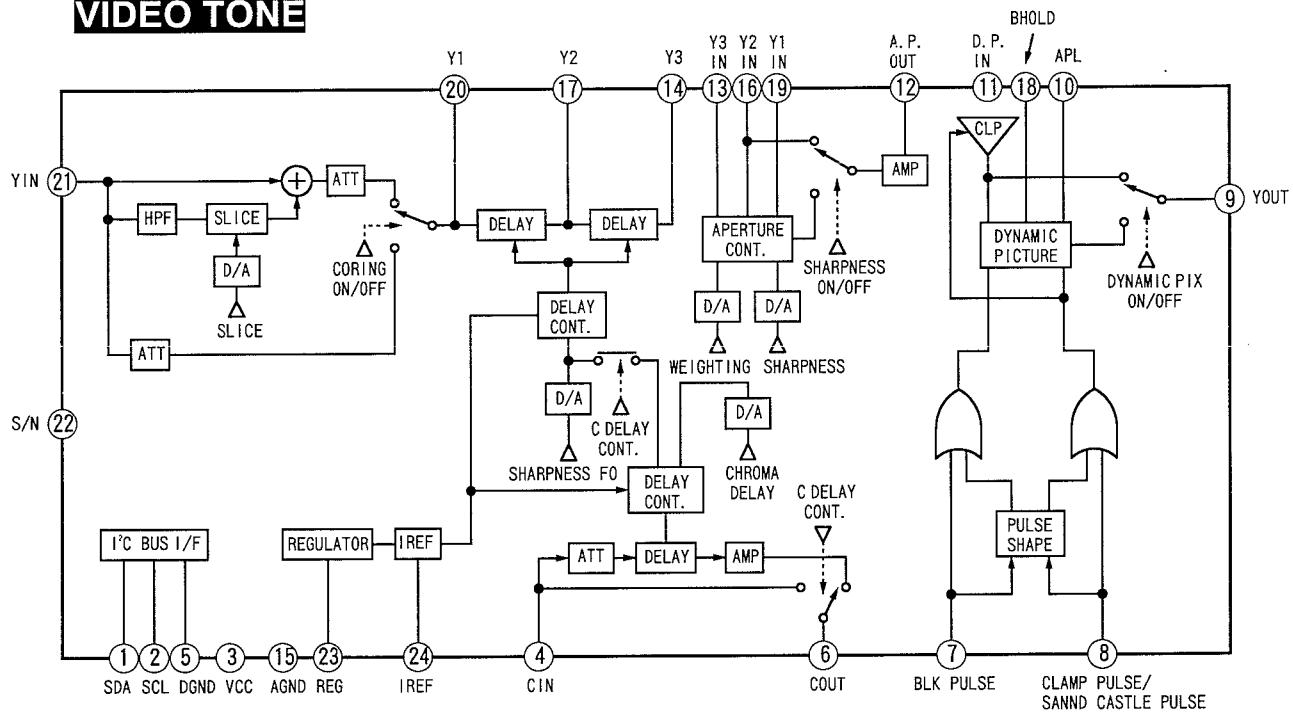
NOTE: n. c. = not connected, i. c. = internally connected.

**$\mu$  PD42102G-3**  
**PAL LINE BUFFER**



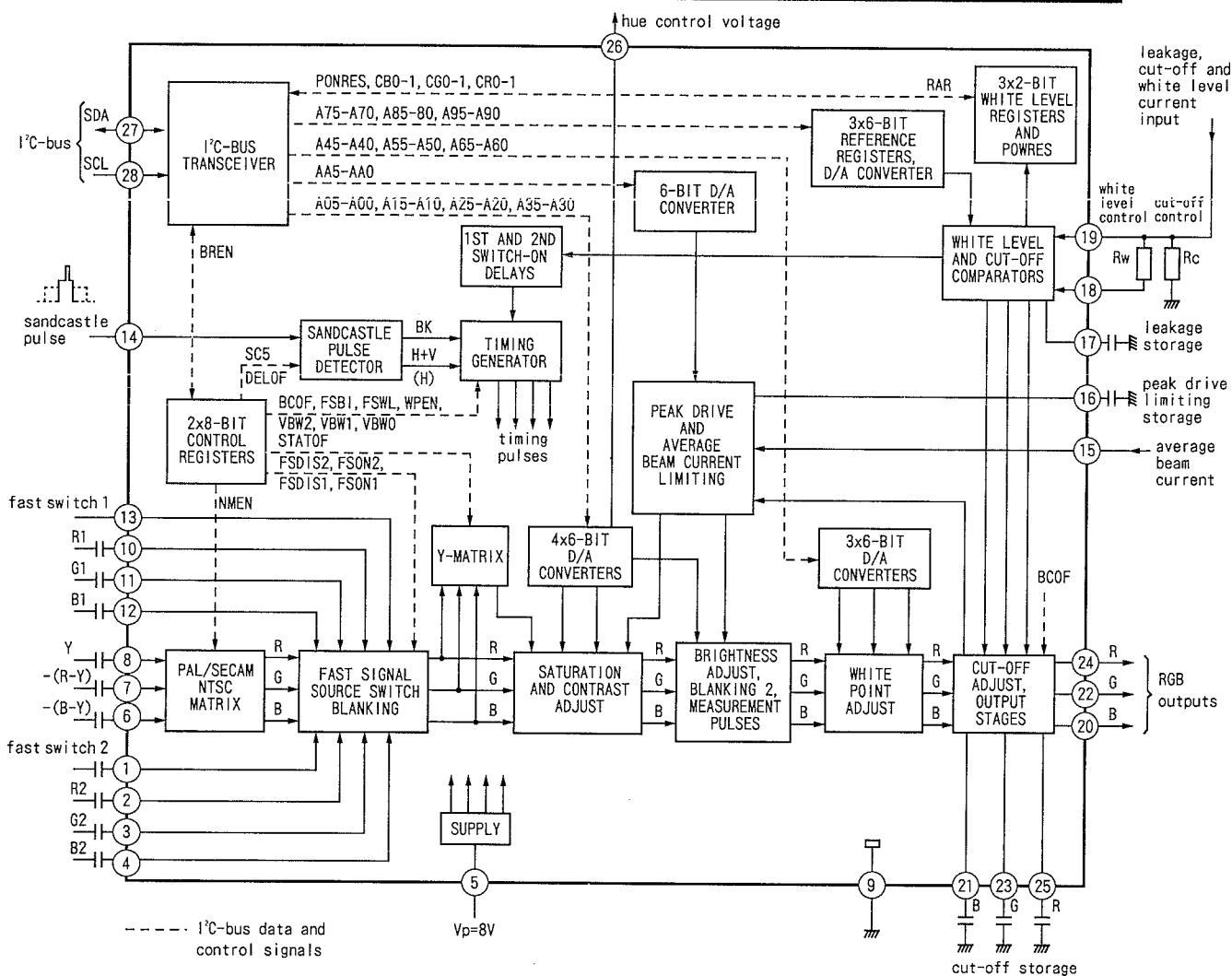
DIN0-DIN7	DATA IN
DOUT0-DOUT7	DATA OUT
WCK	WRITE CLOCK IN
RCK	READ CLOCK IN
WE	WRITE ENABLE IN
RE	READ ENABLE IN
RSTW	RESET WRITE IN
RSTR	RESET READ IN
VDD	
GND	GROUND

**CXA1420P**  
**VIDEO TONE**

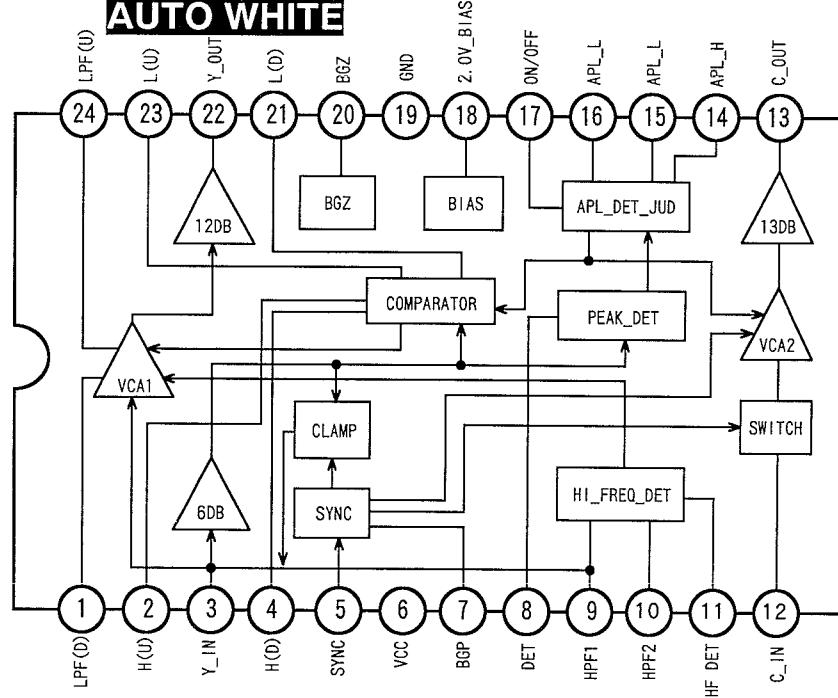


# TDA4680

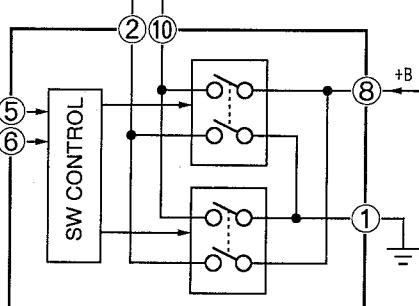
## Video Processor, with automatic cut-off and white level control



## LA7668N AUTO WHITE

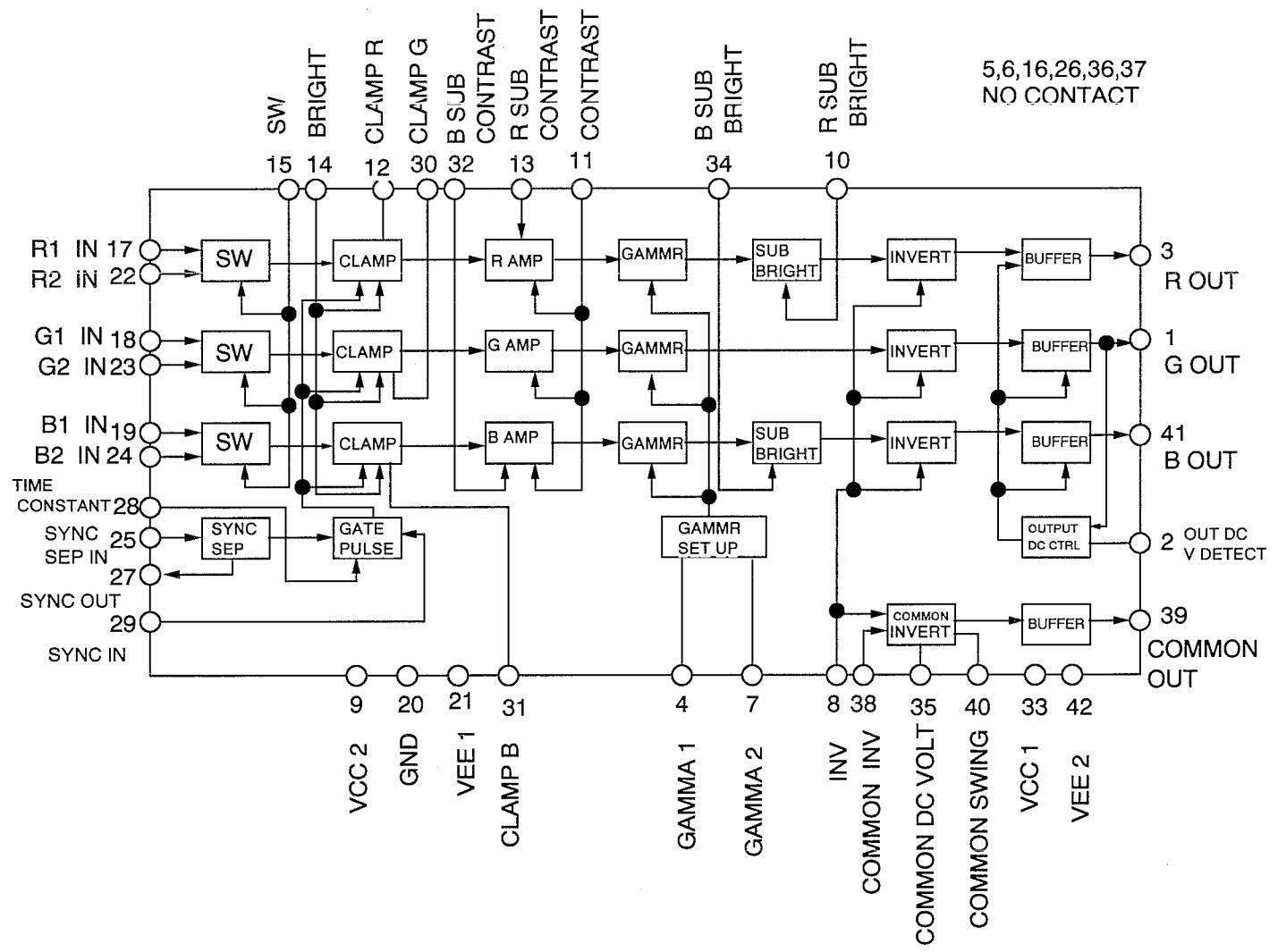


## LB1641 ZOOM/FOCUS MOTOR DRIVE

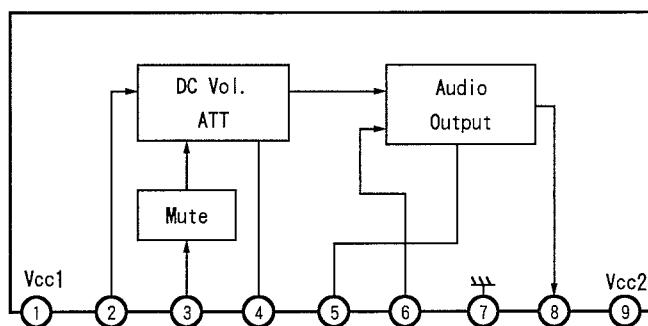


**IR3Y07**

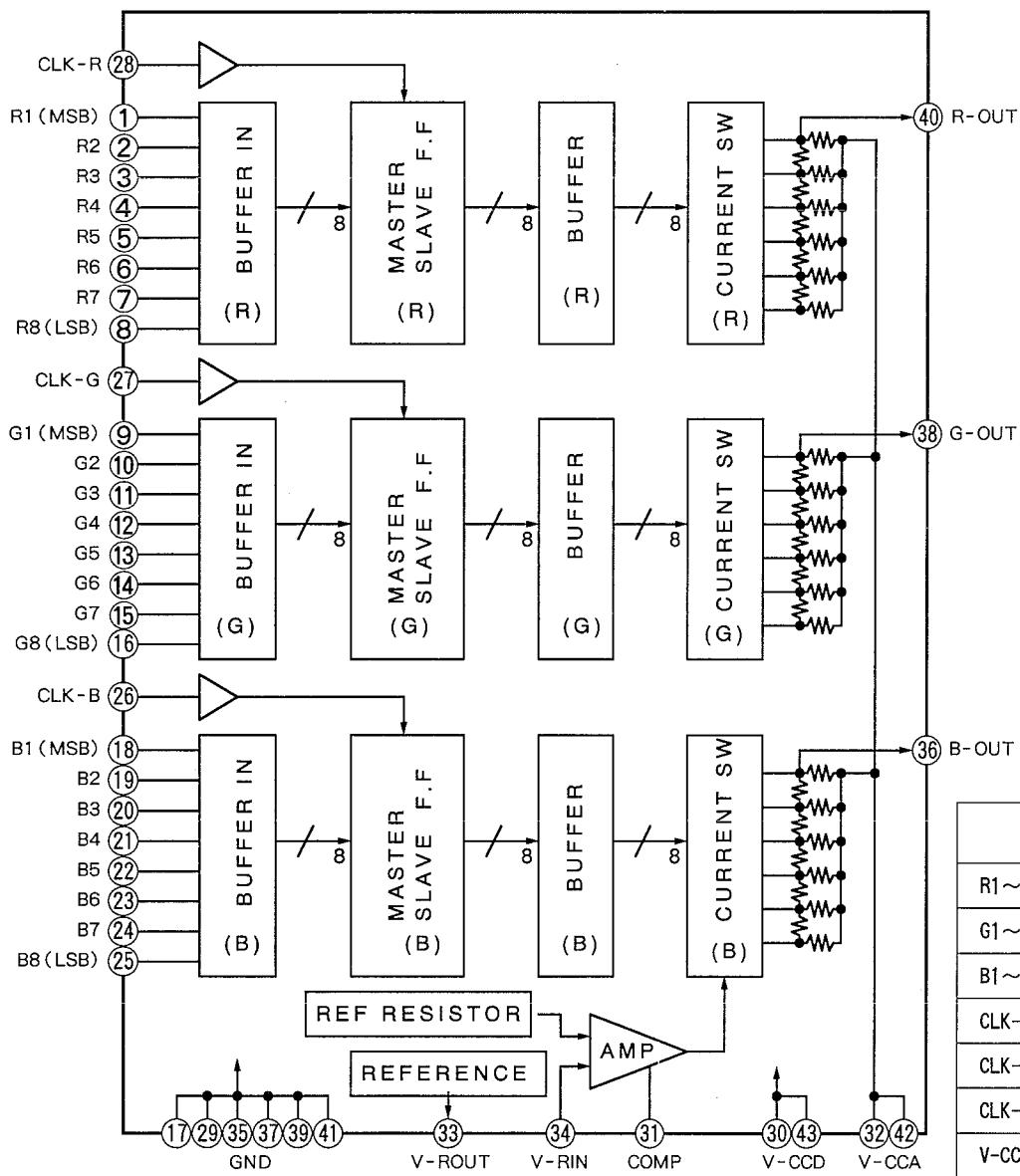
**RGB INTERFACE DRIVER**



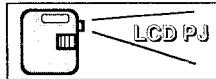
**AN5265**



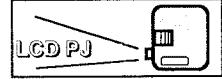
## MB40978 D/A CONVERTER



R1~R8	R CH DIGITAL IN
G1~G8	G CH DIGITAL IN
B1~B8	B CH DIGITAL IN
CLK-R	R CH CLOCK IN
CLK-G	G CH CLOCK IN
CLK-B	B CH CLOCK IN
V-CCD	DIGITAL VCC IN (5V±5%)
V-CCA	ANALOG VCC IN (5V±5%)
GND	GROUND
V-RIN	REFERENCE VOLT IN
V-ROUT	REFERENCE VOLT OUT
COMP	PHASE CONTROL
R-OUT	R CH ANALOG OUT
G-OUT	G CH ANALOG OUT
B-OUT	B CH ANALOG OUT
NC	NO CONTACT



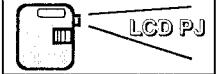
# IC-Tr Package Outline Drawings



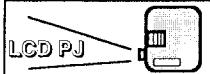
## INTEGRATED CIRCUIT

	MN1380 - S		A1020B - PQ100C A1280A - PQ160C MN56070 MN56020 UPC5024 MB40978
LA7213	LB1641	AN5265	PQ30RV31
L78M05 L78M08 TA79008S	L7815 - RA	TYPE NO. TA79L008P TA79L005P	R A K UPC1093J
<b>PHOTO-COUPLER</b>   PC113 TLP647	 CNY17F		(CHIP TYPE)   FMQ1

<b>TRANSISTOR</b>						
	ECB	ECB	TYPE NO. 2SC3070	C B E	B E C 2SC4423 2SD1913	C B E C:COLLECTOR B:BASE E:EMITTER

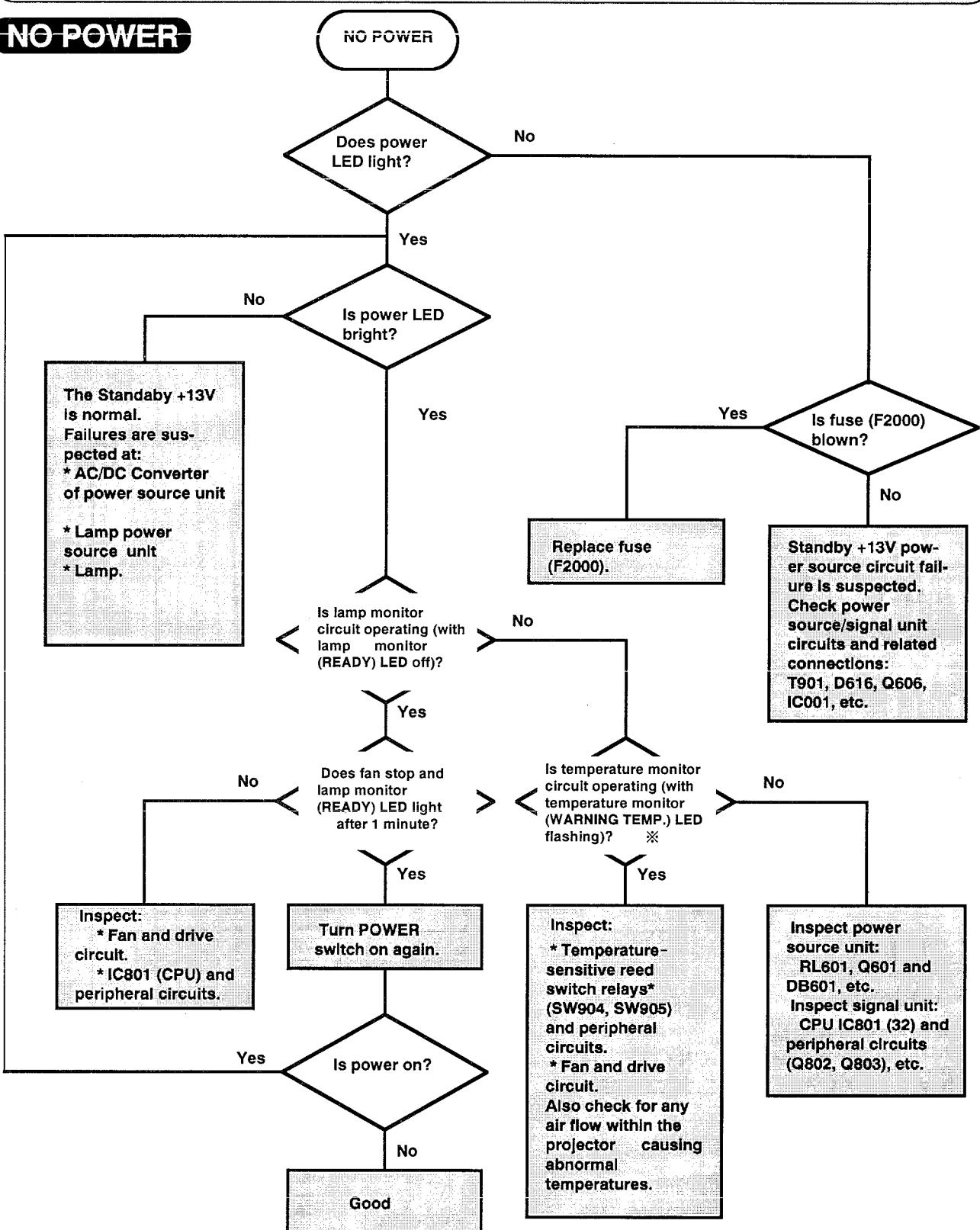


# [TROUBLESHOOTING CHART]



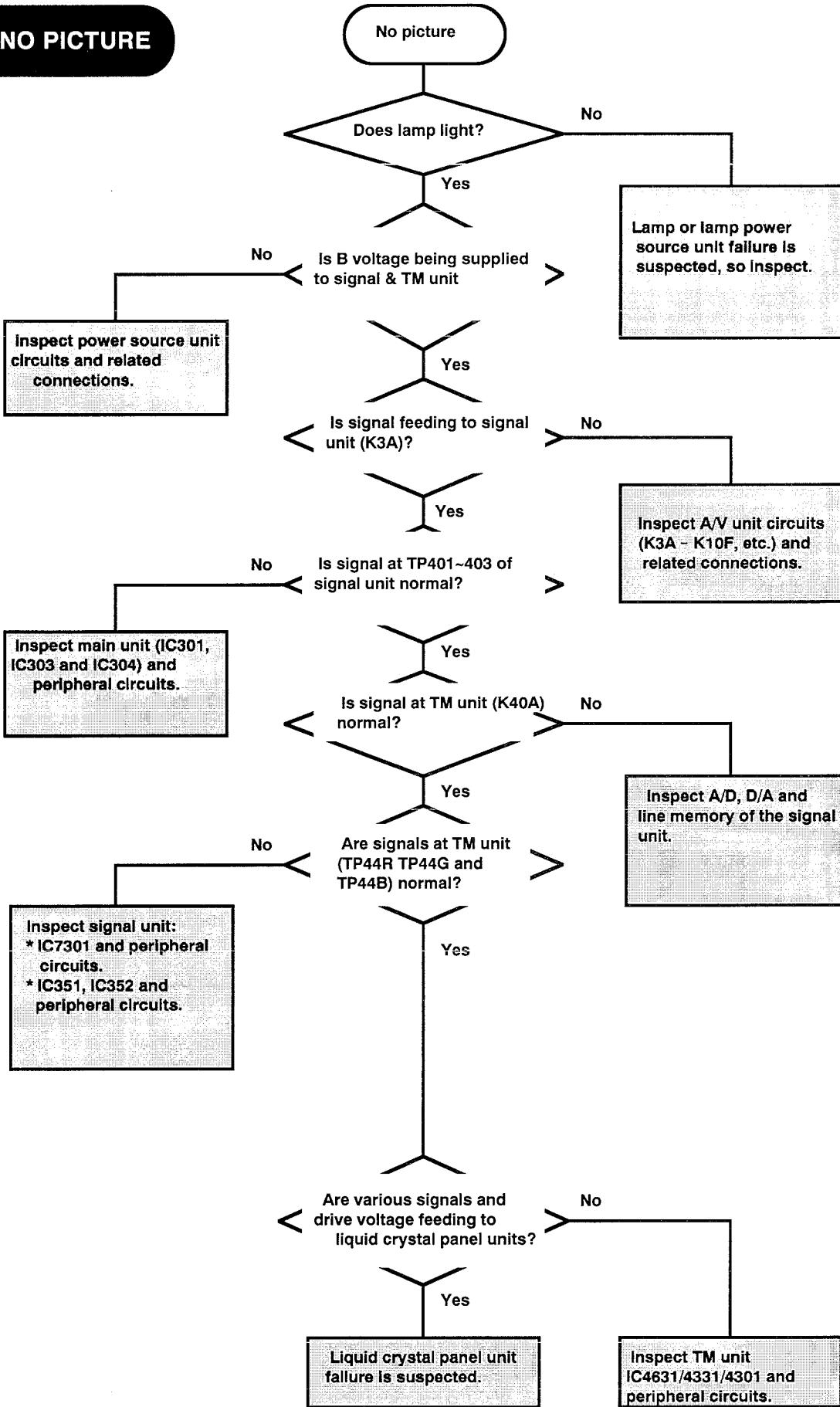
The chart below is a troubleshooting guide on projector circuits and describes general procedure for locating trouble spots. Please refer to the chart for unit maintenance and inspection.

## NO POWER

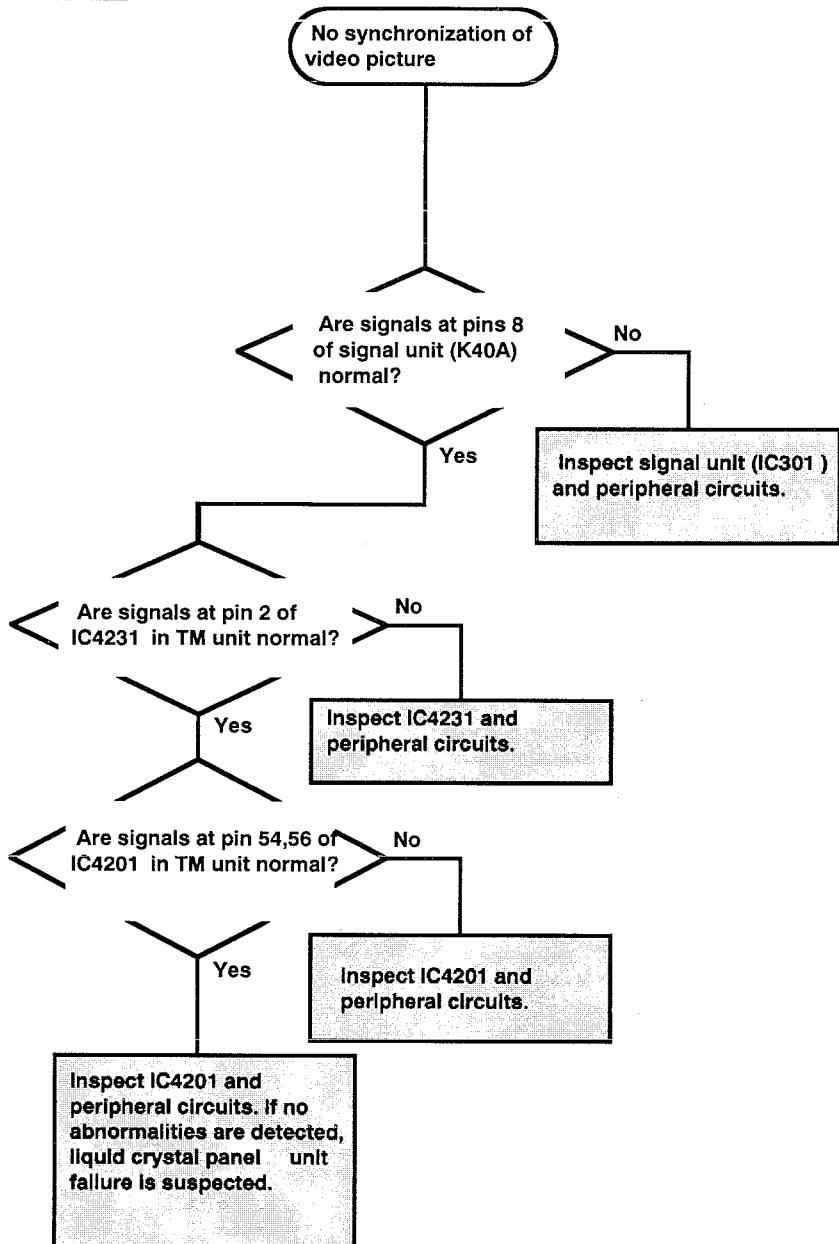


\* The temperature-sensitive reed switch relays (SW904, SW905) are normally on.

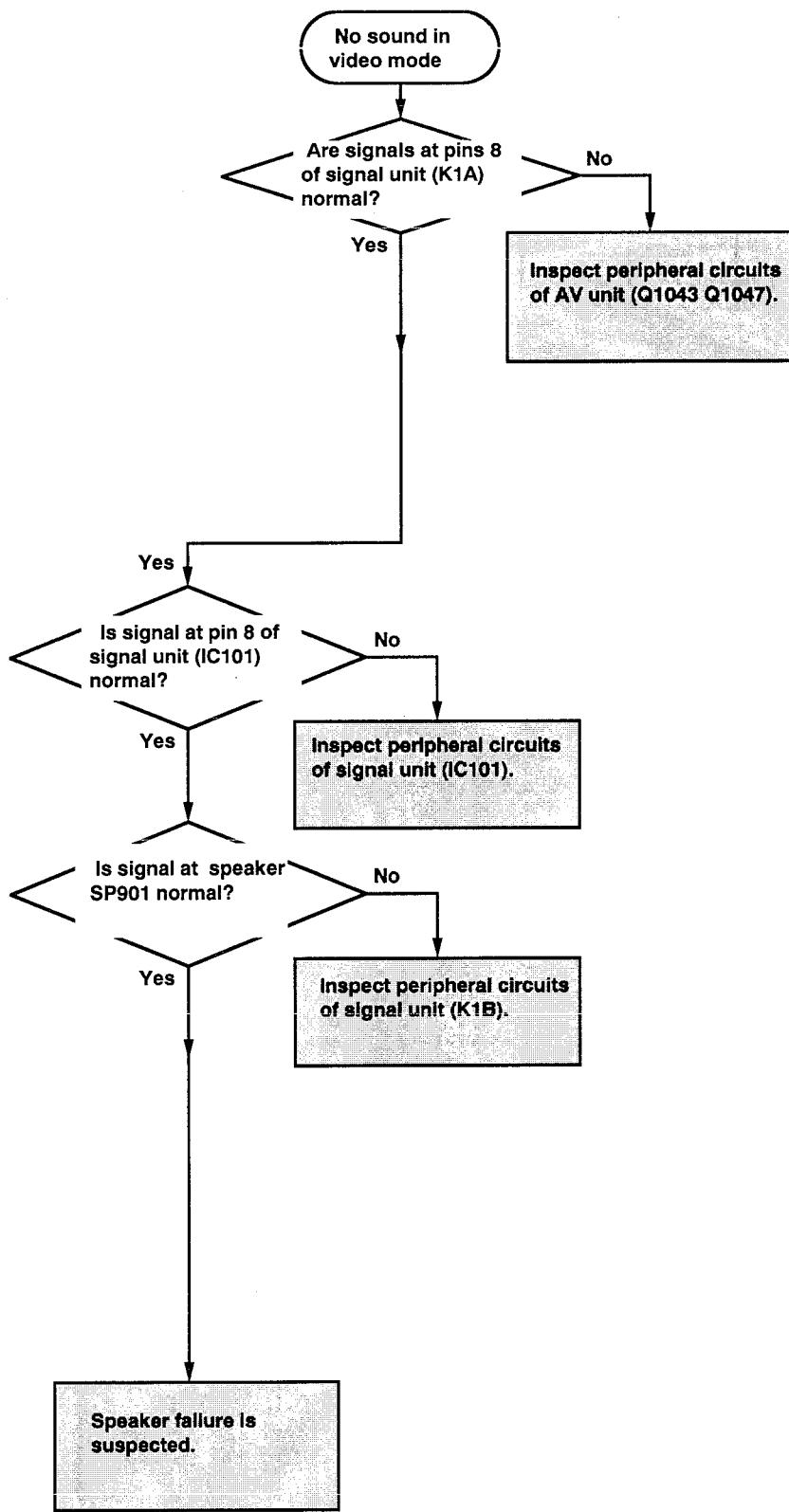
## NO PICTURE



## NO SYNCHRONIZATION

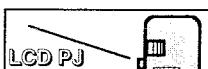


## NO SOUND

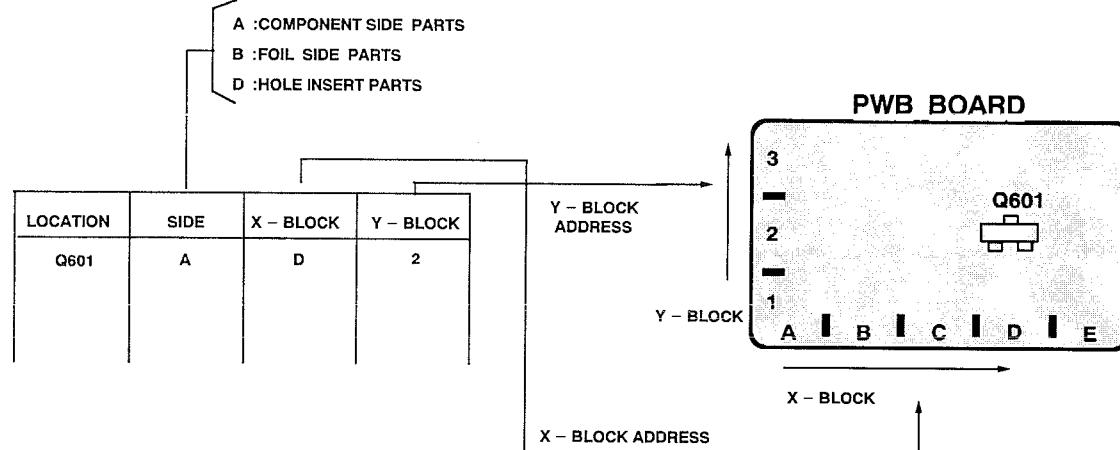




# PARTS ADDRESS LIST



See Component and Testpoint Locations



## TM , SUB POWER & LOW+B POWER BOARD

LOCATION	SIDE	X - BLOCK	Y - BLOCK	LOCATION	SIDE	X - BLOCK	Y - BLOCK	LOCATION	SIDE	X - BLOCK	Y - BLOCK
F2000	D	B	1	Q4331	A	E	2	VR2021	D	B	2
IC001	D	B	4	Q4332	D	E	2	VR4001	D	E	4
IC002	D	B	4	Q4361	A	G	4	VR4021	D	E	4
IC003	D	C	5	Q4362	D	G	4	VR4041	D	E	4
IC004	D	C	4	Q4391	A	E	3	VR4061	D	E	4
IC006	D	A	3	SW2001	D	C	1	VR4062	D	E	5
IC007	D	A	3	SW4301	D	E	2	VR4063	D	E	4
IC4001	A	E	5	SW4311	D	D	1	VR4091	D	F	5
IC4002	A	F	5	SW4361	D	F	3	VR4161	D	F	4
IC4161	A	F	4	T4261	D	D	4	VR4301	D	F	3
IC4162	A	F	4	T4272	D	D	4	VR4331	D	E	1
IC4201	A	D	3					VR4361	D	F	3
IC4231	D	E	3								
IC4261	A	D	3								
IC4271	A	C	3								
IC4301	A	E	3								
IC4331	A	E	1								
IC4361	A	F	3								
IC4391	A	E	4								
K01A	D	B	3								
K01B	D	B	3								
K01C	D	B	3								
K2001	D	B	2								
K2002	D	B	1								
K40A	D	F	4								
K42A	D	C	2								
K42B	D	C	3								
K42C	D	C	4								
K42D	D	C	1								
K43B	A	G	3								
K43G	A	F	2								
K43R	A	F	1								
K44A	D	D	5								
Q001	B	B	4								
Q002	B	A	3								
Q003	B	A	3								
Q4121	A	F	4								
Q4121	A	F	4								
Q4141	A	F	4								
Q4221	A	D	2								
Q4231	A	D	3								
Q4232	A	E	3								
Q4233	A	D	3								
Q4234	A	D	3								
Q4235	A	C	3								
Q4237	A	D	1								
Q4238	A	D	1								
Q4301	A	E	2								
Q4302	D	E	2								

## SIGNAL BOARD

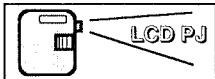
LOCATION	SIDE	X - BLOCK	Y - BLOCK	LOCATION	SIDE	X - BLOCK	Y - BLOCK	LOCATION	SIDE	X - BLOCK	Y - BLOCK
IC101	D	G	4	Q101	B	G	4	SW6050	D	E	2
IC1201	A	D	5	Q102	B	G	5	SW6051	D	E	2
IC1202	A	C	5	Q1301	A	A	3	SW6052	D	D	2
IC1203	A	C	4	Q1302	A	A	3	SW6053	D	D	2
IC1204	A	C	3	Q1303	A	A	2	SW6054	D	B	2
IC1231	A	D	4	Q1331	A	B	3	SW6055	D	G	2
IC1232	A	C	4	Q1332	A	B	3	SW6056	D	F	2
IC1233	A	C	4	Q1333	A	A	2	SW6057	D	F	2
IC1234	A	C	3	Q1361	A	B	2	SW6058	D	F	2
IC1261	A	D	4	Q1362	A	B	2	SW6059	D	F	2
IC1262	A	D	3	Q1363	A	A	2				
IC1283	A	B	4	Q201	B	G	3	TE201	A	F	2
IC1284	A	B	3	Q202	A	G	3	TE203	A	F	3
IC1281	A	B	4	Q203	B	G	3	TE204	A	E	2
IC1291	A	C	3	Q251	B	F	3	TE309	A	G	3
IC1292	A	D	3	Q252	B	G	3	TE401	A	D	4
IC1293	A	C	3	Q253	B	E	2	TH801	D	E	4
IC251	A	F	3	Q271	B	E	2	TP201	A	G	3
IC281	D	E	3	Q281	B	E	3	TP202	A	G	3
IC301	D	G	3	Q301	A	F	2	TP203	A	F	3
IC302	D	G	2	Q302	A	F	2	TP204	A	E	2
IC303	D	F	2	Q303	A	F	2	TP309	A	G	2
IC304	D	F	4	Q304	B	G	2	TP310	A	G	2
IC801	D	F	5	Q306	A	F	2	TP312	A	G	2
IC802	D	E	4	Q307	A	F	3	TP401	A	D	5
IC803	D	F	5	Q308	A	F	2	TP402	A	D	4
K12A	D	A	2	Q311	B	G	3	TP403	A	D	4
K12B	D	B	2	Q312	B	G	3				
K12C	D	A	3	Q411	A	E	4	VR251	D	F	3
K1A	D	H	3	Q412	A	E	3	VR801	D	F	4
K1B	D	G	3	Q431	A	E	4				
K3A	D	H	2	Q432	A	E	3	X1301	D	A	3
K3B	D	D	2	Q451	A	E	4	X1331	D	B	3
K8A	D	H	4	Q452	A	E	3	X1361	D	B	2
K8B	D	H	2	Q6001	B	B	2	X301	D	G	3
K8C	D	E	2	Q6002	B	C	2	X302	D	G	2
K8D	D	E	2	Q6003	B	C	2	X303	D	G	3
K8F	D	E	2	Q6004	B	B	2	X304	D	G	2
K8G	D	D	3	Q801	B	F	4	X411	D	E	4
K8H	D	F	4	Q802	A	D	5	X431	D	E	4
KG301	D	G	2	Q803	A	D	5	X451	D	E	4
KG6051	D	A	2	Q806	A	F	5	X801	D	E	5
QC801	D	E	5	Q807	A	F	5				

## POWER BOARD

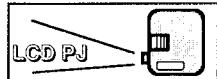
## LAMP BALLAST BOARD

## A/V &amp; HIC BOARD

LOCATION	SIDE	X - BLOCK	Y - BLOCK	LOCATION	SIDE	X - BLOCK	Y - BLOCK	LOCATION	SIDE	X - D	Y - BLOCK
IC802	D	G	5	A711	D	F	2	AU1001	D	D	2
K8A	D	G	2	FB701	D	D	4	KC1001	D	B	3
K8B	D	E	4	FB702	D	D	3	KC1002	D	C	3
K8C	D	E	3	FB705	D	G	2	KC1101	D	D	3
K8D	D	F	6	HB751	D	E	3	IC51	B	D	2
K8E	D	G	6					IC52	D	D	2
K8F	D	G	6	K7A	D	G	4	K10A	D	C	2
K8G	D	E	5	K7B	D	E	3	K10B	D	B	2
K8I	D	E	3	K7D	D	D	1	K10C	D	C	1
K8J	D	F	6	K7S	D	E	3	K10D	D	C	3
K8L	D	E	4	K7X	D	E	3	K10F	D	A	3
K8M	D	E	5					K10G	D	A	2
K8P	D	D	4	PC701	D	D	2	K10I	D	A	2
PC801	D	H	4					K7E	D	E	3
Q801	D	G	3	Q701	D	D	4	K7F	D	E	2
Q802	D	G	2	Q702	D	E	2				
Q803	D	F	3	Q703	D	E	2	PC52	B	D	1
Q804	D	G	6	Q704	D	F	2	PC53	B	D	1
Q805	D	E	5	Q705	D	F	2	PC54	A	D	1
RL801	D	F	4	Q706	D	E	3	PC56	A	D	1
				Q731	D	F	4				
T801	D	F	4					Q1001	B	B	3
VA801	D	F	3	RL701	D	G	3	Q1002	B	B	3
VR801	D	G	5					Q1041	B	B	1
				SSS701	D	E	2	Q1042	B	D	2
				SSS702	D	E	2	Q1043	B	C	1
								Q1044	B	B	1
				SW701	D	D	2	Q1046	B	C	1
								Q1047	B	B	1
				T701	D	E	4	Q1048	B	B	1
				T731	D	F	3	Q51	A	D	2
				TP	D	E	3	Q52	A	D	2
								Q53	A	D	2
								Q54	A	D	2
								Q56	A	D	2
								Q57	A	D	2
								Q58	A	D	1
								SW1101	D	D	1
								VR51	D	D	2



## ( Take Notice Of "SCHEMATIC DIAGRAMS" )



### PRODUCT SAFETY NOTICE

THE COMPONENTS DESIGNATED BY A MARK ( $\triangle$ ) IN THIS SCHEMATIC DIAGRAM DESIGNATE COMPONENTS WHOSE VALUES ARE OF SPECIAL SIGNIFICANCE TO PRODUCT SAFETY. SHOULD ANY COMPONENT DESIGNATED BY A MARK NEED TO BE REPLACED, USE ONLY THE PART DESIGNATED IN THE PARTS LIST. DO NOT DEVIATE FROM THE RESISTANCE, WATTAGE AND VOLTAGE RATINGS SHOWN.

### SERVICE NOTES:

1. When replacing parts on circuit boards, clamp the lead wires to terminals before soldering.
2. When replacing high wattage resistors on circuit board, keep the resistor body 10 mm (3/8") from circuit board.
3. Keep wires away from high voltage and high temperature components.

### NOTES ON SCHEMATIC DIAGRAM

Specification of capacitor and resistors will be shown with coded symbols, reading code symbols following the chart and notes. Some capacitor and resistors will be shown directly with values and no other information. Detailed information on each capacitor and resistor will be shown in the list.

DO NOT REPLACE OR ORDER RESISTOR AND CAPACITOR PARTS FOLLOWING THE SPECIFICATIONS SHOWN IN THE SCHEMATIC DIAGRAMS.

ALWAYS CHECK FOR THE CORRECT SPECIFICATIONS IN THE PARTS LIST. ESPECIALLY FOR CRITICAL COMPONENT MARKED  $\triangle$ . SPECIAL ATTENTION MUST BE GIVEN TO CRITICAL COMPONENTS.

Read resistor codes as follows:

1. All resistance values are indicated in ohms: K=1,000. M=1,000,000.
2. Read wattage, material and tolerance codes following the chart.

Read capacitor codes as follows:

1. For capacitors identified with  $\square$ , values less than 1 are expressed in  $\mu F$ , values more than 1 are in pF.
2. For capacitors (electrolytic) identified with  $\triangle$ , values are expressed in  $\mu F$ .

Voltage and waveforms were taken using a video color bar signal (1V p-p). Line voltage is 240V.

Voltages were taken with a high-impedance voltmeter.

## CAPACITOR AND RESISTORS CODE

### CAPACITOR (Example)

500 C K 1500 B

Characteristic

Value code

Tolerance code

Material code

Voltage number

D	± 0.5pF
T	+ 50% - 10%
J	± 5%
K	± 10%
M	± 20%
N	± 30%
P	+ 100% - 0%
Z	+ 80% - 20%
C	± 0.25pF
C	Ceramic
E	Electrolytic
F	Polyester
N	Polypropylene
T	Tantalum
K	Ceramic
H	MT-Composite
P	NP. Electrolytic
M	MT-polypropylene

### RESISTOR (Example)

6 Y K 4.7

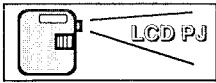
Value code

Tolerance code

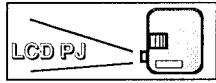
Material code

Wattage number

D	± 0.5%
F	± 1%
G	± 2%
J	± 5%
K	± 10%
M	± 20%
F	Carbon film
N	Metalized carbon
S	Oxide metallized
Y	Wirewound
C	Solid
D	Carbon film
W	Wire Wound



# Voltage and Waveforms



## [ 1. IC VOLTAGE CHART ]

TM BOARD

PIN	V	PIN	V	PIN	V	PIN	V	PIN	V	PIN	V	PIN	V
iC4001		iC4002		iC4201	3.5	69	0	iC4301	15.8	iC4331	1	15.9	
1	3.1	1	1.6	1	0	70	0	1	15.8	1	1	15.9	
2	3.4	2	1.6	2	4.9	71	0	2	0	2	2	0	
3	1.9	3	1.6	3	3.5	72	0.2	3	0	3	3	0	
4	4.5	4	1.7	4	0.1	73	4.9	4	0.1	4	4	0	
5	0	5	1.0	5	2.4	74	0.2	5	0.1	5	5	0	
6	2.9	6	0	6	4.9	75	0.2	6	0	6	6	0	
7	3.4	7	0	7	0.5	76	0.1	7	0.2	7	7	4.9	
8	2.8	8	0	8	0.7	77	1.7	8	0	8	8	0	
9	2.4	9	0.5	9	0	78	4.5	9	0	9	9	0.4	
10	2.8	10	0.5	10	0	79	0	10	0	10	10	0	
11	4.6	11	0.6	11	0	80	0.2	11	0	11	11	0	
12	2.8	12	1.7	12	0			12	2.4	12	12	2.4	
13	2.0	13	1.6	13	0	IC4231		13	0	13	13	0	
14	3.8	14	1.7	14	0	1	2.8	14	2.4	14	14	0	
15	0.1	15	1.6	15	0	2	4.1	15	0	15	15	0	
16	1.3	16	4.9	16	4.9	3	0	16	0	16	16	0	
17	2.9			17	0	4	4.8	17	0	17	17	0	
18	3.1	IC4161		18	2.5	5	4.8	18	2.4	18	18	2.4	
19	0.4	1	0	19	2.5			19	0	19	19	1.1	
20	-8.0	2	0	20	4.9	IC4261		20	0	20	20	0	
21	0.4	3	0	21	0	1	2.3	21	4.9	21	21	4.9	
22	4.9	4	0	22	0	2	2.3	22	0	22	22	0	
23	4.9	5	0	23	0	3	2.3	23	0	23	23	0	
24	2.4	6	0	24	0	4	2.3	24	0	24	24	0	
25	0.4	7	0	25	0	5	2.3	25	4.9	25	25	4.9	
26	2.4	8	15.9	26	4.9	6	2.5	26	4.9	26	26	4.9	
27	-7.2			27	2.2	7	0	27	4.9	27	27	4.9	
28	0	IC4162		28	2.4	8	4.8	28	0	28	28	0	
29	0	1	0	29	2.4	9	0	29	4.9	29	29	4.9	
30	2.0	2	0	30	0.6	10	4.9	30	0	30	30	0.1	
31	2.7	3	0	31	4.9	11	0	31	15.9	31	31	15.9	
32	2.7	4	0	32	0	12	4.9	32	0	32	32	0	
33	1.0	5	0	33	2.4	13	0	33	0	33	33	0	
34	4.4	6	0	34	2.4	14	4.9	34	8.0	34	34	8.0	
35	0	7	0	35	0			35	8.0	35	35	8.0	
36	1.8	8	15.9	36	2.9	IC4271		36	0	36	36	0	
37	0			37	2.4	1	4.9	37	8.1	37	37	8.1	
38	0			38	0	2	0	38	7.9	38	38	7.9	
39	0			39	0.4	3	0	39	8.1	39	39	8.1	
40	-1.68			40	0.4	4	4.9	40	7.9	40	40	7.9	
41	0			41	0	5	0	41	8.1	41	41	8.1	
42	-1.7			42	0	6	4.9	42	7.9	42	42	7.9	
43	0			43	4.8	7	0	43	8.1	43	43	8.1	
44	-1.7			44	4.8	8	4.9	44	7.9	44	44	0	
45	-7.9			45	0	9	0	45	0	45	45	0	
46	0.4			46	0	10	4.9	46	15.9	46	46	15.9	
47	2.4			47	0	11	0	47	0	47	47	0	
48	4.9			48	0	12	4.9	48	0	48	48	0	
49	3.5			49	2.4	13	0	49	0	49	49	0	
50	0.7			50	2.4	14	4.9	50	0.1	50	50	0.1	
				51	2.4			51	0	51	51	0	
				52	0			52	15.9	52	52	15.9	
				53	4.8			53	0.4	53	53	0.3	
				54	0			54	0.4	54	54	0.3	
				55	0			55	0.4	55	55	0.3	
				56	2.2			56	0.4	56	56	0.3	
				57	4.8			57	0.4	57	57	0.3	
				58	0.3			58	0.4	58	58	0.3	
				59	0			59	0.4	59	59	0.3	
				60	4.9			60	0.4	60	60	0.3	
				61	0			61	0.4	61	61	0.3	
				62	0			62	0.4	62	62	0.3	
				63	2.4			63	0.4	63	63	0.3	
				64	2.4			64	0.4	64	64	0.3	
				65	2.4								
				66	2.4								
				67	0								
				68	0								

PIN	V	PIN	V	PIN	V	PIN	V	PIN	V	PIN	V
<b>IC4361</b>											
1	15.9										
2	0										
3	0										
4	0										
5	0										
6	0										
7	4.9										
8	0										
9	0										
10	0										
11	0										
12	2.4										
13	0										
14	2.4										
15	0										
16	0										
17	0										
18	2.4										
19	0										
20	0										
21	4.9										
22	0										
23	0										
24	0										
25	4.9										
26	4.9										
27	0										
28	0										
29	4.9										
30	0										
31	15.9										
32	0										
33	0										
34	7.9										
35	8.0										
36	0										
37	8.0										
38	7.9										
39	8.0										
40	7.9										
41	8.0										
42	7.9										
43	8.0										
44	7.9										
45	0.1										
46	15.9										
47	0										
48	0										
49	0										
50	0.1										
51	0										
52	15.9										
53	0.2										
54	0.2										
55	0.2										
56	0.3										
57	0.3										
58	0.3										
59	0.3										
60	0.3										
61	0.3										
62	0.3										
63	0.3										
64	0.3										

## SIGNAL BOARD

PIN	V	PIN	V	PIN	V	PIN	V	PIN	V	PIN	V
<b>IC101</b>		<b>IC1203</b>		<b>IC1231</b>		<b>IC1233</b>		<b>IC1261</b>			
1	12.6	1	0.7	1	3.2	1	1.7	1	3.2		
2	5.7	2	0.8	2	0.1	2	1.7	2	0		
3	0	3	0.6	3	4.8	3	1.7	3	4.8		
4	1.7	4	1.0	4	0.1	4	2.1	4	2.7		
5	8.2	5	0	5	0	5	0	5	0		
6	7.8	6	4.1	6	0.2	6	4.1	6	0		
7	0	7	0	7	0.1	7	0	7	0		
8	8.4	8	2.0	8	0.1	8	2.0	8	4.8		
9	17.6	9	0.4	9	0.1	9	3.0	9	0		
		10	1.6	10	2.2	10	2.8	10	0		
<b>IC1201</b>		11	1.6	11	4.8	11	3.2	11	0.5		
1	0	12	0	12	0	12	0.6	12	0.4		
2	0	13	0.1	13	1.6	13	0.8	13	1.7		
3	4.8	14	0.1	14	1.6	14	3.6	14	2.2		
4	2.2	15	1.7	15	1.6	15	3.0	15	0		
5	0	16	0.5	16	2.2	16	3.1	16	3.0		
6	0	17	1.2	17	3.1	17	1.4	17	3.1		
7	0	18	4.8	18	4.8	18	4.8	18	4.8		
8	4.8	19	0	19	0	19	4.1	19	0		
9	0	20	0	20	3.0	20	0	20	3.2		
10	2.2	21	0.7	21	3.5	21	2.1	21	3.2		
11	4.8	22	0.7	22	0	22	1.7	22	0.7		
12	0	23	0.9	23	0.1	23	1.7	23	0.1		
13	0.8	24	0.9	24	0	24	1.7	24	1.1		
14	0										
15	0.7	<b>IC1204</b>		<b>IC1232</b>		<b>IC1234</b>					
16	1.0	1	0.7	1	1.7	1	0.9				
17	0.5	2	0.8	2	1.7	2	0.8				
18	4.8	3	0.6	3	1.7	3	0.8				
19	0	4	1.0	4	2.1	4	0.9				
20	1.7	5	0	5	0	5	0				
21	0.1	6	4.1	6	4.1	6	3.9				
22	0.1	7	0	7	0	7	0				
23	0.1	8	2.0	8	2.0	8	1.7				
24	1.2	9	0.4	9	3.0	9	0.3				
		10	1.6	10	2.8	10	0.2				
<b>IC1202</b>		11	1.6	11	3.2	11	0.5				
1	0.7	12	0	12	0.6	12	0				
2	0.8	13	0.1	13	0.8	13	0				
3	0.6	14	0.1	14	3.6	14	4.8				
4	1.0	15	1.7	15	3.0	15	0				
5	0	16	0.5	16	3.1	16	4.8				
6	4.1	17	1.2	17	1.4	17	0				
7	0	18	4.8	18	4.8	18	0.4				
8	2.0	19	0	19	4.1	19	0.2				
9	0.4	20	0	20	0	20	0.3				
10	1.6	21	0.7	21	2.1	21	1.7				
11	1.6	22	0.7	22	1.7	22	4.7				
12	0	23	0.9	23	1.7	23	4.0				
13	0.1	24	0.9	24	1.7	24	0				
14	0.1					25	0.7				
15	1.7					26	0.6				
16	0.5					27	0.6				
17	1.2					28	0.7				
18	4.8										
19	0										
20	0										
21	0.7										
22	0.7										
23	0.9										
24	0.9										

PIN	V	PIN	V	PIN	V	PIN	V	PIN	V	PIN	V	PIN	V
IC1262		IC1264		IC1291		IC1292		IC281		IC303			
1	1.8	1	0.9	1	0	1	0	1	4.0	1	5.2		
2	2.2	2	0.8	2	0	2	4.8	2	3.7	2	0.1		
3	1.1	3	0.9	3	1.6	3	1.6	3	9.1	3	0		
4	2.9	4	0.7	4	0.4	4	4.8	4	5.0	4	0		
5	0	5	0	5	1.1	5	1.6	5	0	5	0.3		
6	4.1	6	4.0	6	0.8	6	4.8	6	4.3	6	0		
7	0	7	0	7	0.7	7	1.6	7	0.7	7	3.2		
8	2.0	8	1.7	8	0.7	8	0	8	0.2	8	0		
9	3.0	9	0.7	9	3.0	9	1.6	9	2.9	9	5.2		
10	3.1	10	0.4	10	2.3	10	0	10	4.3	10	0		
11	3.1	11	0.4	11	3.0	11	2.3	11	6.3	11	3.1		
12	0.6	12	0	12	3.0	12	0.1	12	5.1	12	3.1		
13	0.7	13	0	13	2.1	13	2.3	13	3.7	13	0		
14	3.3	14	4.8	14	1.8	14	4.0	14	3.8	14	1.4		
15	3.3	15	0	15	1.8	15	2.3	15	0	15	0		
16	3.1	16	0	16	1.7	16	4.0	16	3.7	16	1.4		
17	1.4	17	0	17	0	17	2.3	17	3.8				
18	4.8	18	0	18	0.6	18	4.0	18	5.4	IC304			
19	4.1	19	0.3	19	3.1	19	0	19	3.7	1	0.1		
20	0	20	0.5	20	3.1	20	4.6	20	3.8	2	5.6		
21	3.0	21	0	21	3.1			21	5.0	3	5.7		
22	1.1	22	4.7	22	3.0	IC1293		22	2.6	4	5.7		
23	2.0	23	4.0	23	1.1	1	0	23	3.8	5	8.2		
24	1.7	24	0	24	2.1	2	4.8	24	2.6	6	4.1		
		25	0.5	25	1.7	3	1.7		7	4.2			
IC1263		26	0.6	26	2.0	4	4.8	IC301		8	4.2		
1	1.8	27	0.6	27	0	5	1.7	1	2.4	9	0		
2	2.2	28	0.6	28	0	6	4.8	2	2.1	10	5.9		
3	1.1			29	4.8	7	1.7	3	2.1	11	5.9		
4	2.9			30	2.7	8	0	4	4.7	12	5.8		
5	0			31	4.8	9	0.1	5	4.1	13	0		
6	4.1			32	3.8	10	0	6	0.6	14	0.5		
7	0			33	3.8	11	2.3	7	8.1	15	6.8		
8	2.0			34	3.8	12	0.1	8	5.0	16	4.9		
9	3.0			35	0	13	2.3	9	0	17	5.9		
10	3.1			36	4.2	14	3.9	10	0.4	18	2.0		
11	3.1			37	4.2	15	2.3	11	3.6	19	2.6		
12	0.6			38	4.2	16	4.0	12	3.8	20	1.3		
13	0.7			39	0	17	2.3	13	0	21	2.5		
14	3.3			40	3.9	18	4.0	14	0	22	1.2		
15	3.3			41	0	19	0	15	6.0	23	2.6		
16	3.1			42	4.8	20	4.6	16	6.5	24	1.2		
17	1.4			43	4.8			17	0.1	25	2.7		
18	4.8			44	0	IC251		18	3.7	26	3.0		
19	4.1					1	3.0	19	1.2	27	4.2		
20	0					2	3.6	20	1.2	28	4.3		
21	3.0					3	3.6	21	3.1				
22	1.1					4	0	22	3.7				
23	2.0					5	3.5	23	0.1				
24	1.7					6	3.5	24	3.4				
						7	7.0	25	3.6				
						8	8.0	26	7.5				
								27	3.4				
								28	0				
								29	3.4				
								30	4.1				
								31	1.5				
								32	2.0				

## LOW+B POWER BOARD

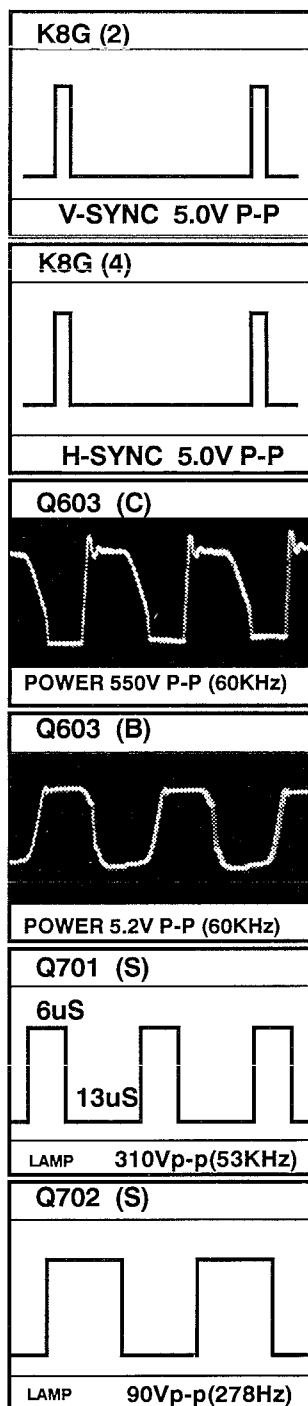
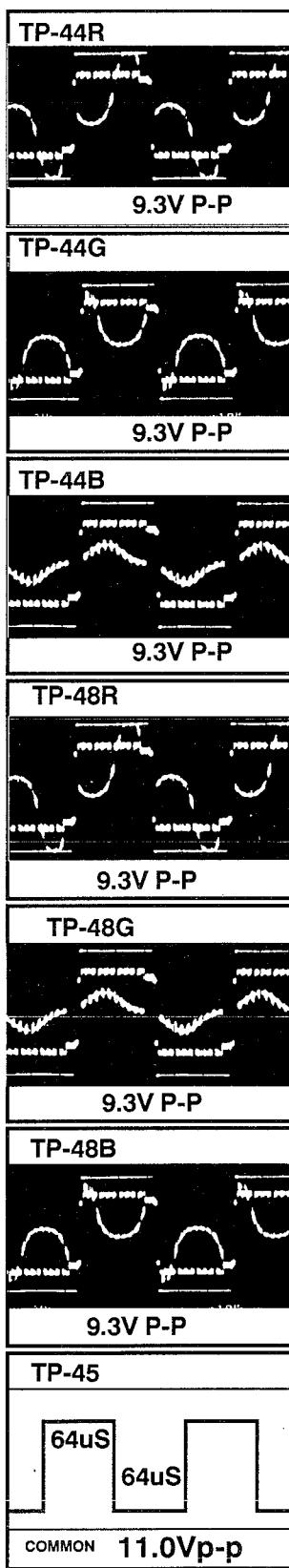
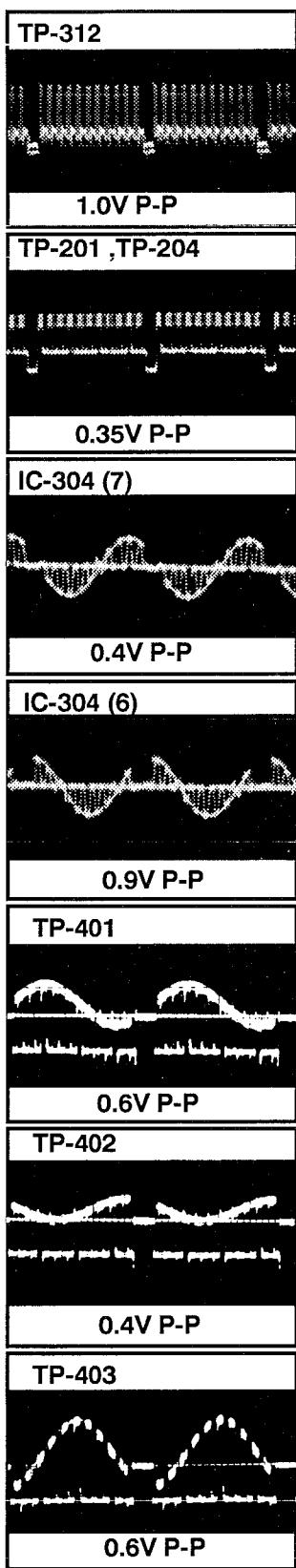
## AV BOARD

PIN	V	PIN	V	PIN	V	PIN	V	PIN	V	PIN	V
IC801		IC802				IC001				IC1001	
1	0.2	1	5.0			1	9.7			1	11.6
2	0	2	5.0			2	0			2	5.7
3	0.6	3	0			3	5.0			3	4.1
4	0.1					IC002				4	0
5	0	IC803				1	0			5	4.1
6	0	1	0			2	-19.3			IC1002	
7	0.4	2	0			3	-15.2			1	0
8	0	3	0			IC003				2	5.0
9	0	4	0			1	12.6			3	0
10	0	5	5.0			2	11.8			4	5.0
11	0	6	5.0			3	0			5	7.7
12	0.03	7	0			4	12.6			6	0
13	0	8	5.0			IC004				7	7.8
14	0					1	11.9			8	7.0
15	0	Q1301				2	8.31			9	11.8
16	5.0	1	3.7			3	0			10	8.0
17	4.8	2	7.7			4	1.25			11	7.0
18	5.0	3	3.8			IC006				12	7.8
19	0	4	2.0			1	17.9			IC1101	
20	5.0	5	8.3			2	15.9			1	0
21	0					3	0			2	0
22	0	Q1331				4	0			3	0
23	0	1	3.7			IC007				4	0
24	2.3	2	7.7			1	0			5	5.0
25	2.1	3	3.8			2	-15.0			6	0
26	0	4	2.0			3	-8.0				
27	5.0	5	8.3								
28	4.6										
29	4.6	Q1361									
30	5.0	1	3.7								
31	5.0	2	7.7								
32	4.7	3	3.8								
33	5.0	4	2.0								
34	0.1	5	8.3								
35	0.1										
36	0.2										
37	0.1										
38	0.1										
39	5.0										
40	0										
41	0										
42	5.0										
43	5.0										
44	4.2										
45	4.3										
46	0										
47	5.0										
48	5.0										
49	0										
50	0										
51	0										
52	0										

## **[ TRANSISTORS VOLTAGE CHART ]**

**Q1301, Q1331, Q1361**  
**See IC Voltage chart**

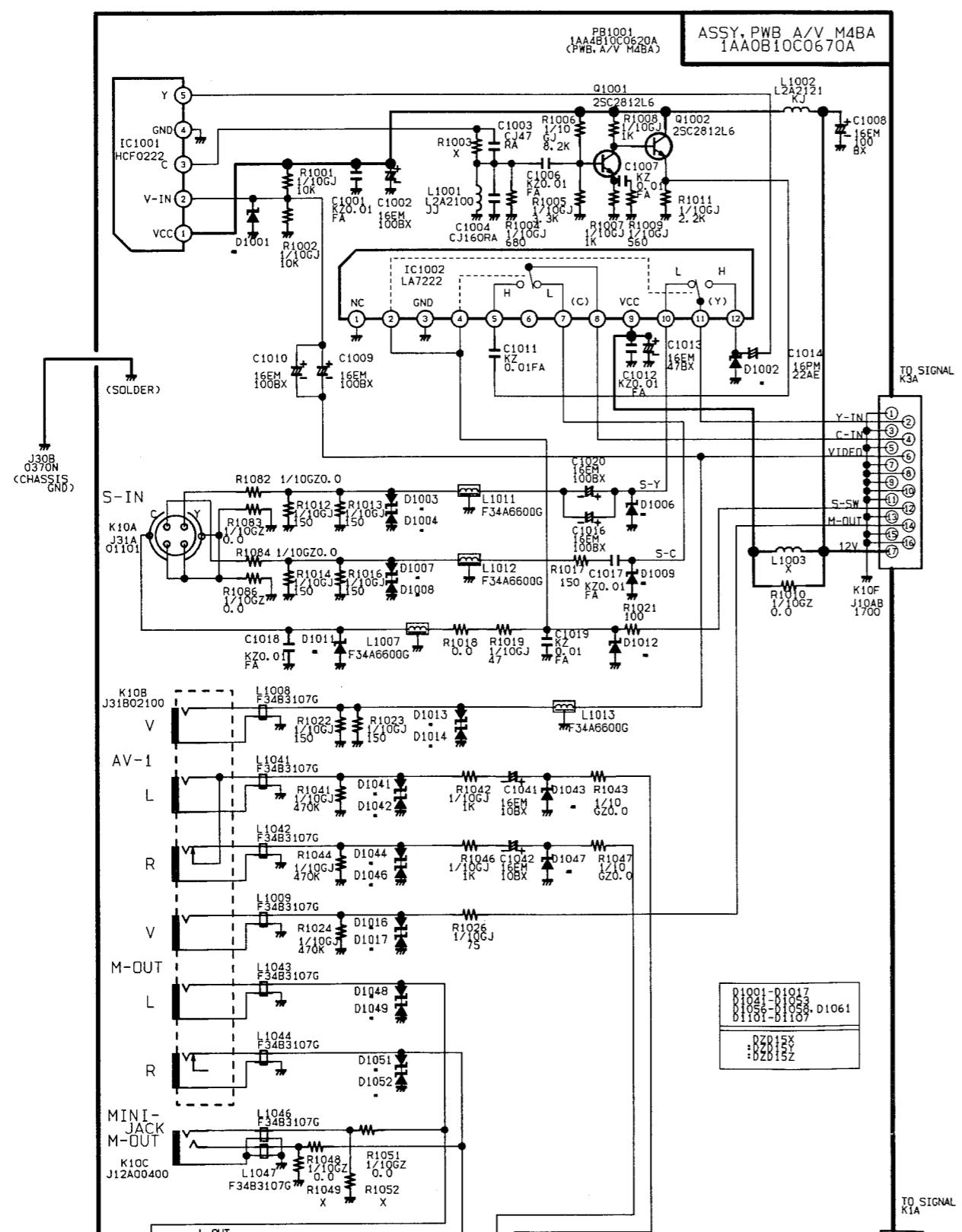
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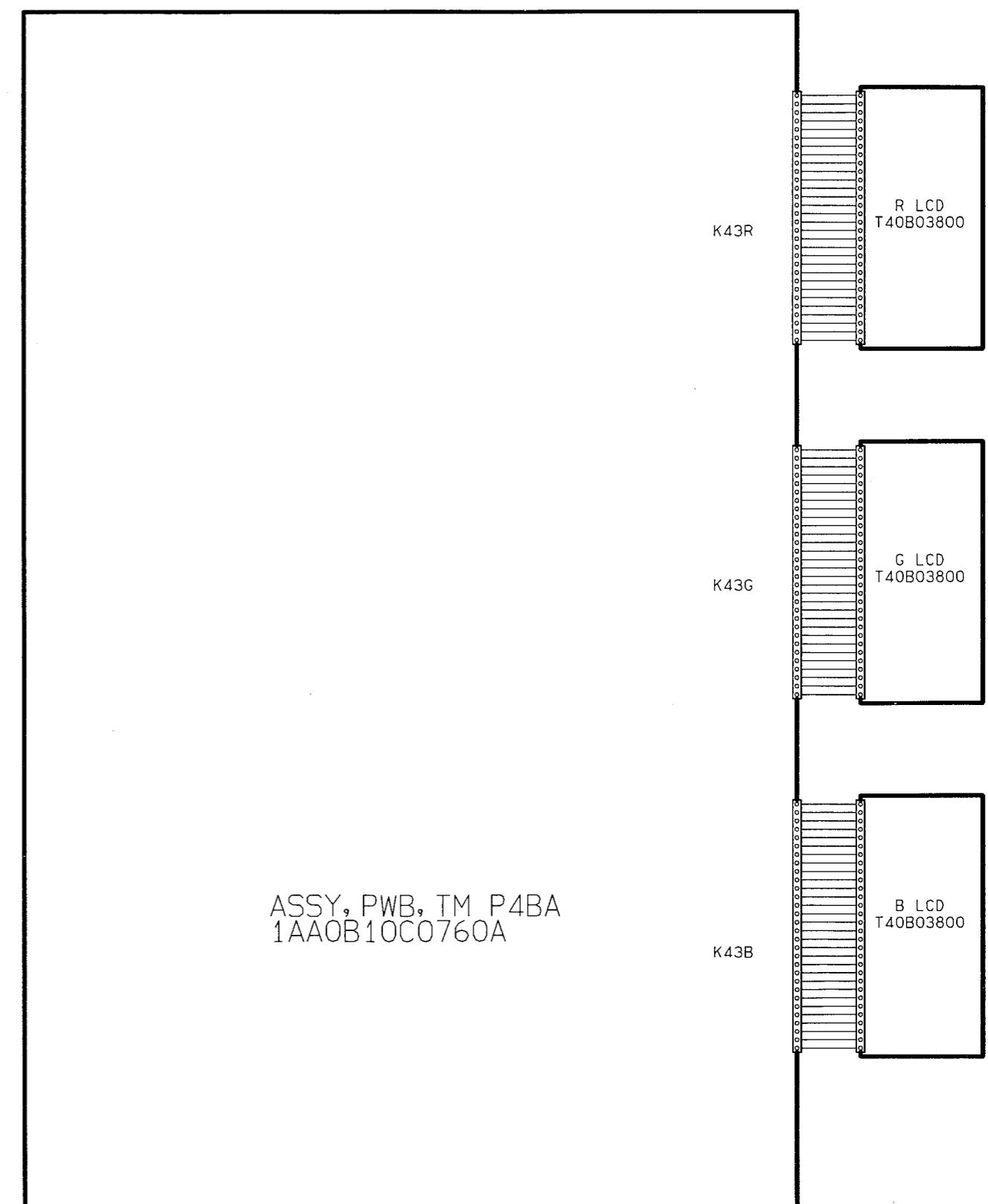
# MODEL PLC-400P/PB/PP

Service Ref.No. PLC-400P/PB/PP-00

## SCHEMATIC DIAGRAMS

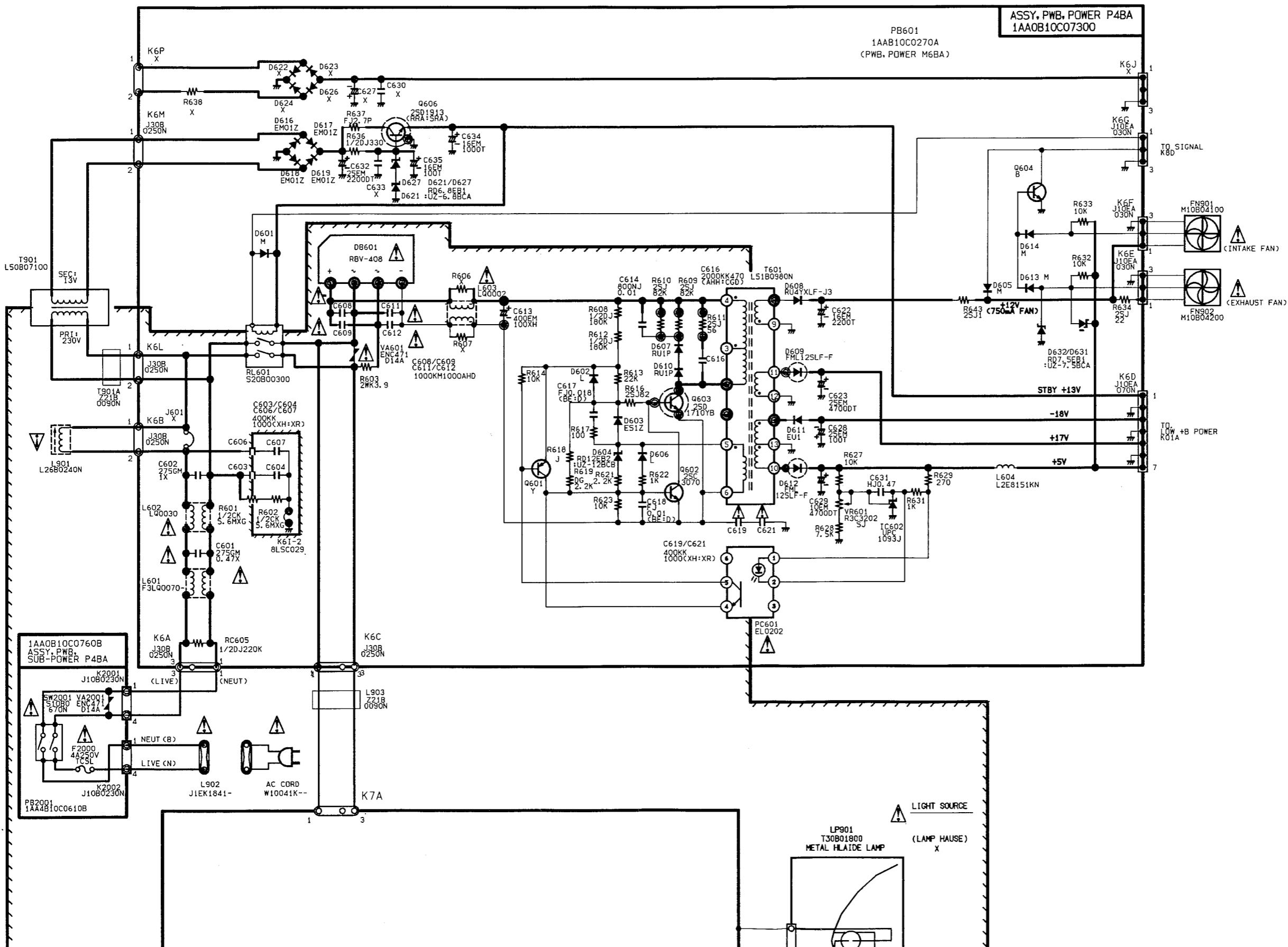


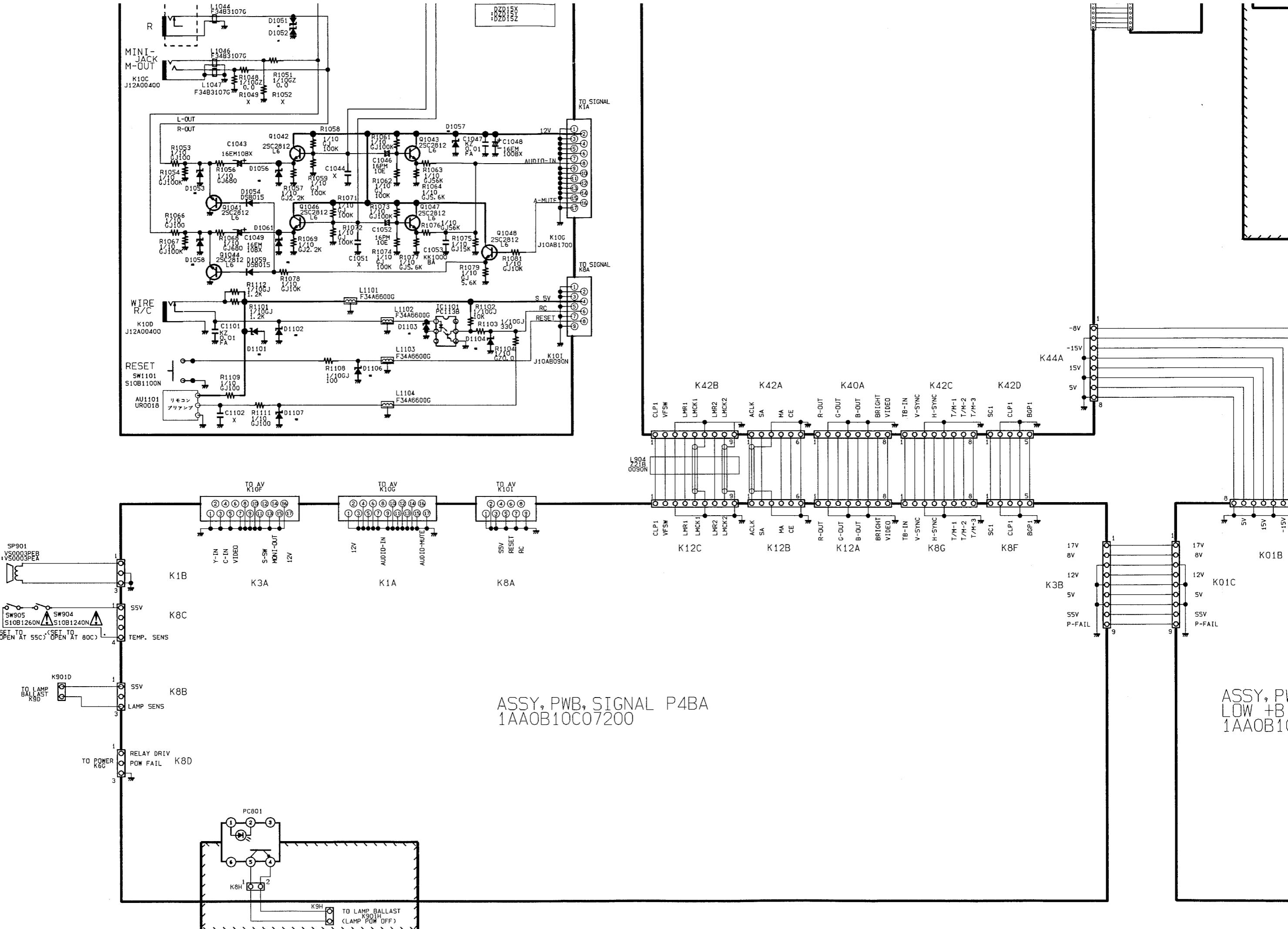
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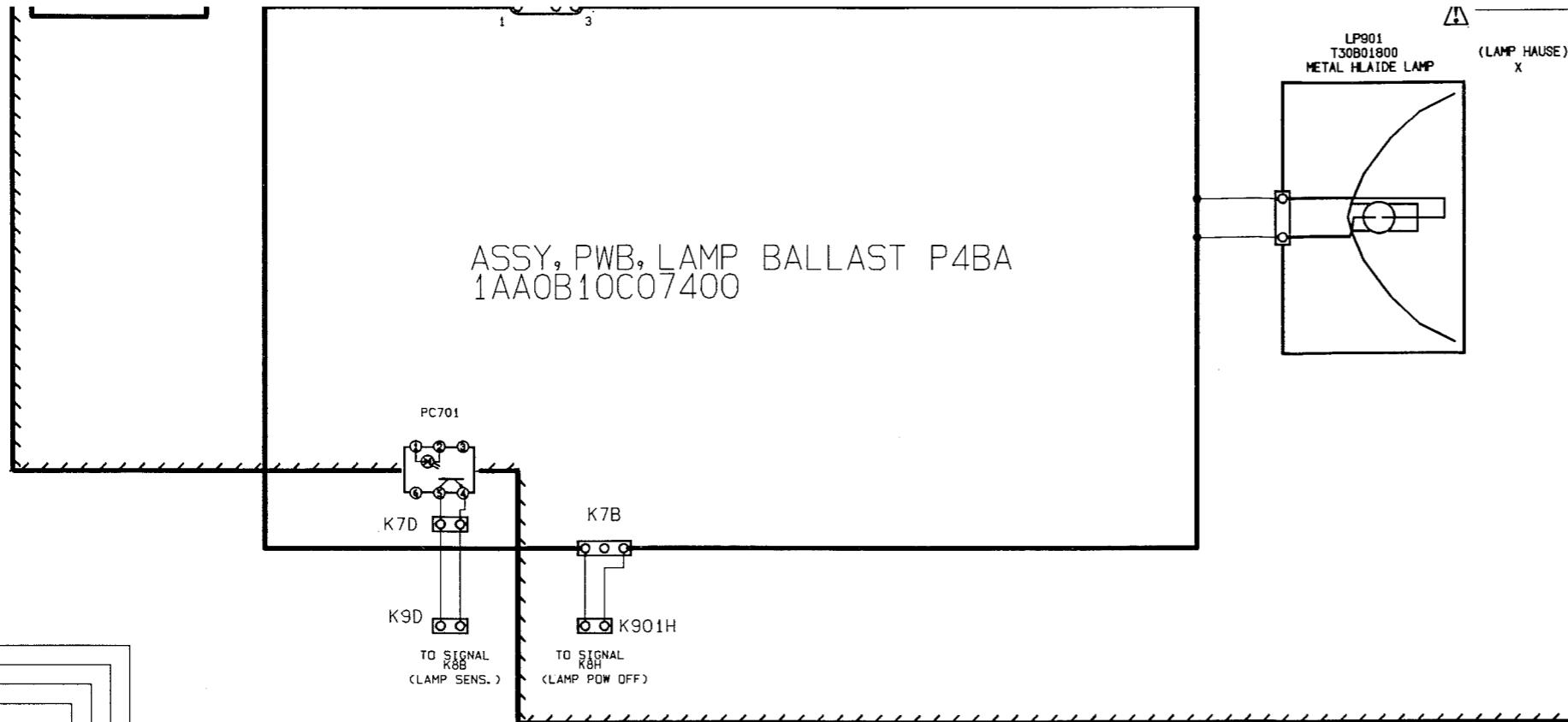


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PB2001  
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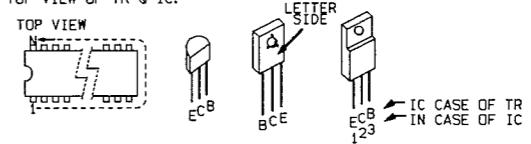




NOTES:

1. RESISTORS SPECIFIED WITH RESISTANCE VALUE ARE "1/60J".
2. RESISTORS SPECIFIED WITH TYPE OF RESISTOR, TOLERANCE AND RESISTANCE VALUE ARE "1/4W".
3. ALL CAPACITORS ARE 50MV RATING UNLESS OTHERWISE NOTED.

4. TOP VIEW OF TR & IC.



5. ISOLATION BOARDER LINE.

COLD SIDE 非充電部  
HOT SIDE 充電部

(DIODE)

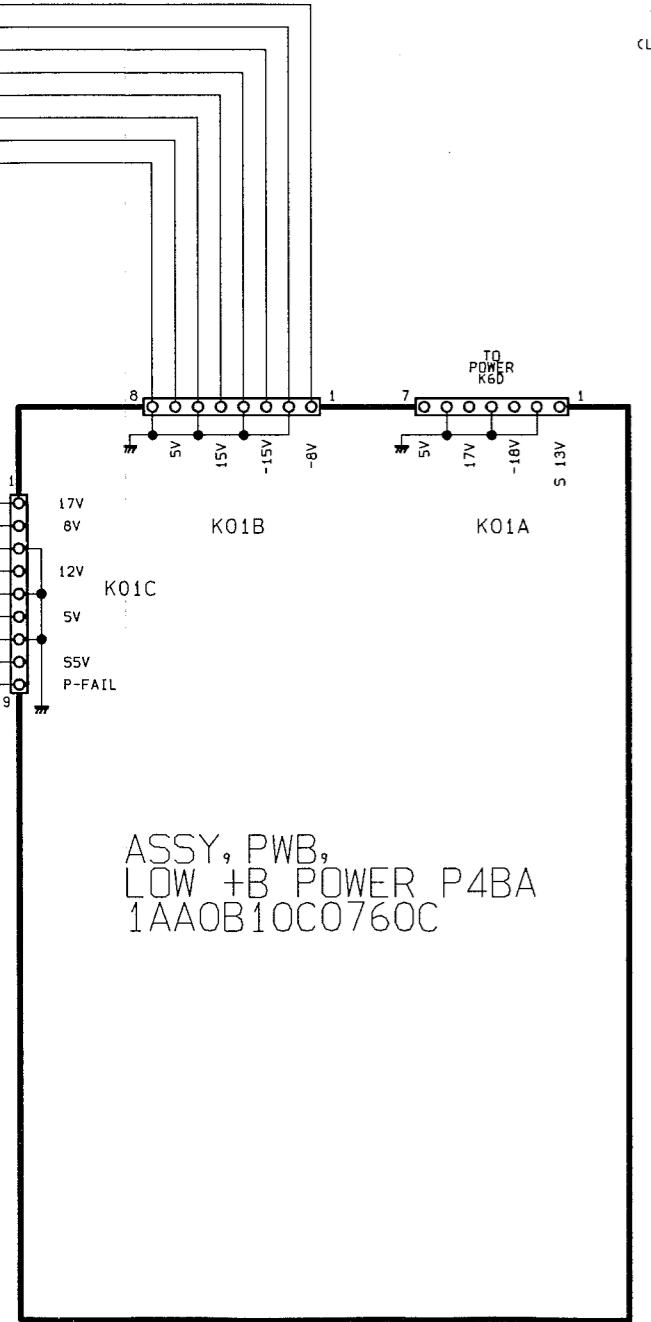
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K	7E100007	1S1555, 1S2473, 1S2076, DS442
L	7E100028	1S1553, 1S2076A, 1S2471
M	7E000025	1SS176, GM01, ISS133
N	7D000020	1S1555, 1S2473, 1S2076, 1SS133, DS442, ISS176, IN4148
P	7D000021	1S1553, 1S2076A, 1S2471, IN4148

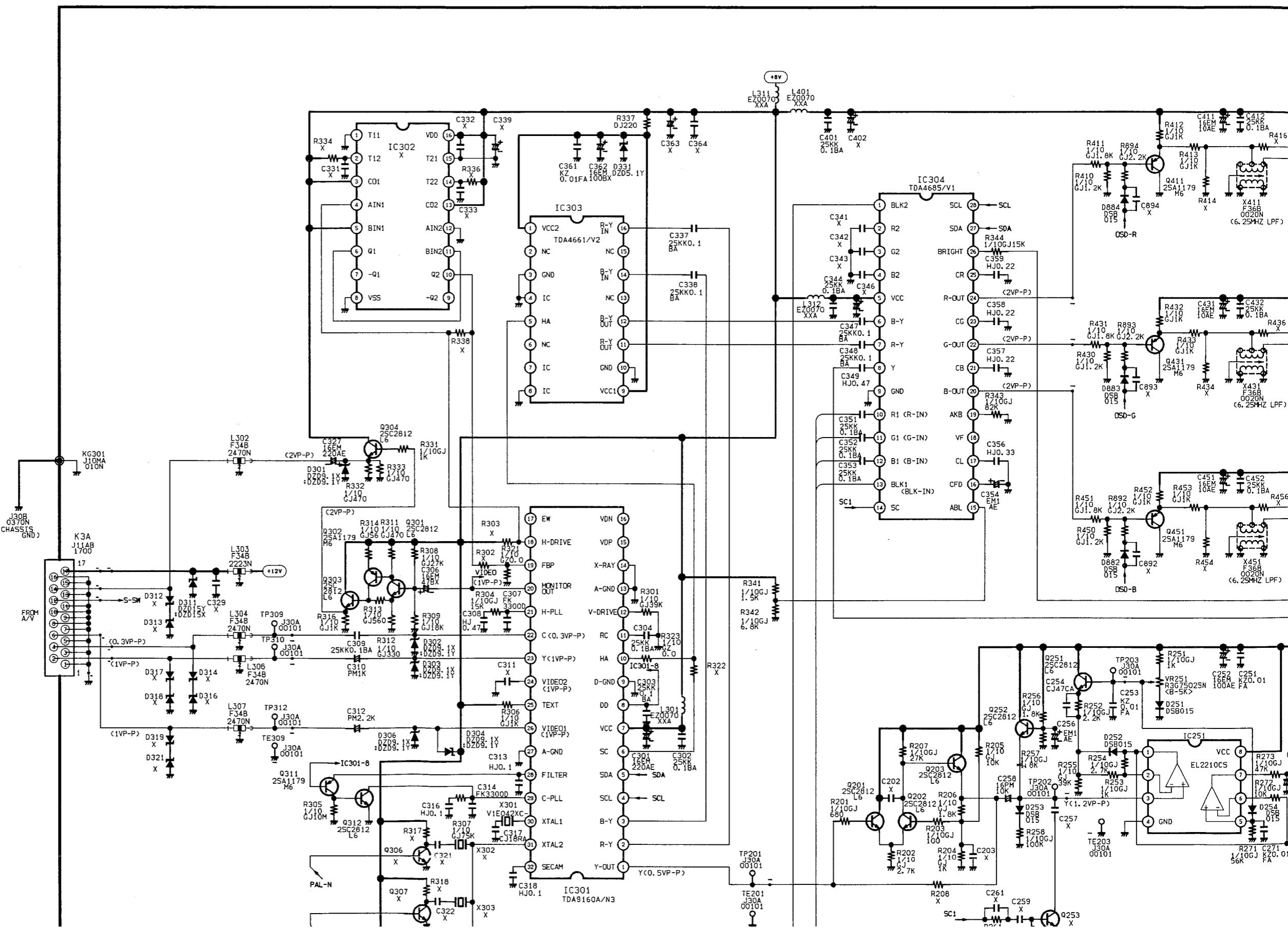
(NPN.TR)

	代表コード	2SC536	2SC945A	2SC1815	2SC1740	2SC1740S	KSC945C
B	7QT00083	E,F,G	P,Q,R	O,Y,G	D,R,S		
D	7QT00128	F,G	P,Q	Y,G	Q,R,S		
F	7QT00168	F,G	P	G	R,S		
H	7TK00001	F,G	P,Q	Y,G	Q,R,S		Y,G
I	7TK00002	E,F,G	P,Q,R	O,Y,G	Q,R,S		Y,G
G	7TK00005	F,G	P	G	R,S		G

(PNP.TR)

	代表コード	2SA608	2SA564A	2SA1015	2SA933	2SA933S	KSA733C
Y	7QT00419	E,F	Q,R	O,Y,G	Q,R		
W	7QT00421	F	R	Y,G	R		
V	7TK00003	E,F	Q,R	O,Y,G	Q,R		Y,G
U	7TK00004	F	R	Y,G	R		G





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A

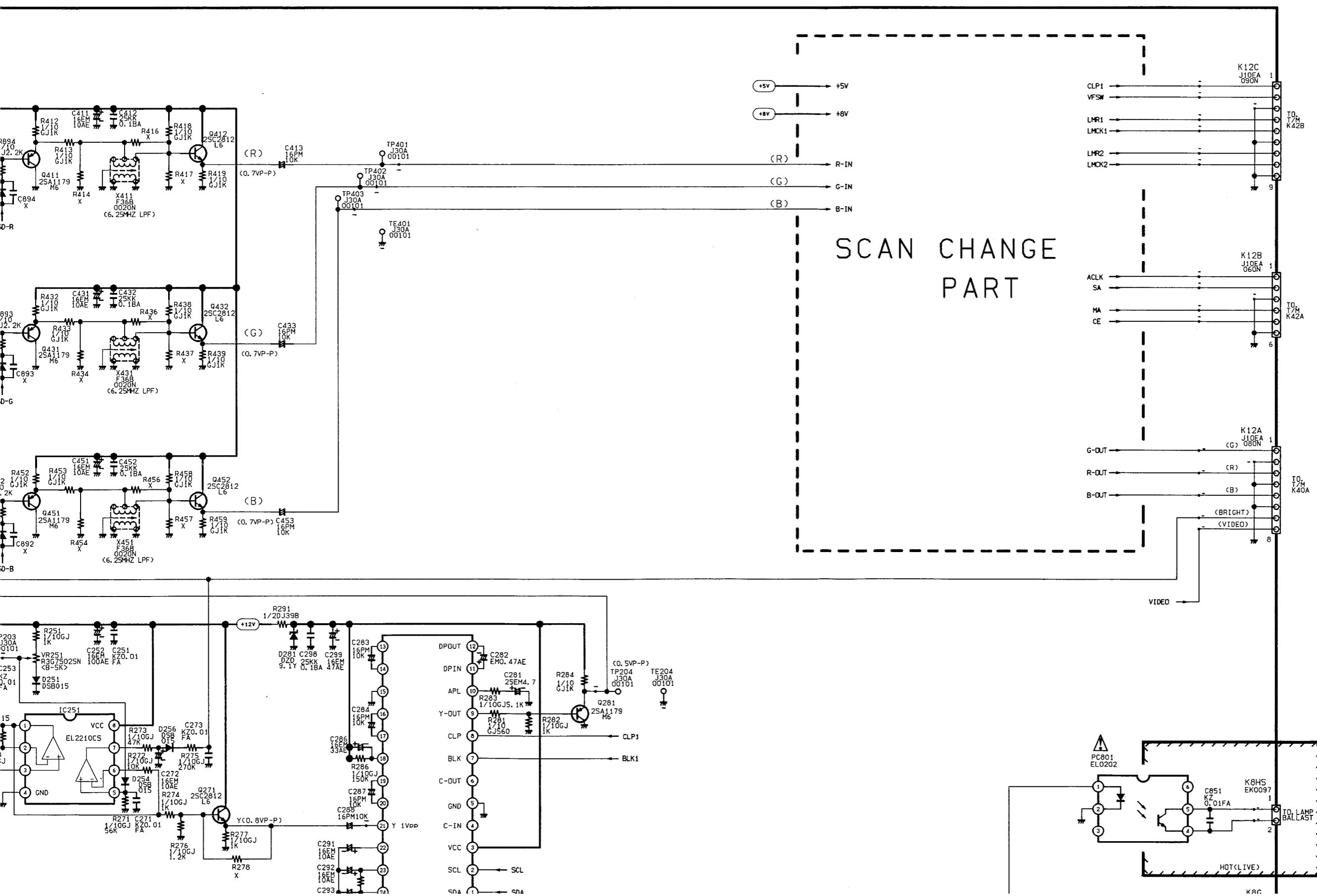
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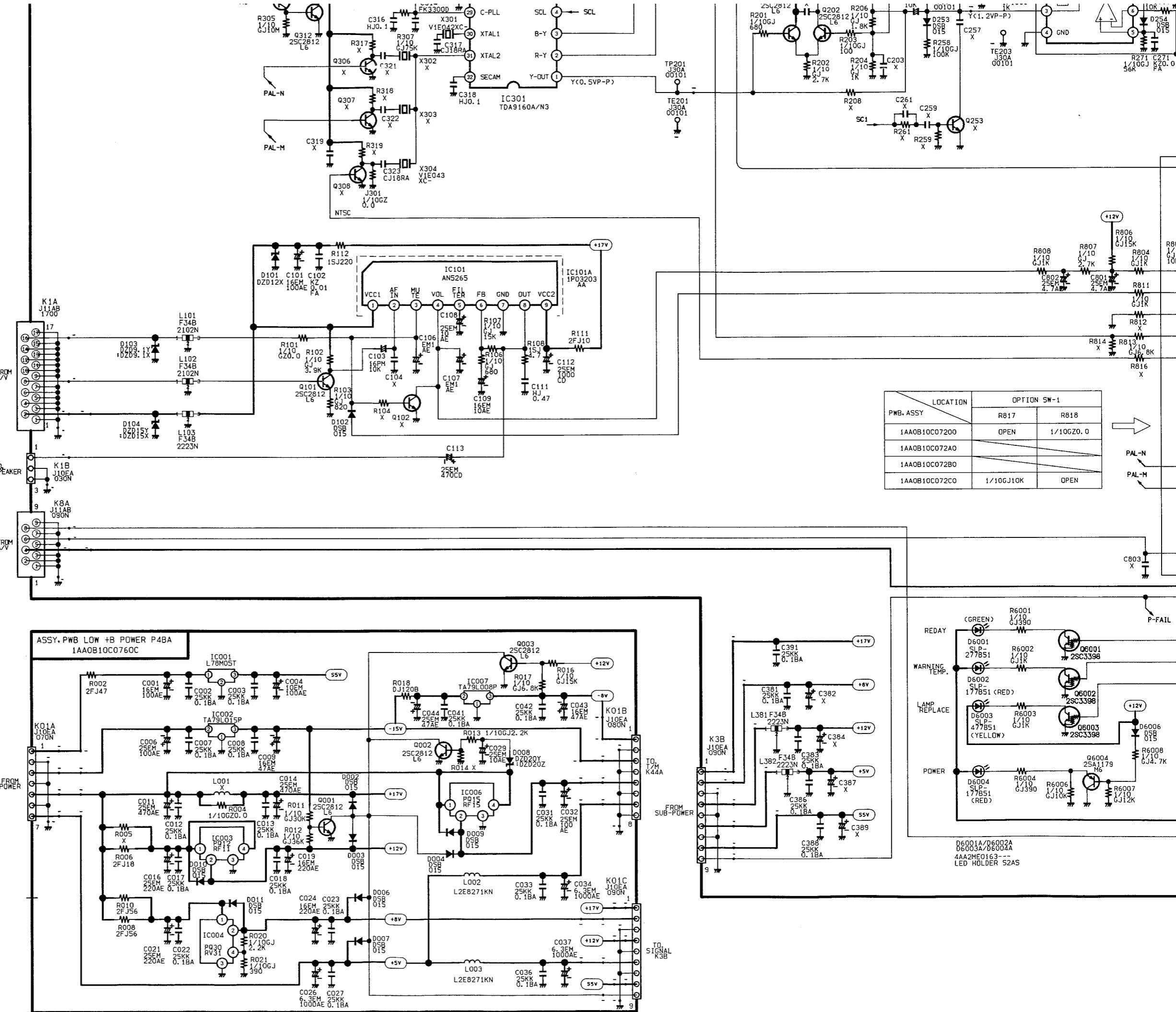
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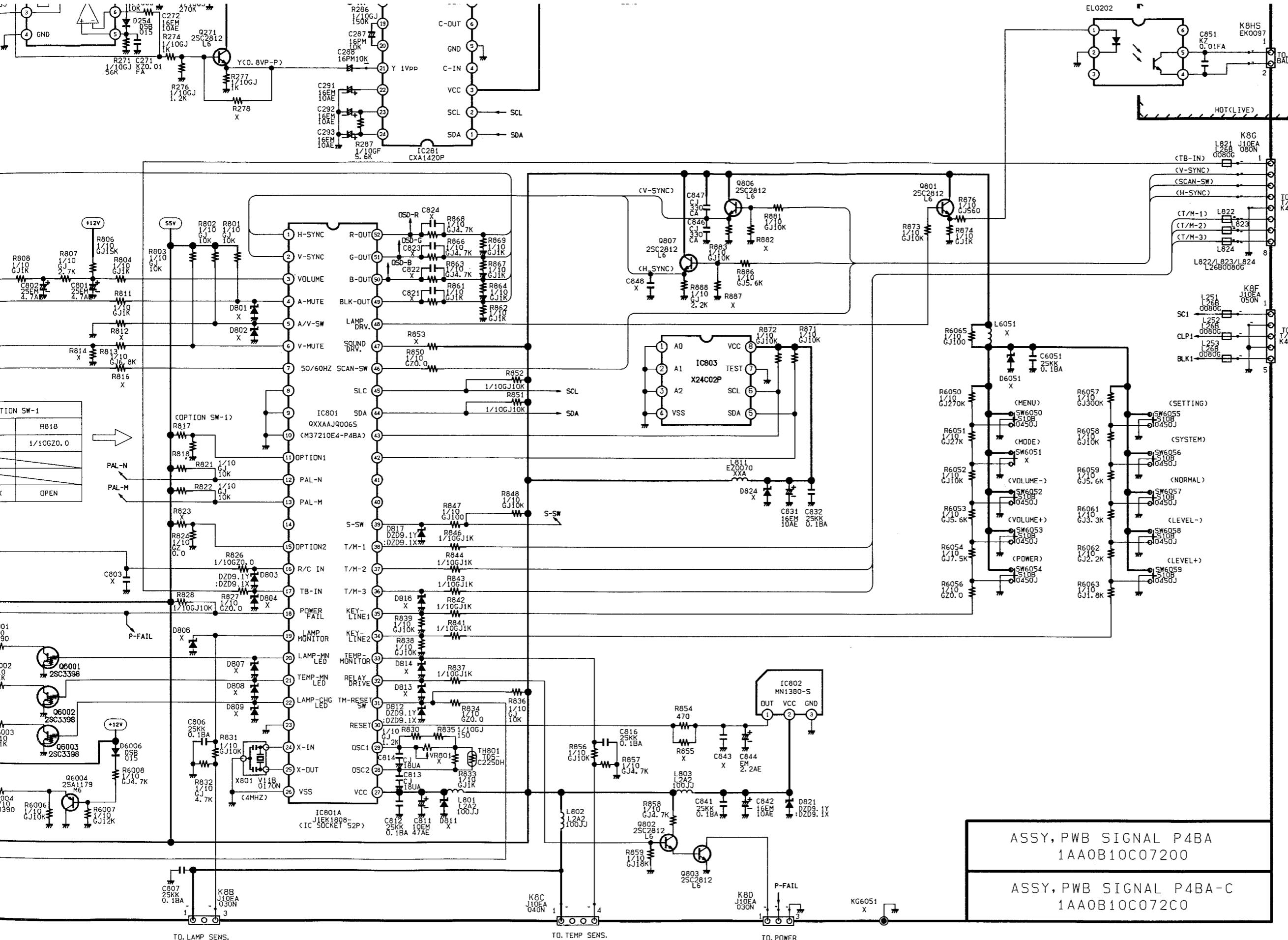
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F

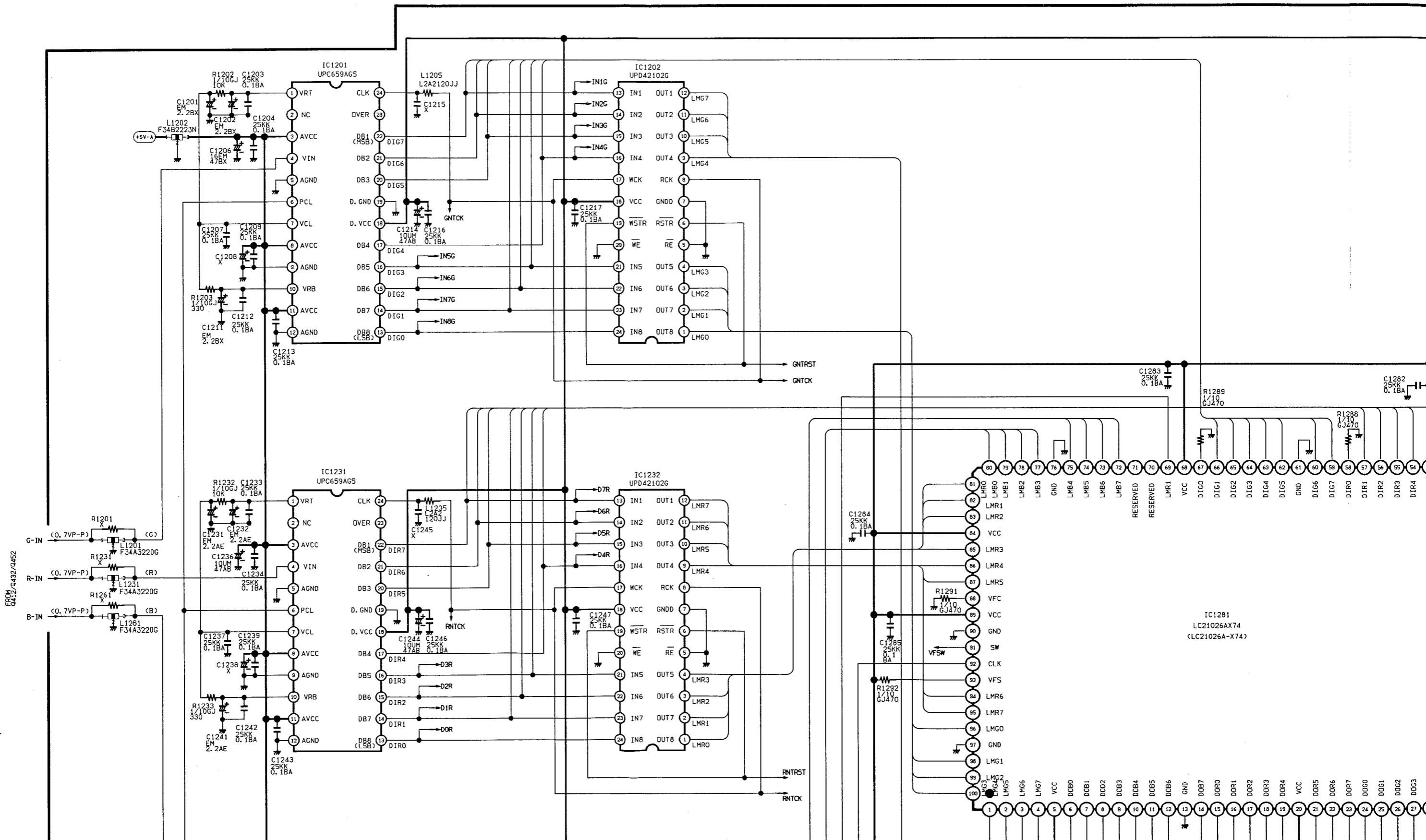






# MODEL PLC-400P/PB/PP

Service Ref.No. PLC-400P/PB/PP-00



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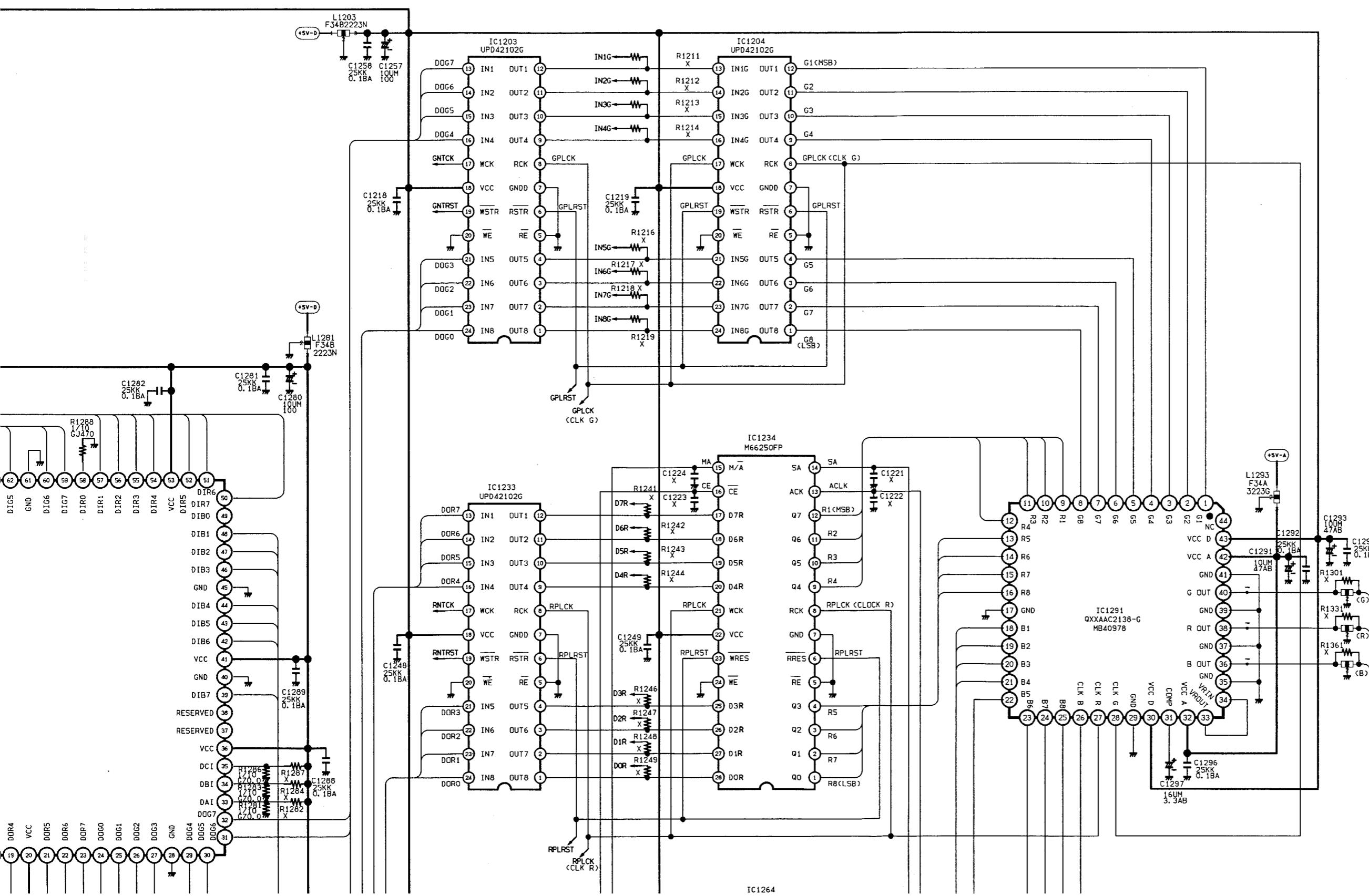
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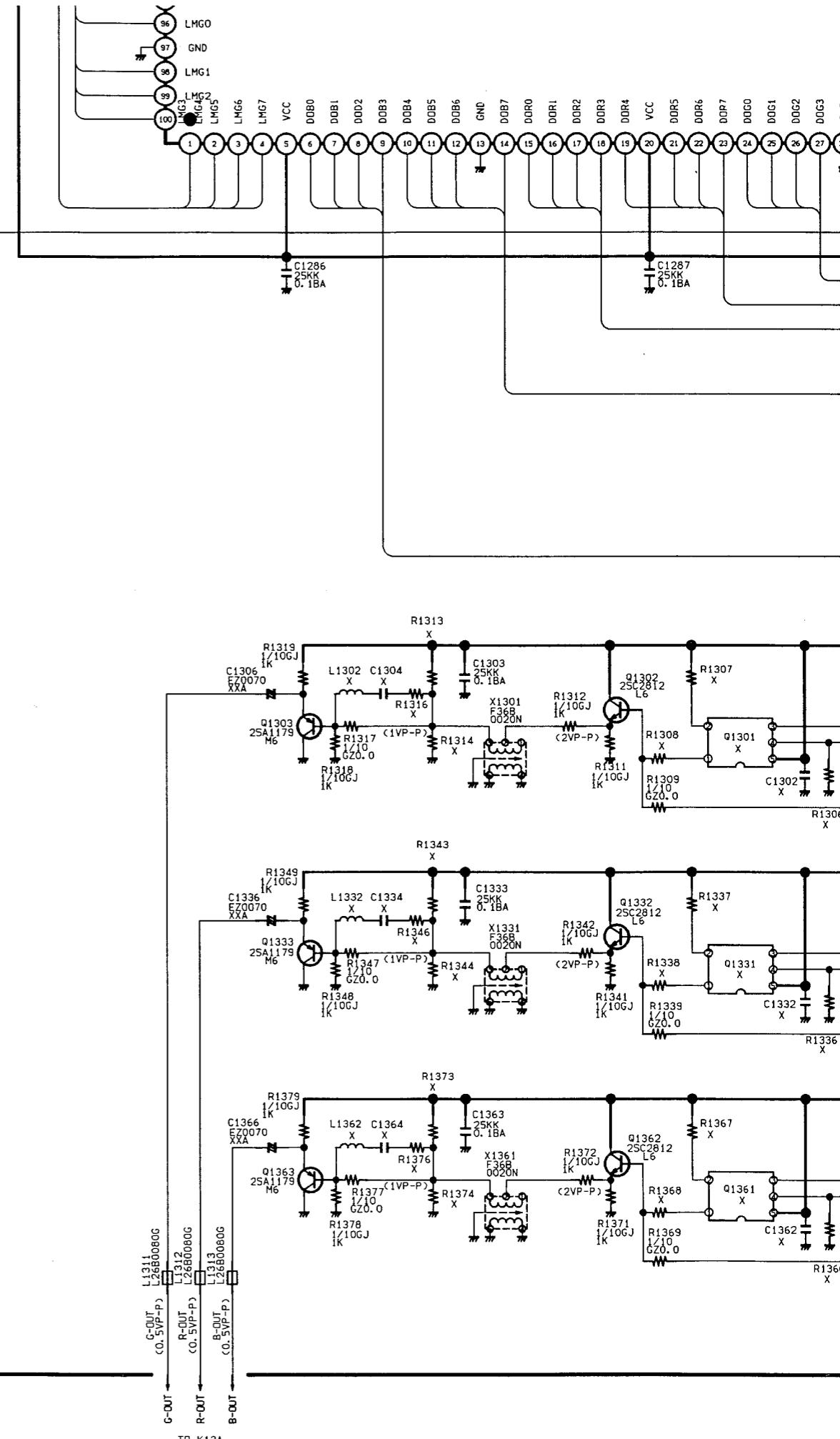
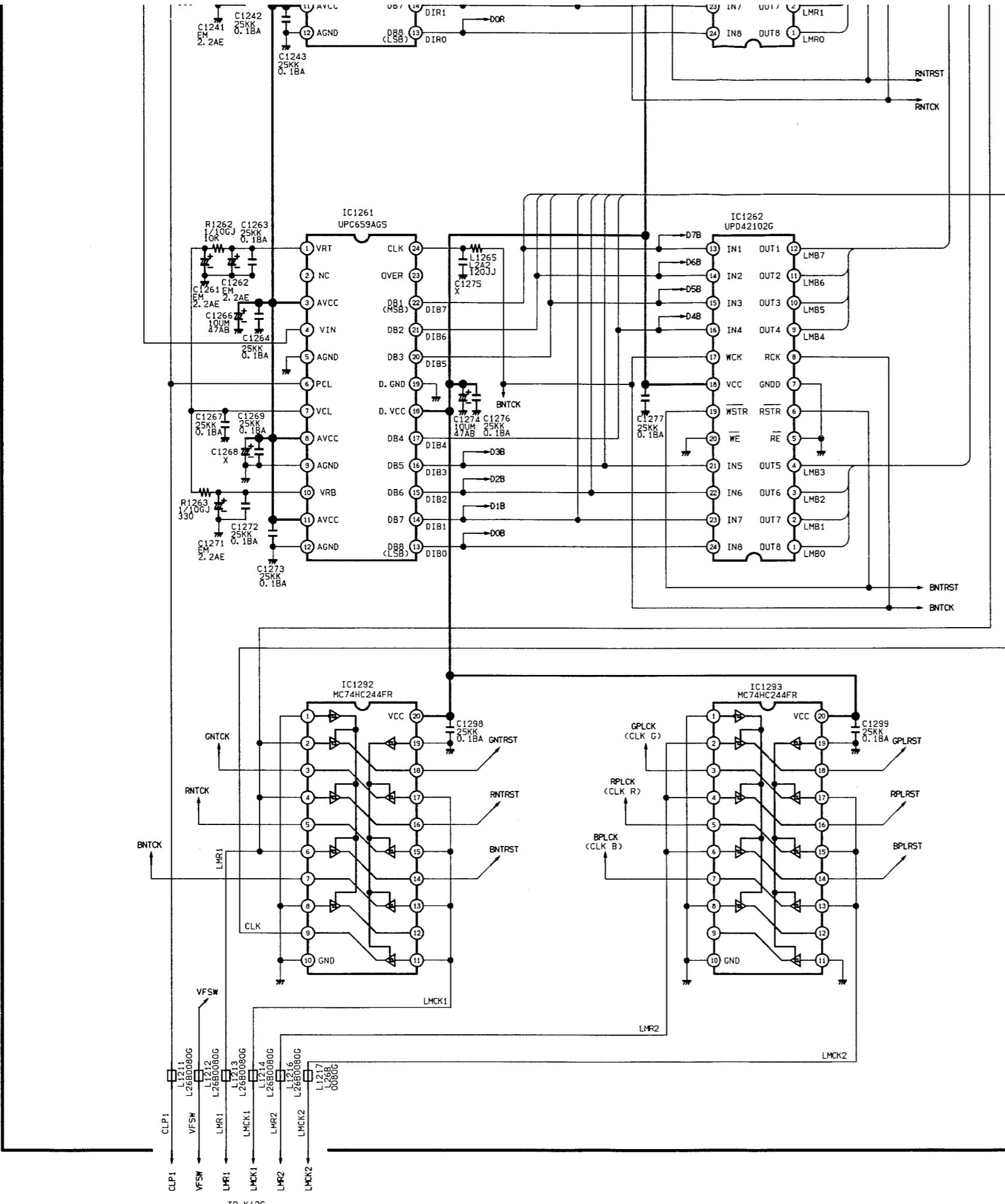
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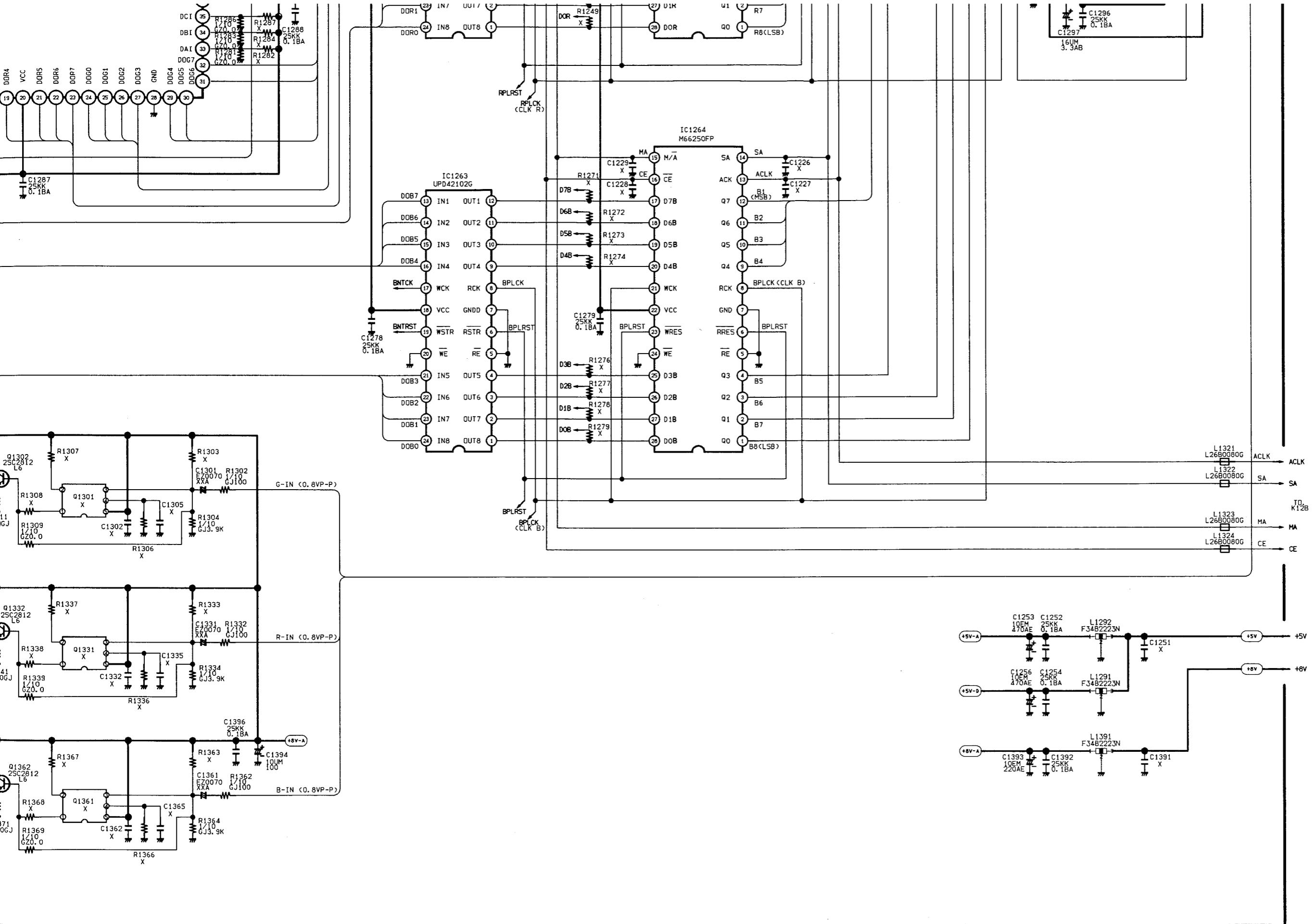
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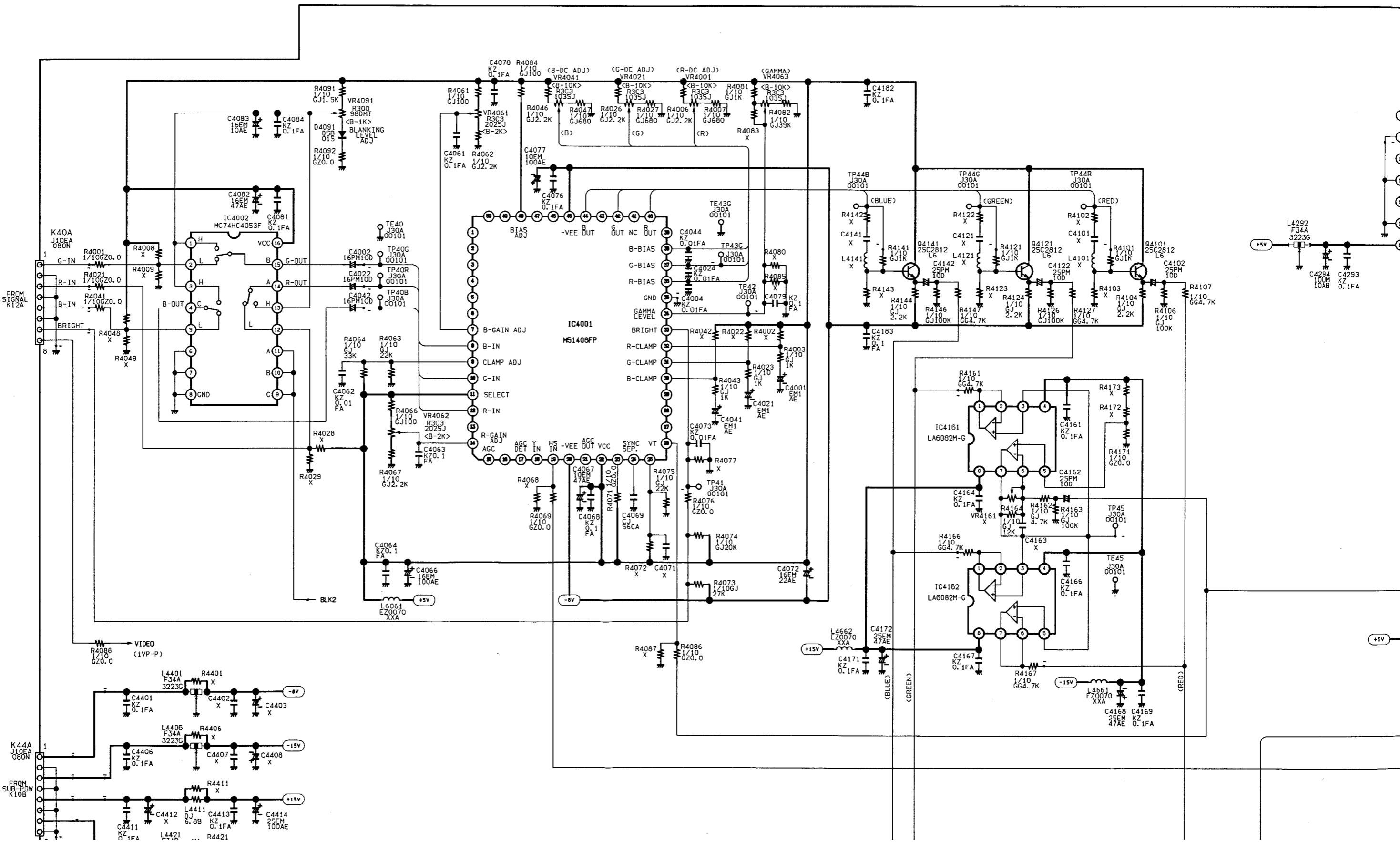
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# ASSY, PWB SIGNAL SCAN CHANGE PART









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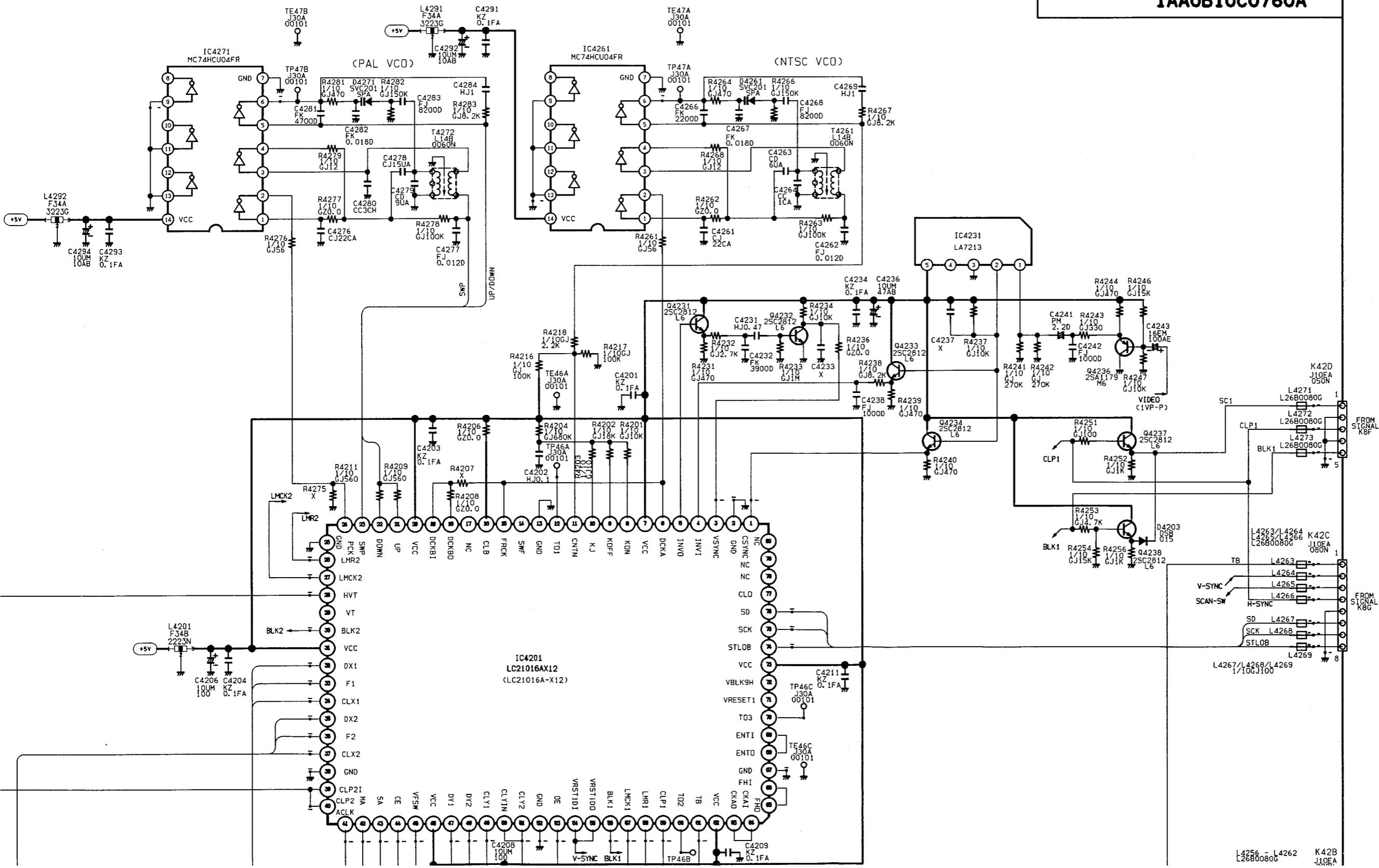
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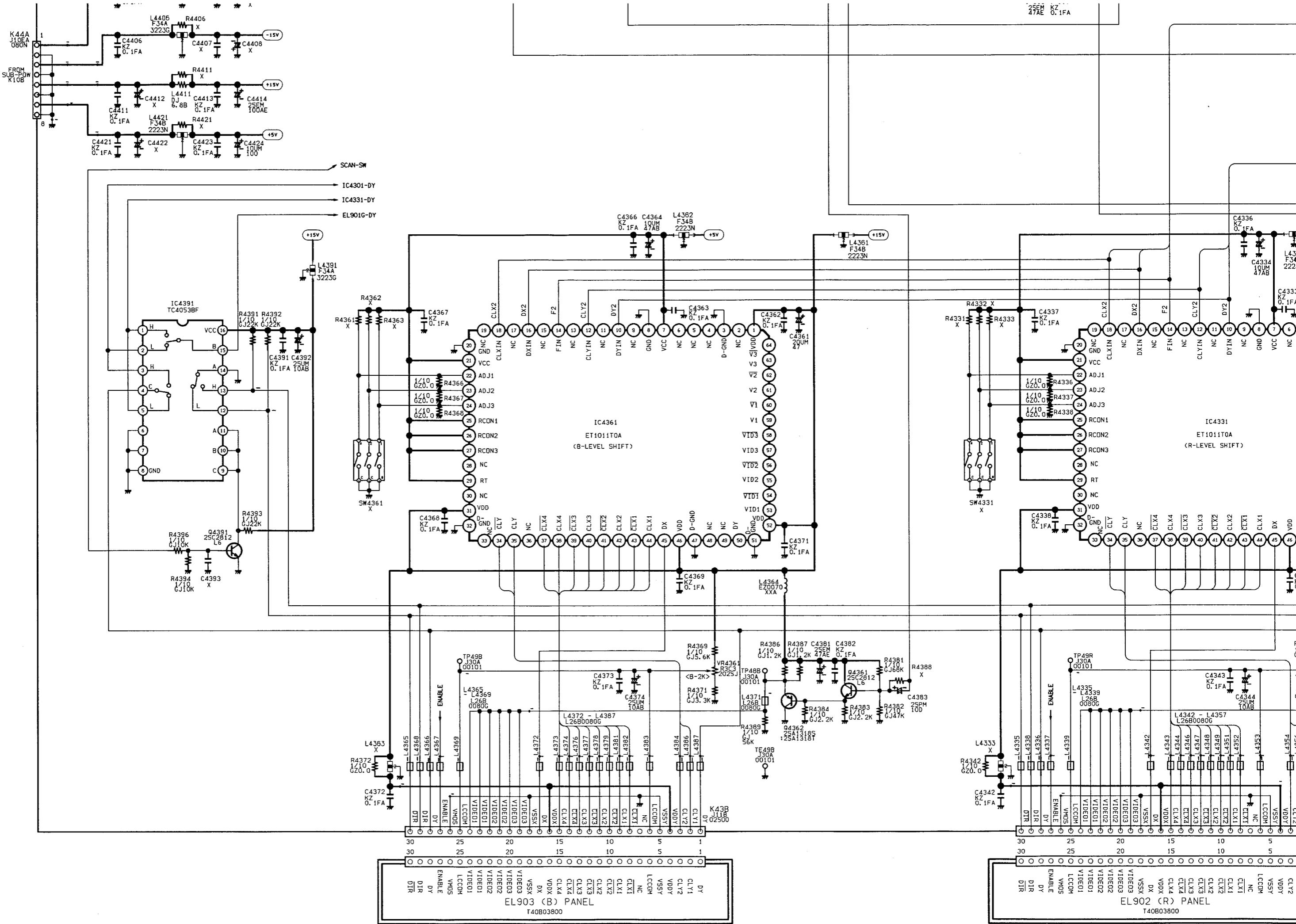
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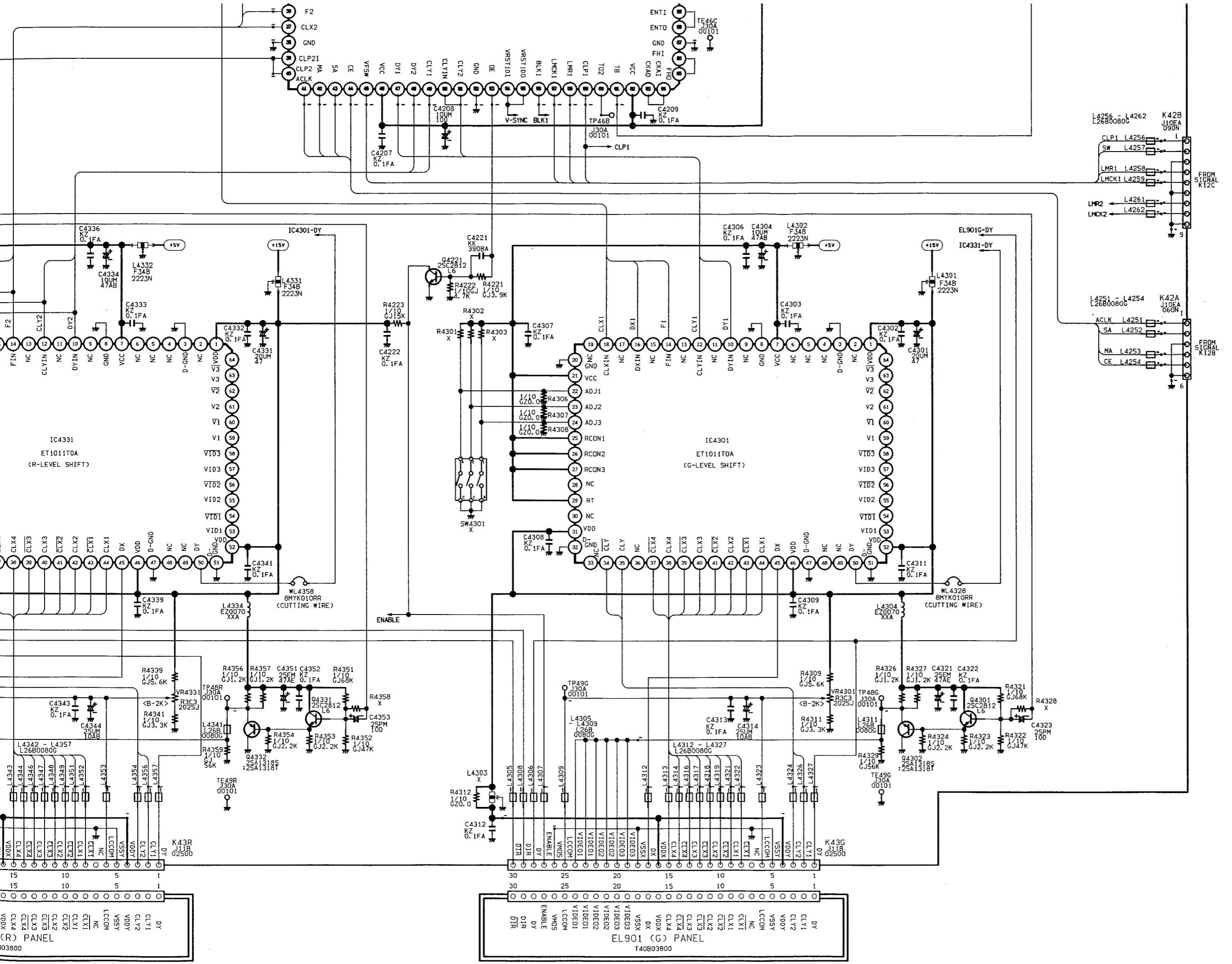
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A

**ASSY, PWB TM P4BA  
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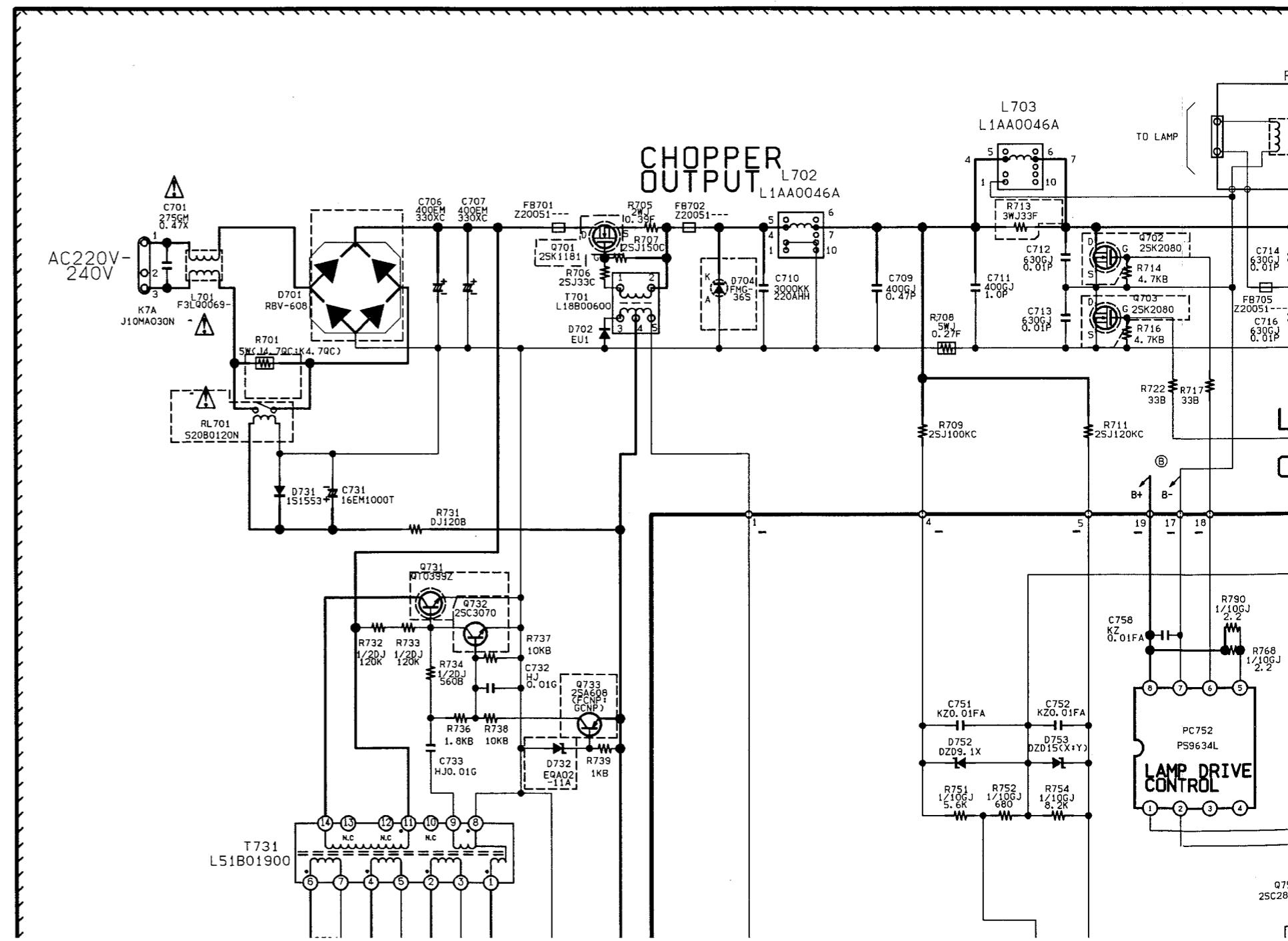


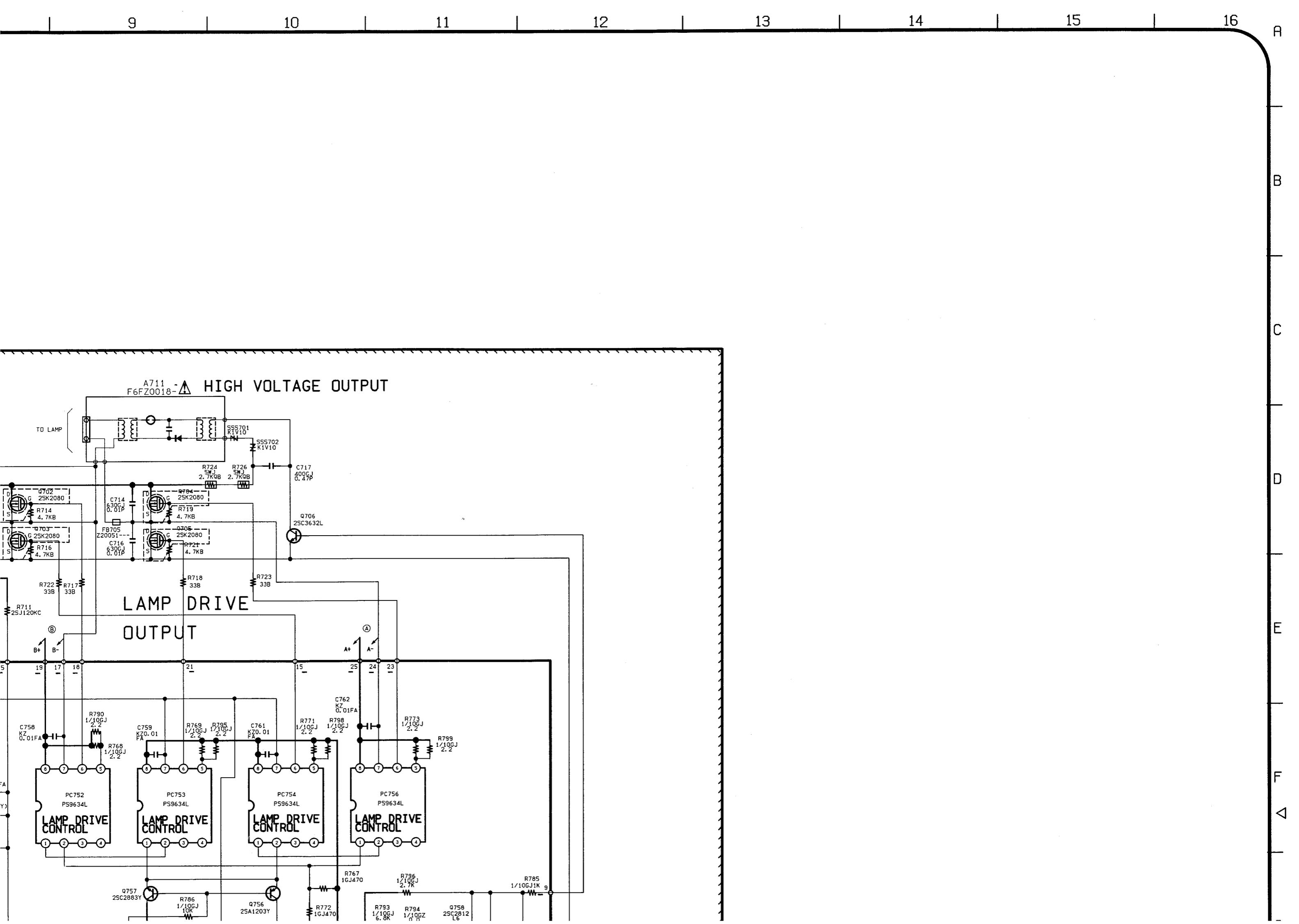




# MODEL PLC-400P/PB/PP

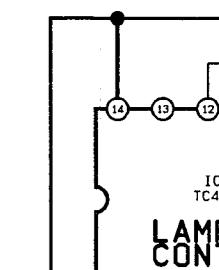
**Service Ref.No. PLC-400P/PB/PP-00**





LAMP DRIVE  
CONTROL

Q75  
2SC286



LAMP  
CONTRO

Q753  
2SC3134

Q754  
2SC2812

R771  
1/10GJ  
2.2K

R772  
1/10GJ  
12K

LAM  
MON

R791  
1/10GJ  
2.2K

R773  
1/10GJ  
5.6K

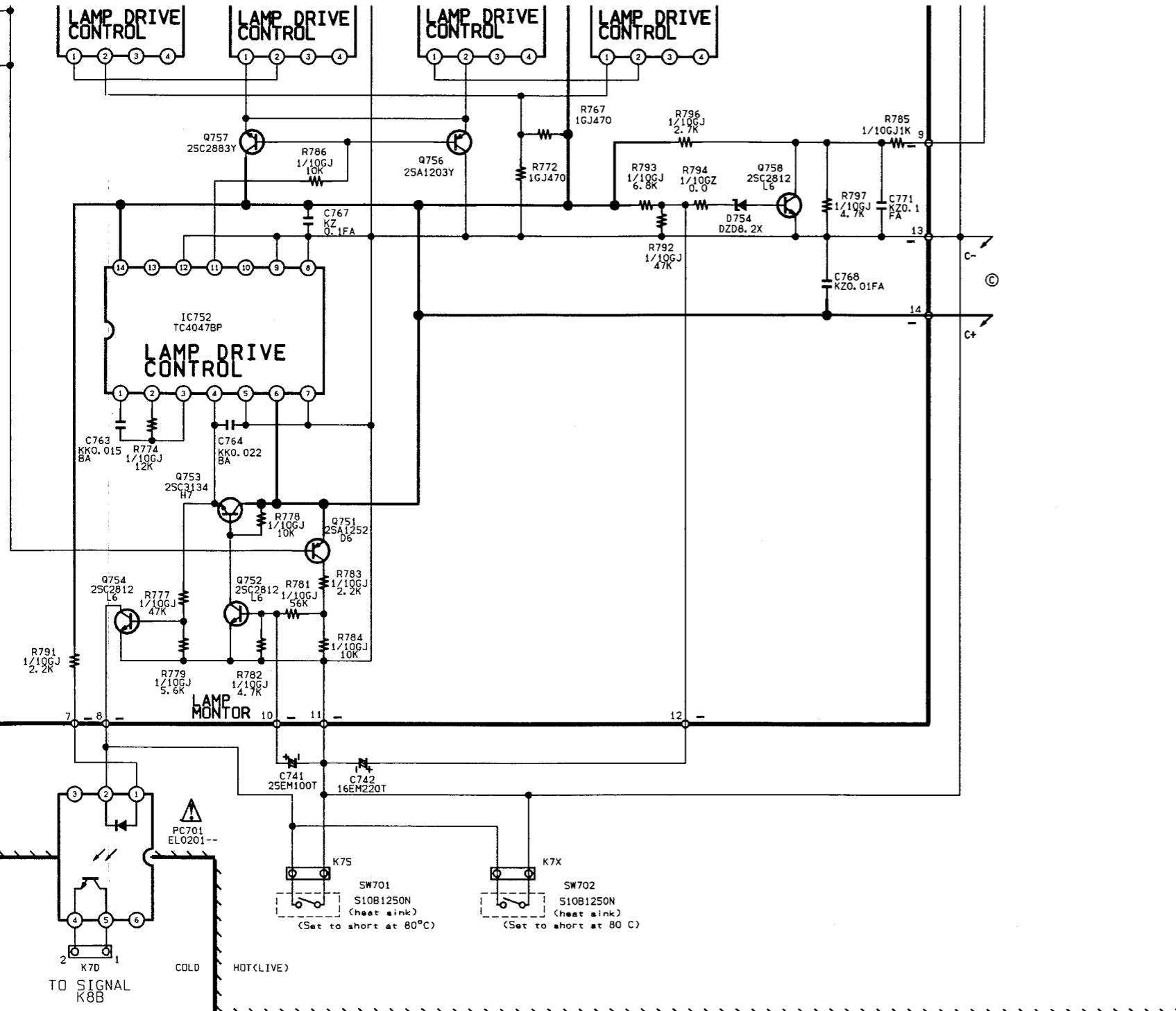
COLD

PC701  
EL0201--

K7D

TO SIGNAL  
K8B

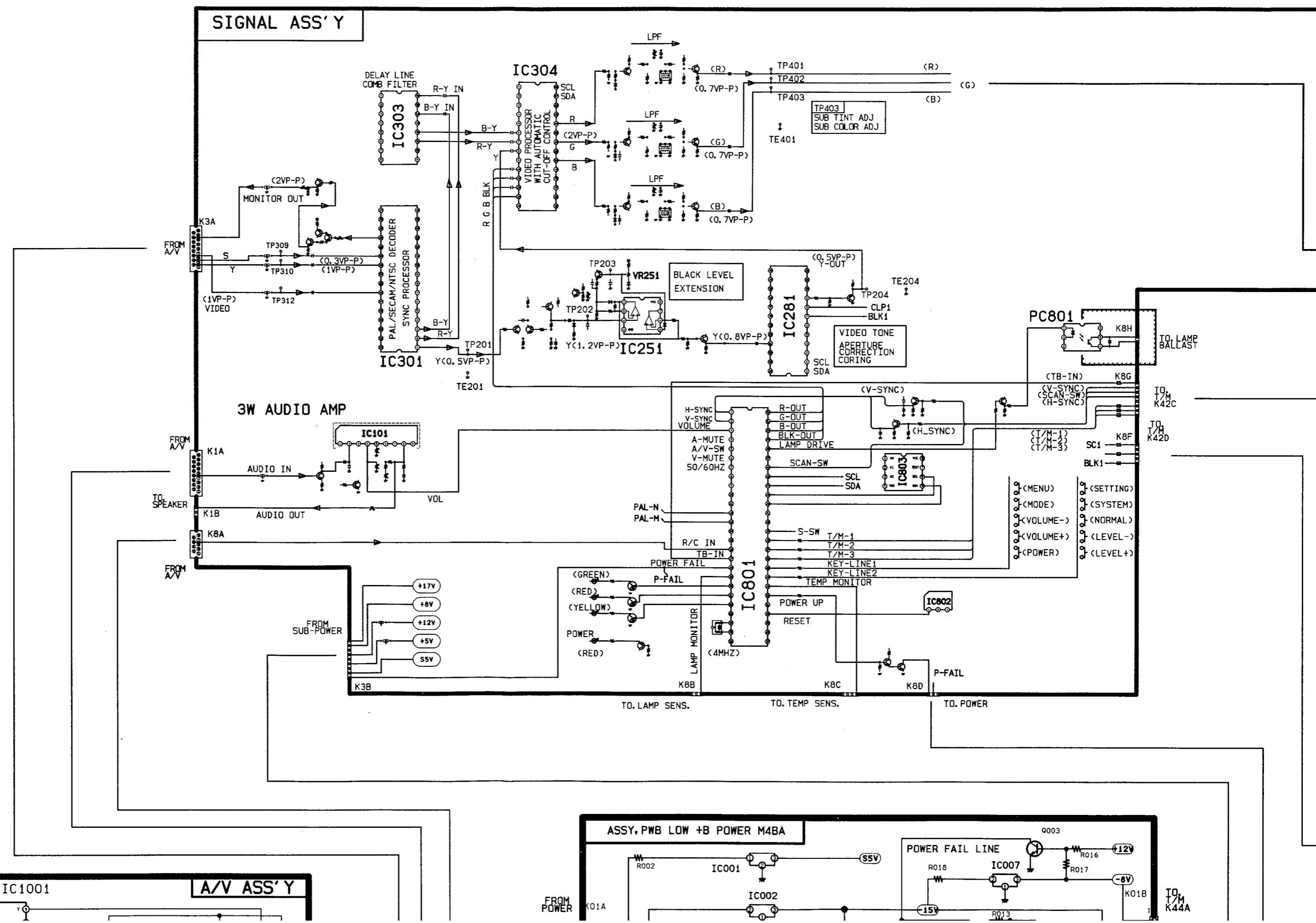
PC



- 98 -

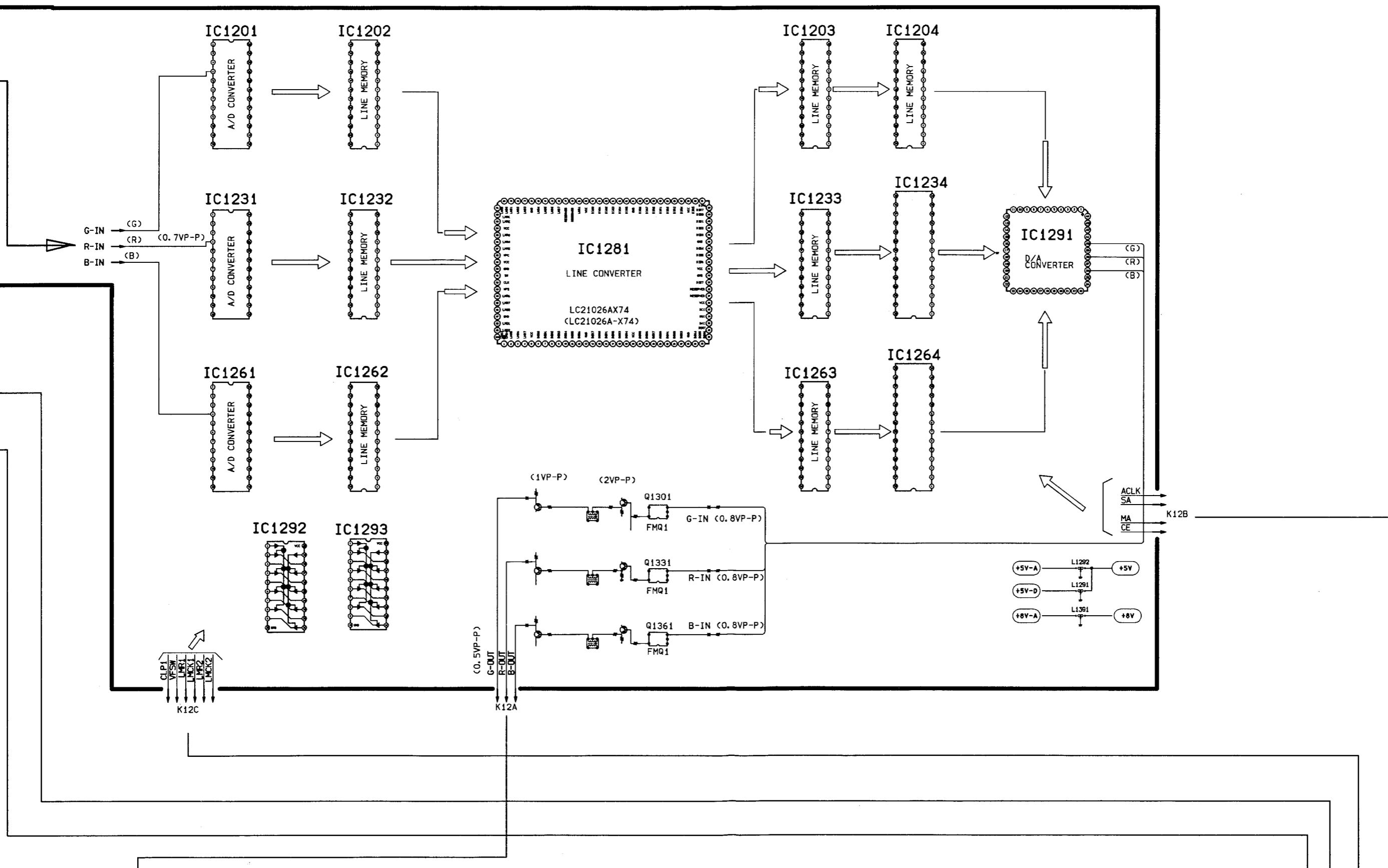
- 9 -

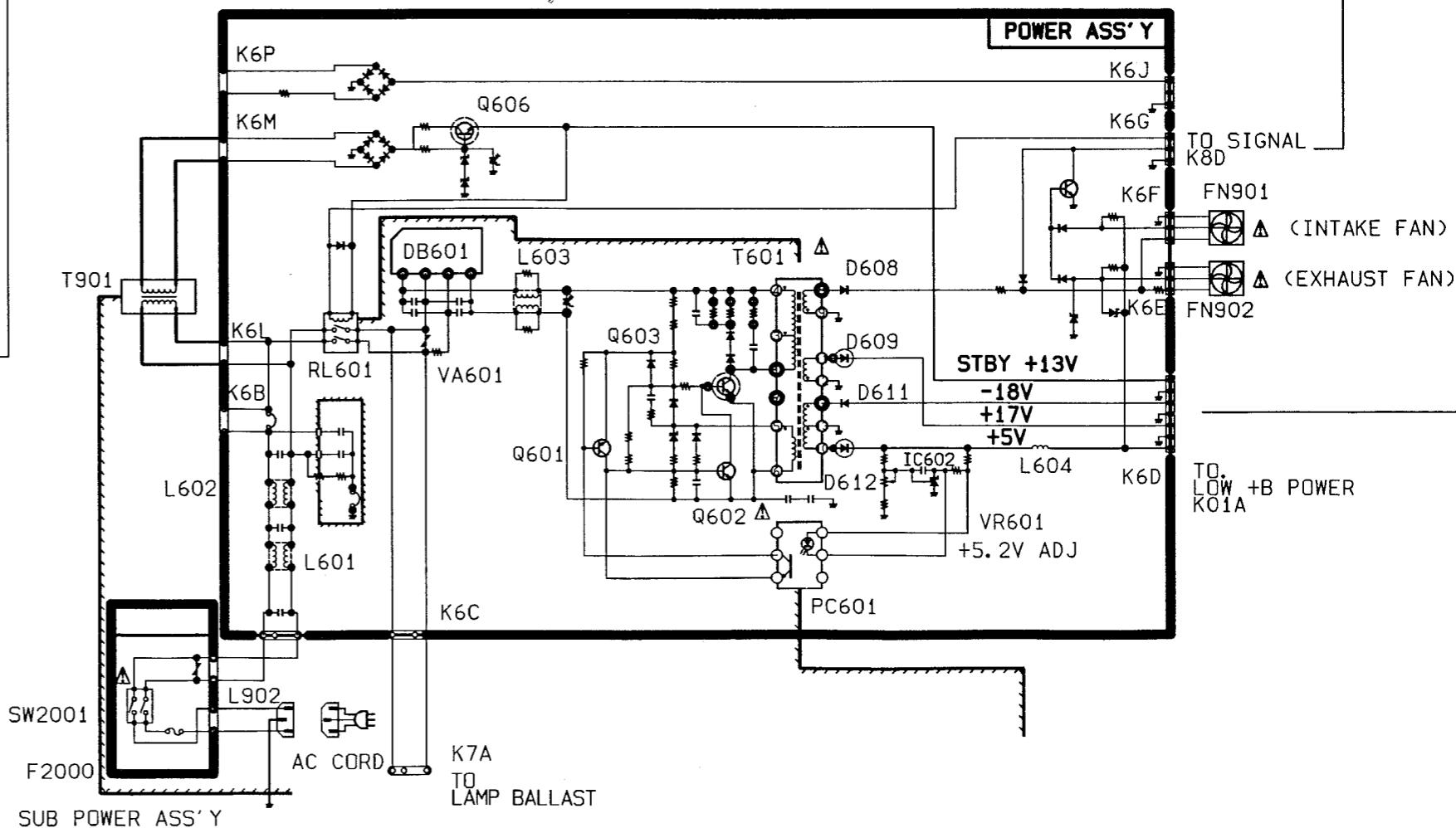
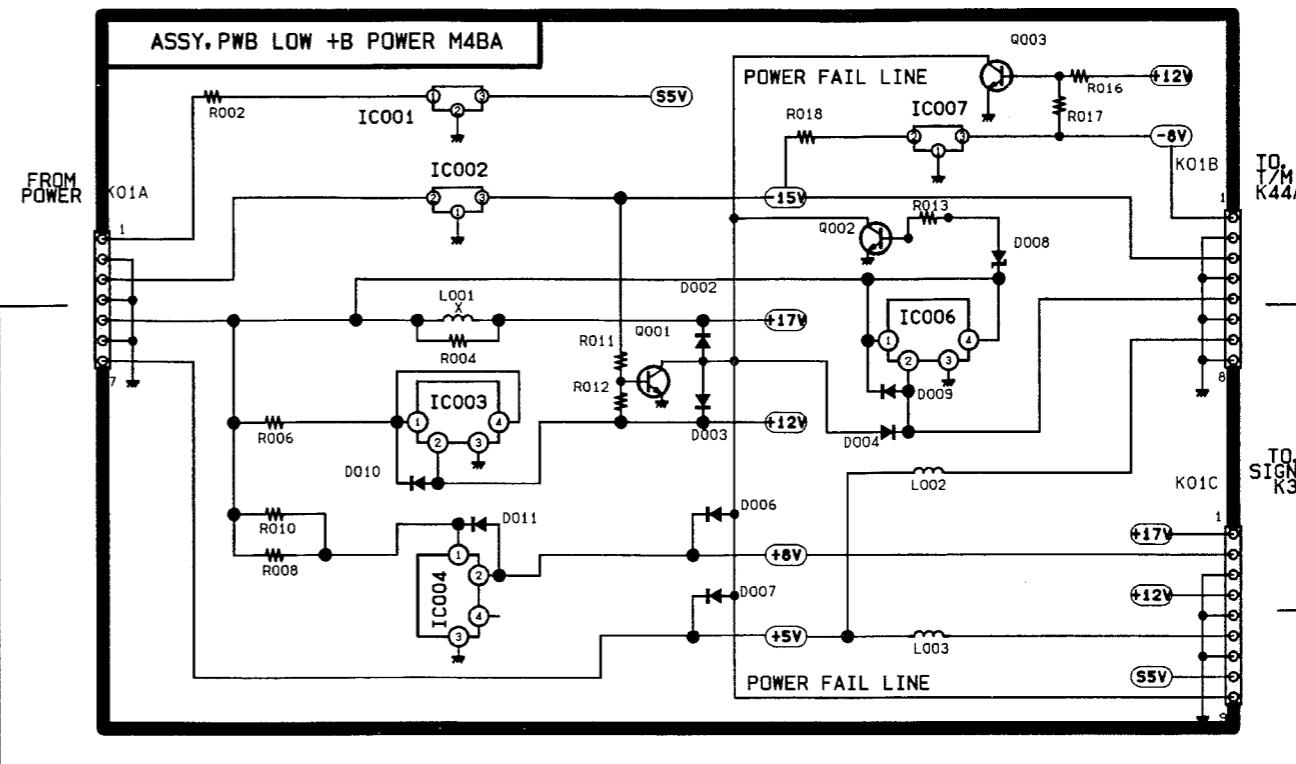
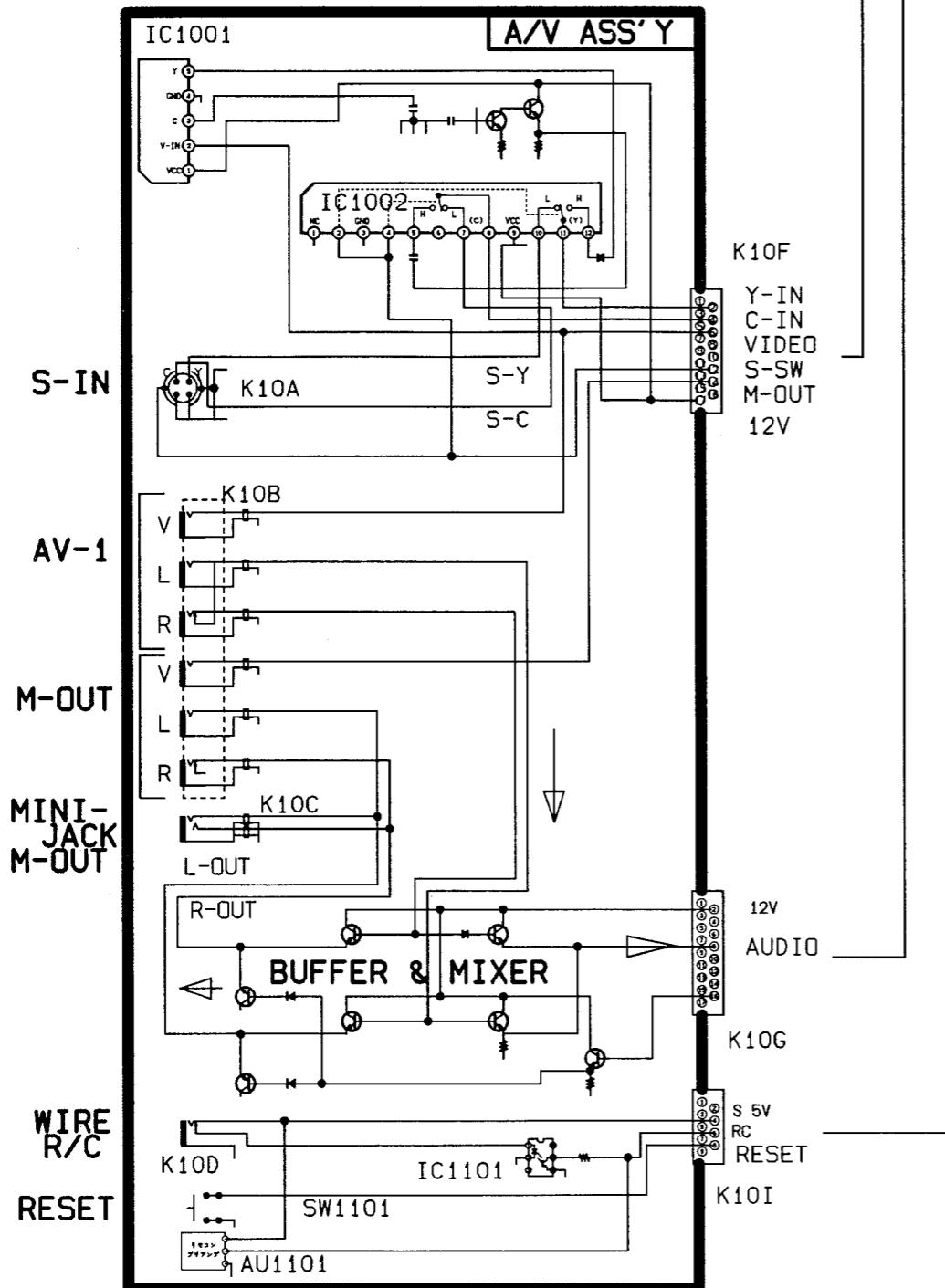
**BLOCK DIAGRAMS AND  
+B DISTRIBUTION DIAGRAMS**

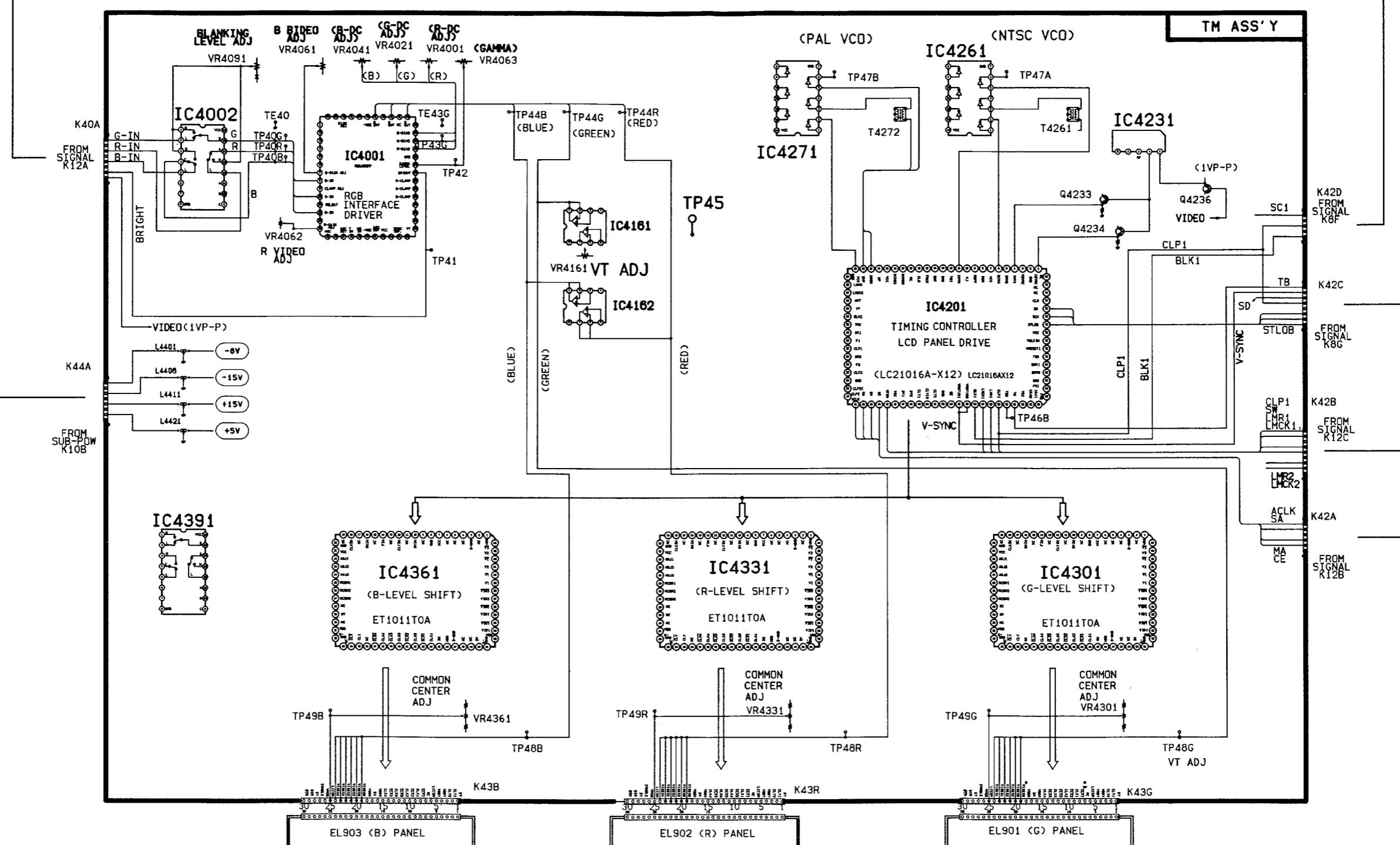


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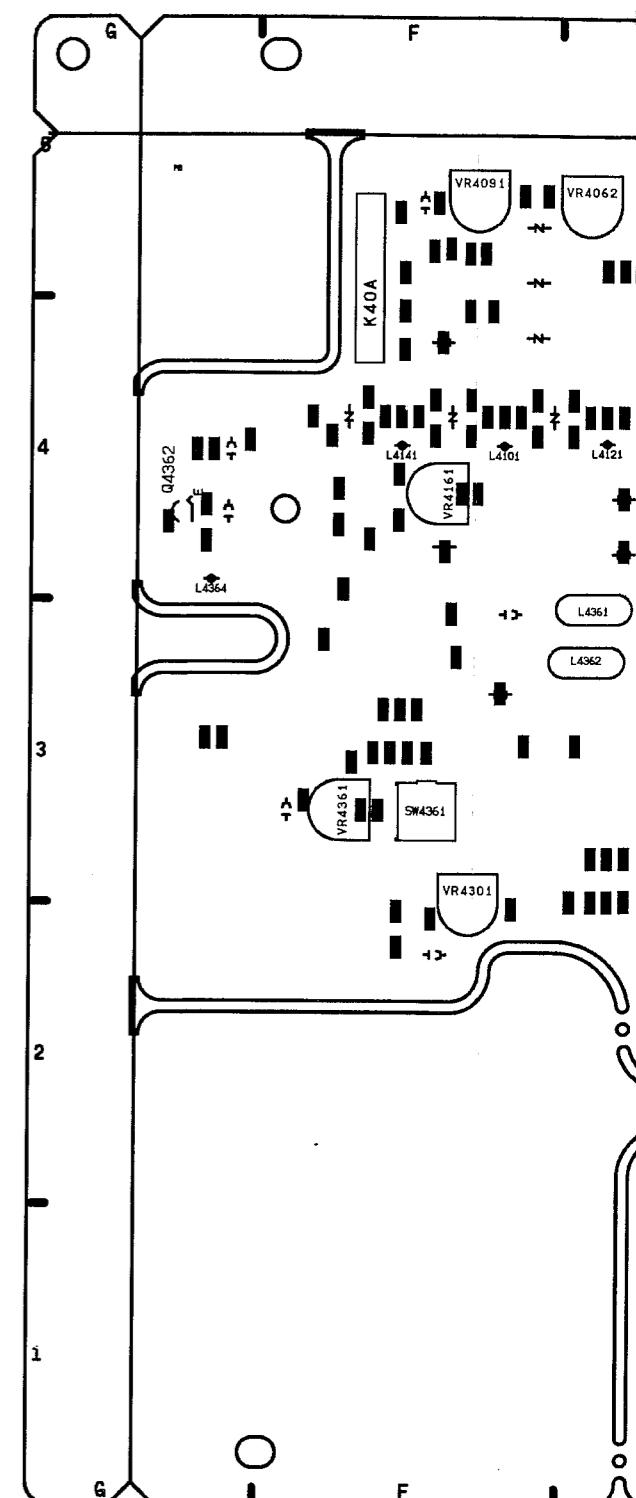
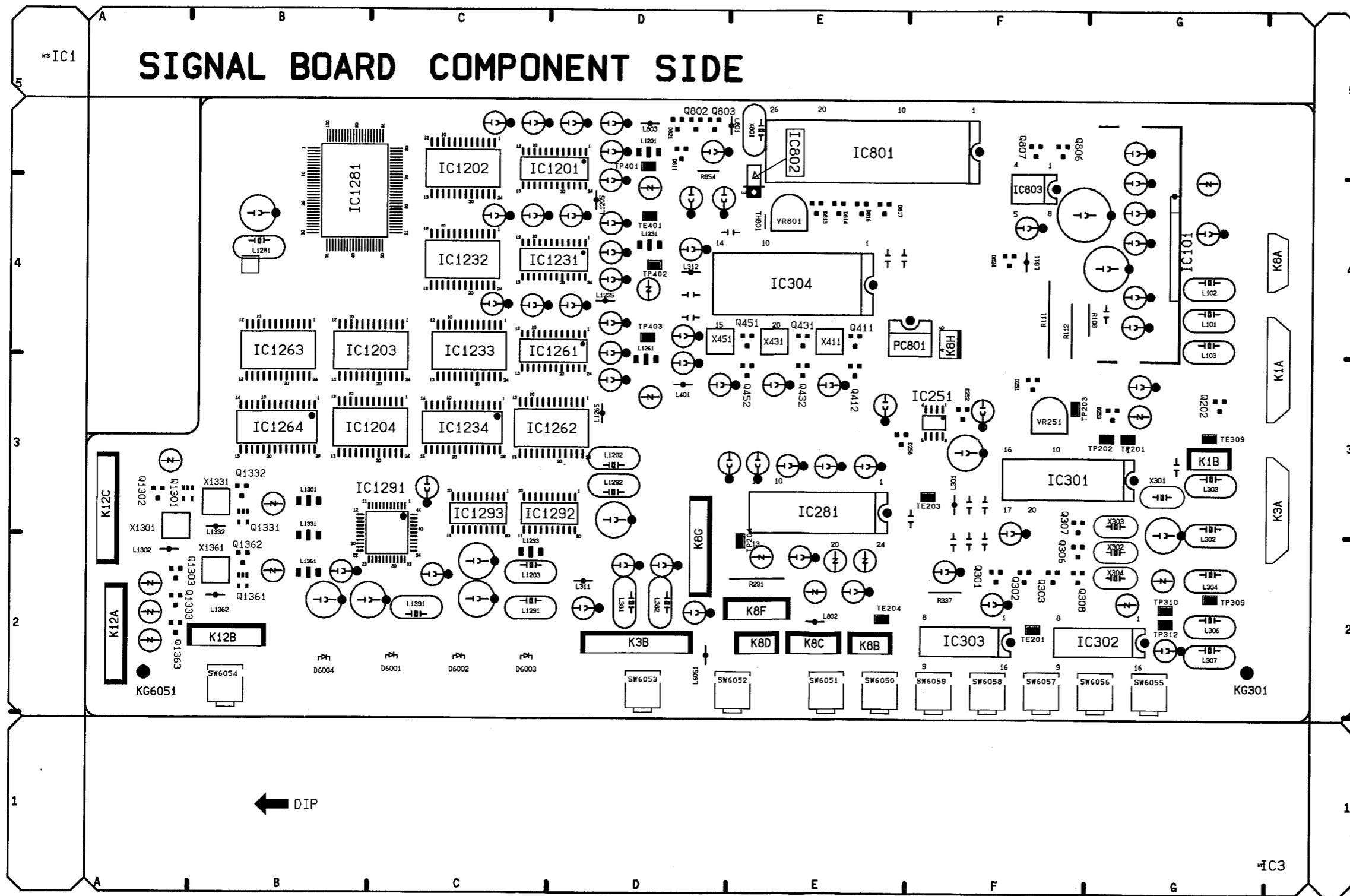




# MODEL PLC-400P/PB/PP

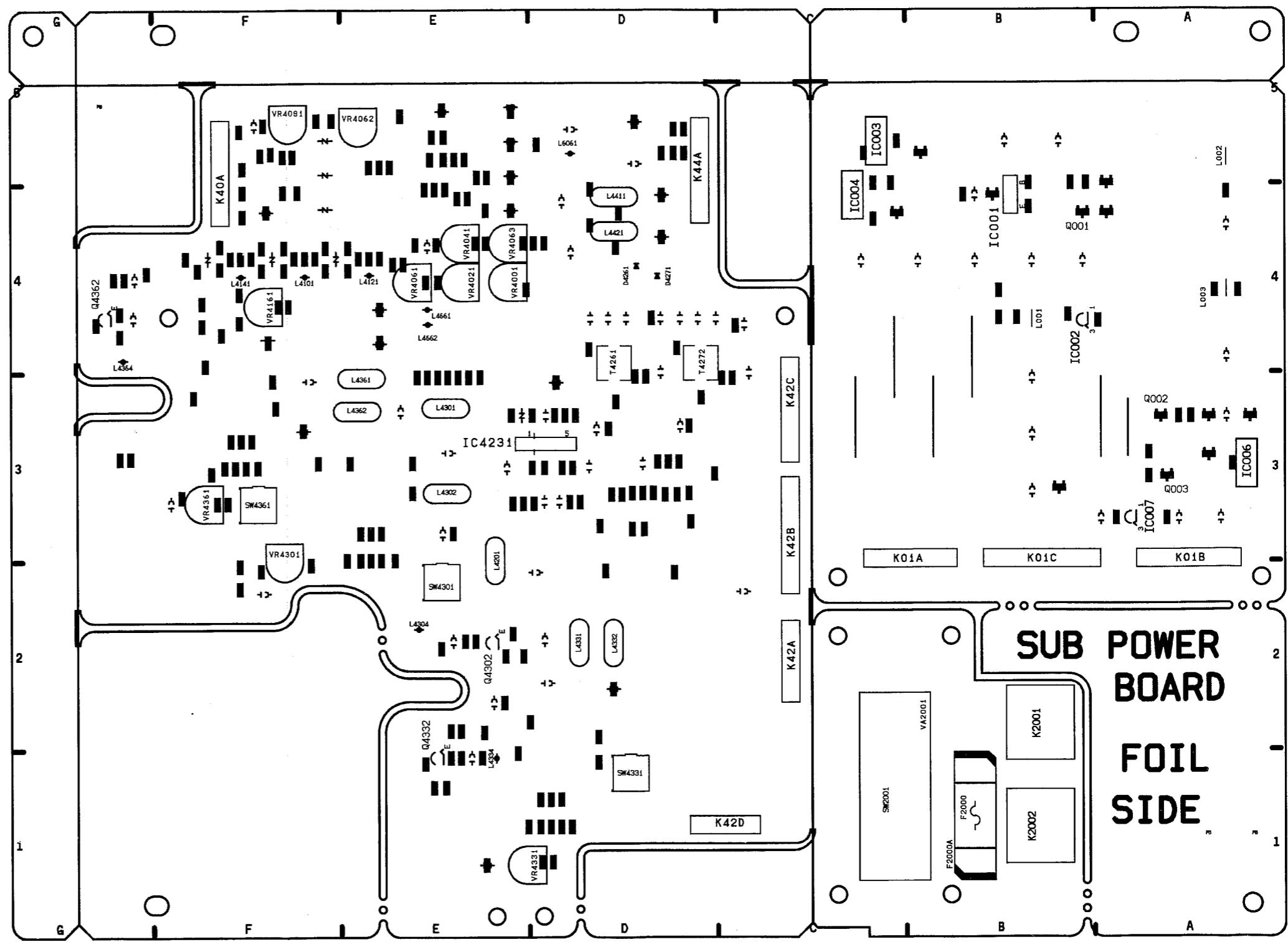
Service Ref.No. PLC-400P/PB/PP-00

## COMPONENT AND TESTPOINT LOCATIONS (See Parts Address List)



**LOW+B POEWR BOARD  
FOIL SIDE**

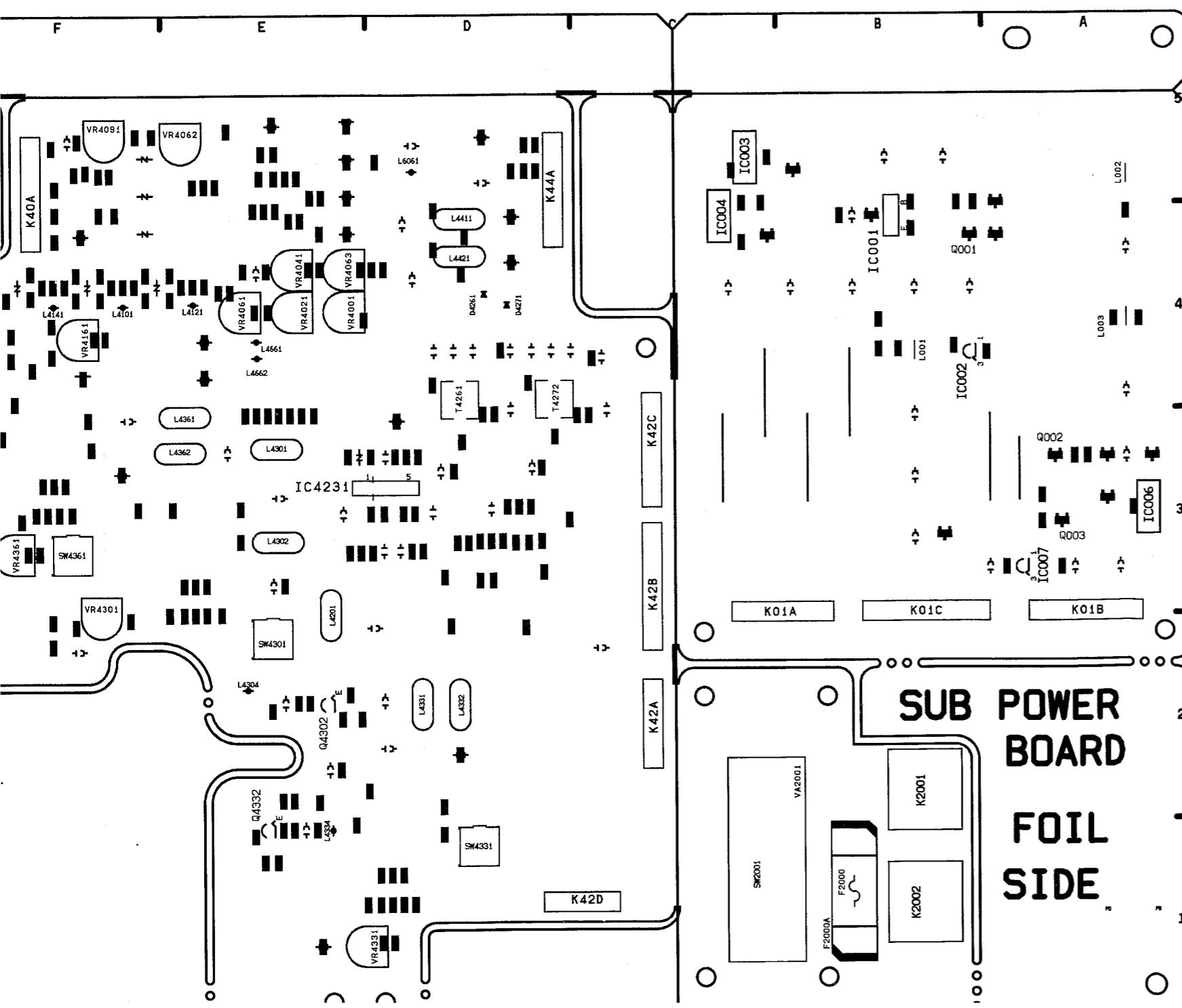
**TM BOARD  
FOIL SIDE**



# **LOW+B POWER BOARD**

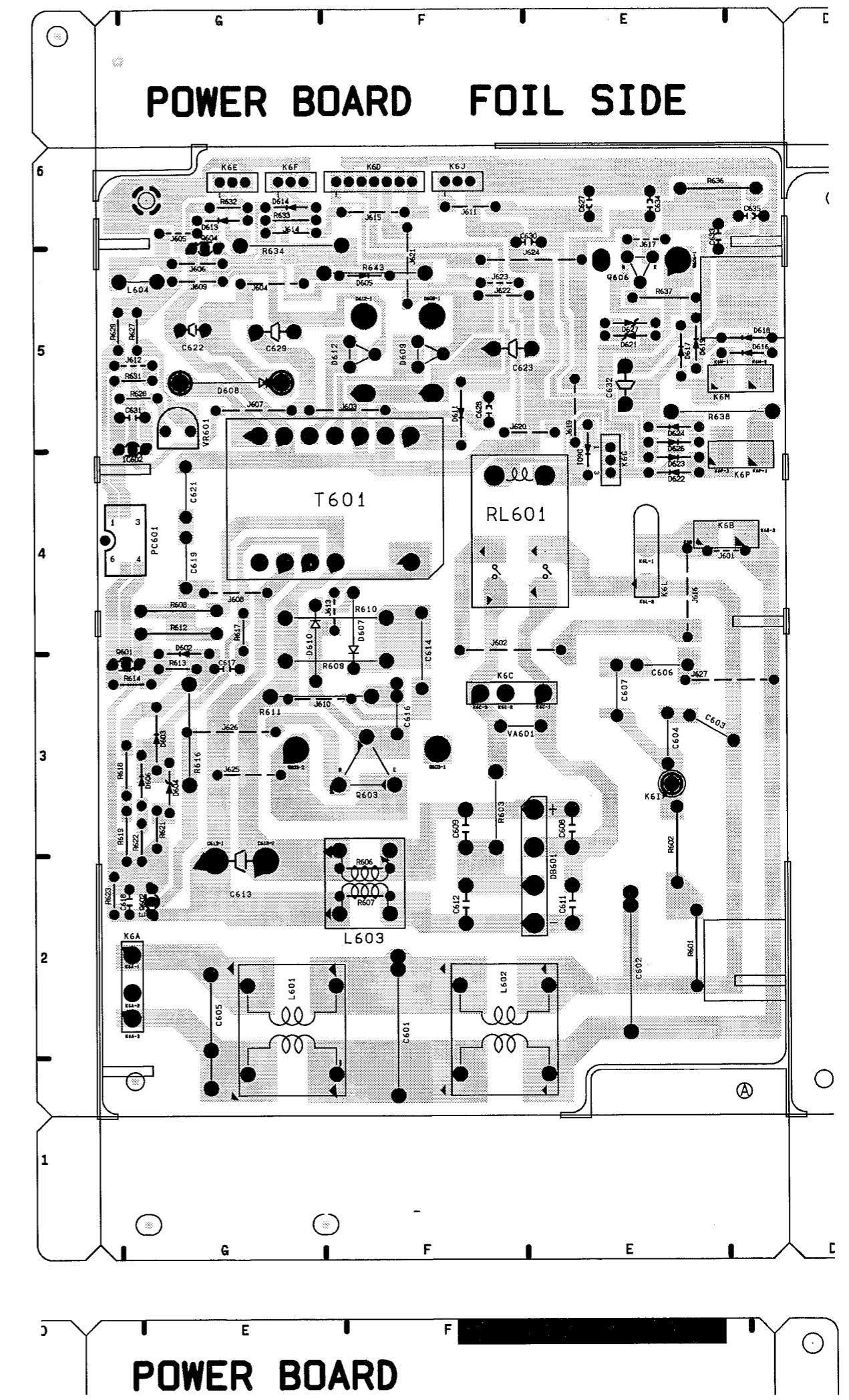
TM BOARD

**LOW+B POEWR BOARD  
FOIL SIDE**

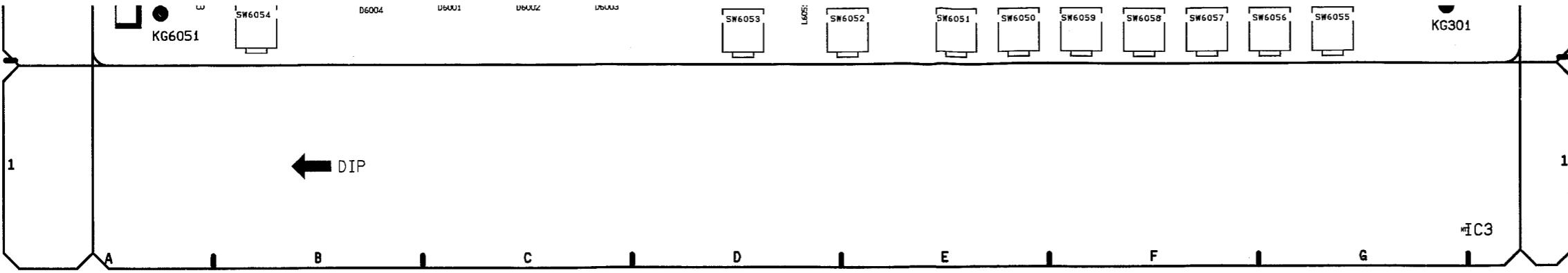


**TM BOARD  
FOIL SIDE**

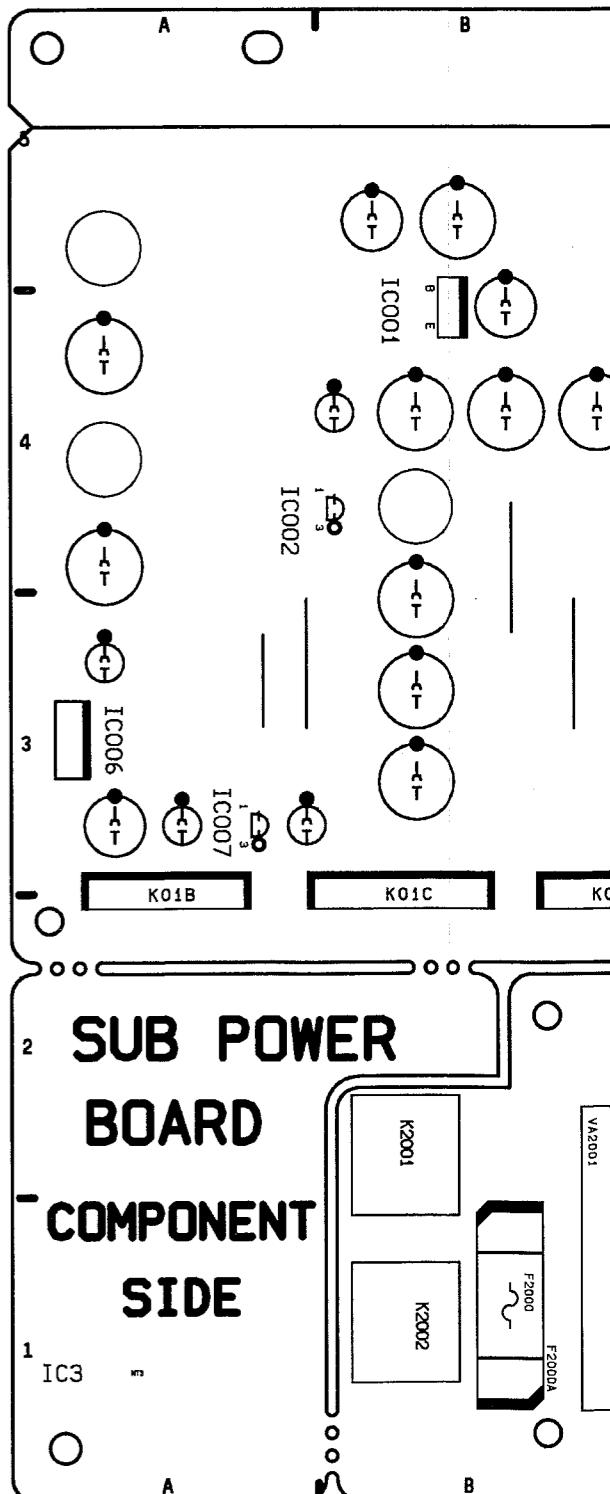
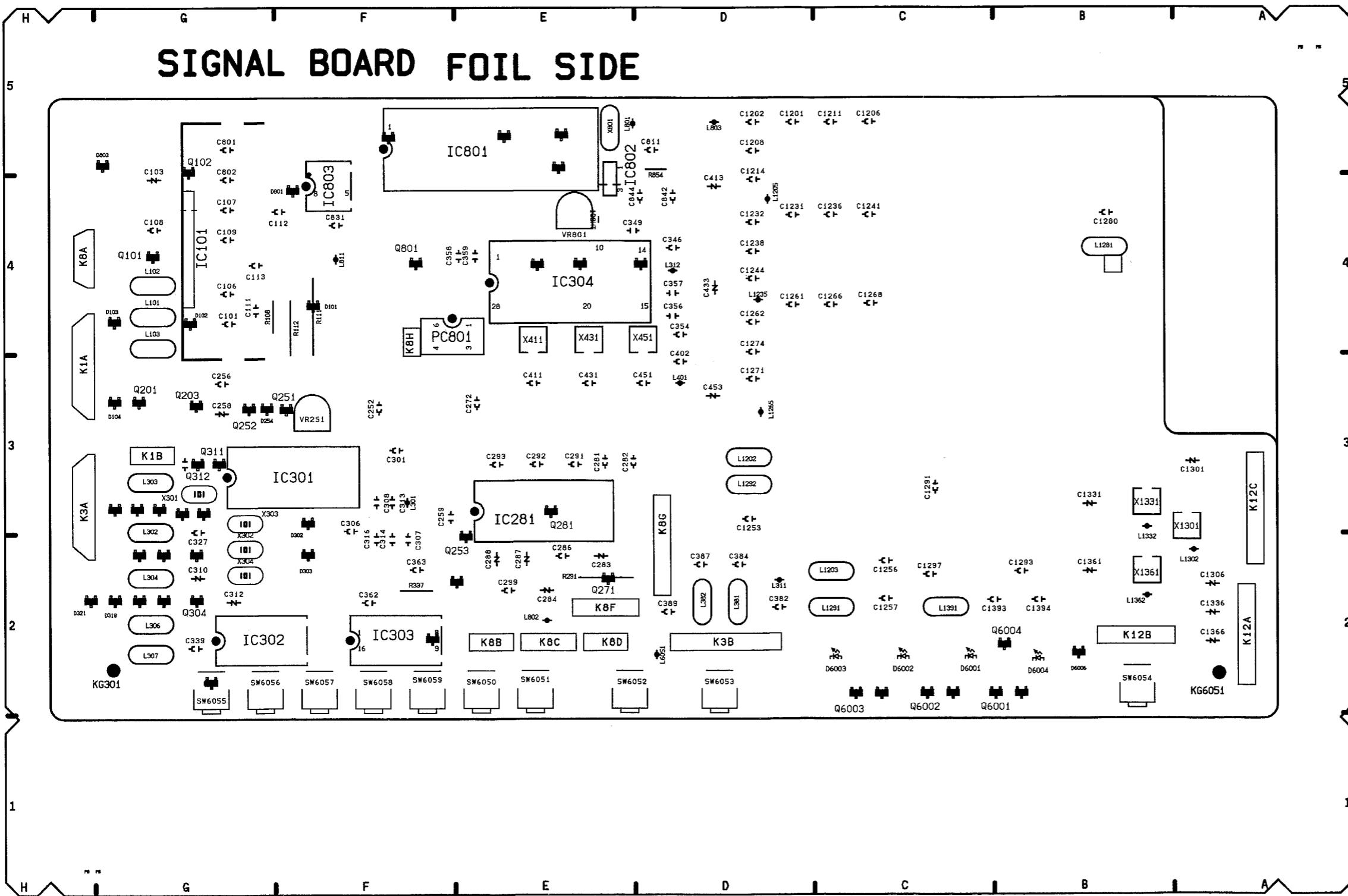
**SUB POWER  
BOARD  
FOIL  
SIDE**

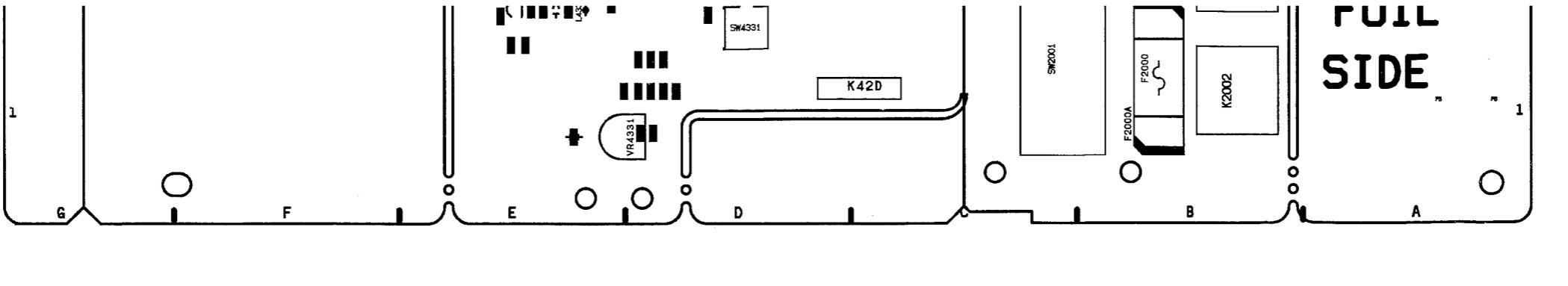
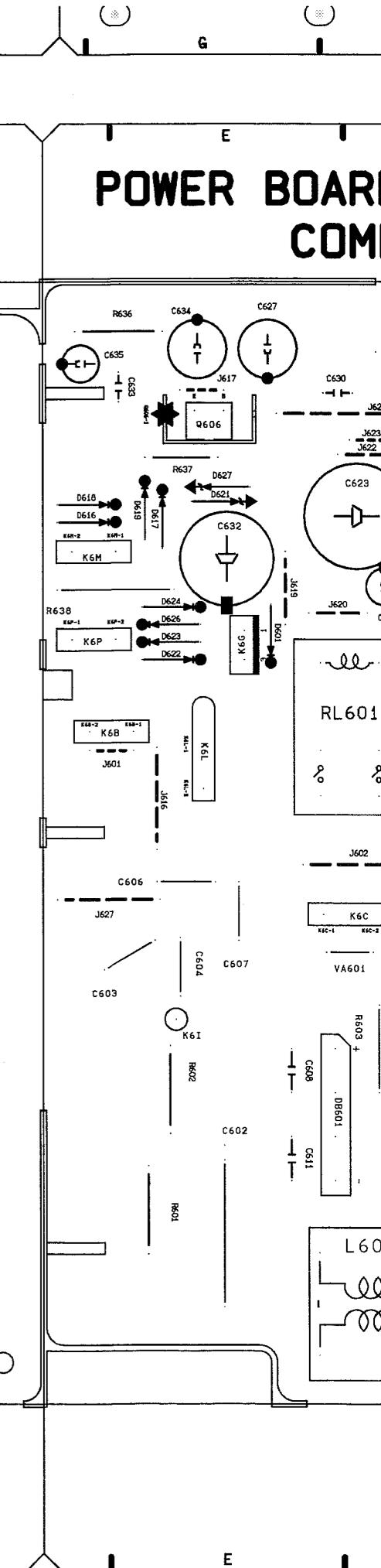


**POWER BOARD**



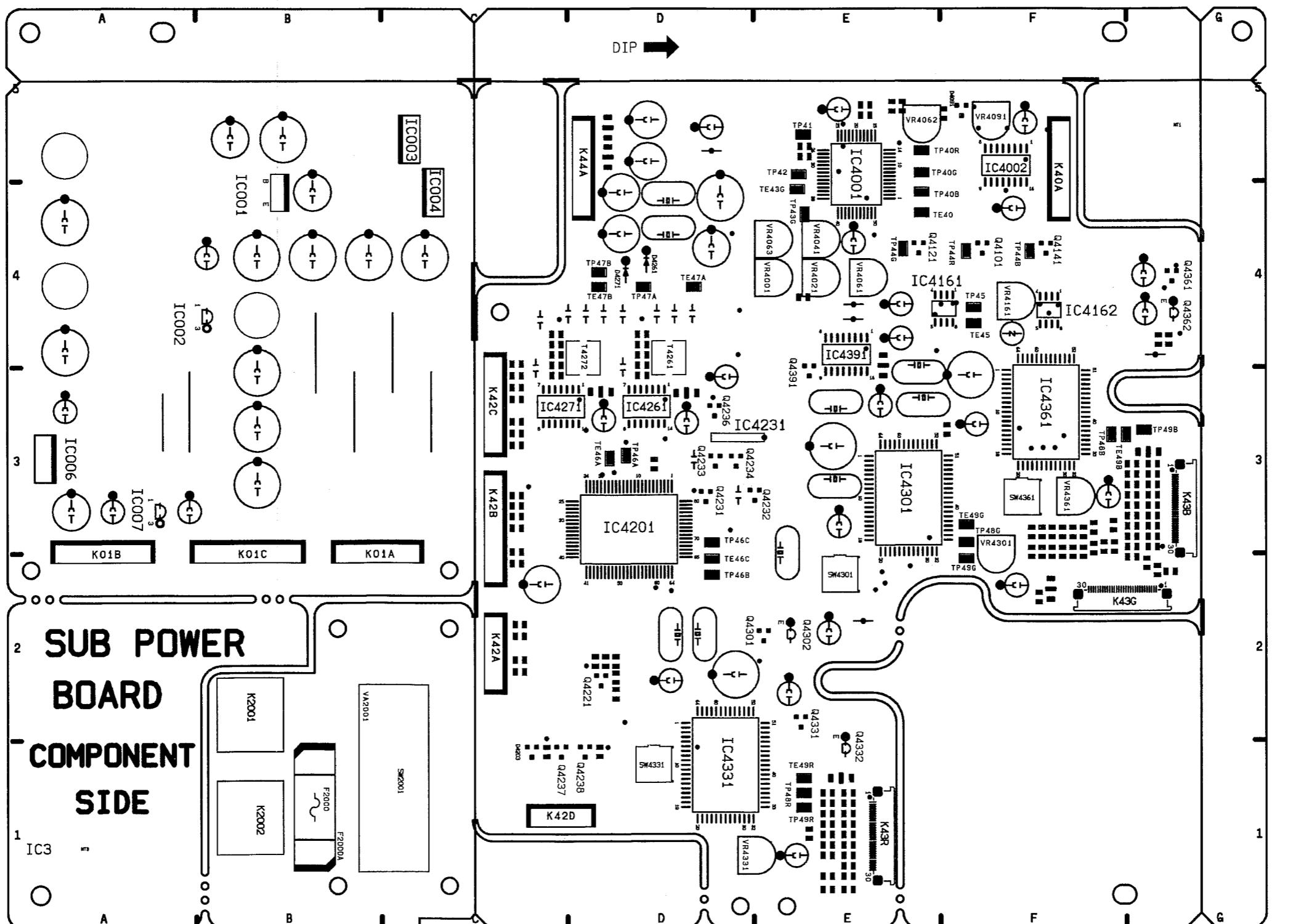
**LOW+B POWER BOARD  
COMPONENT SIDE**



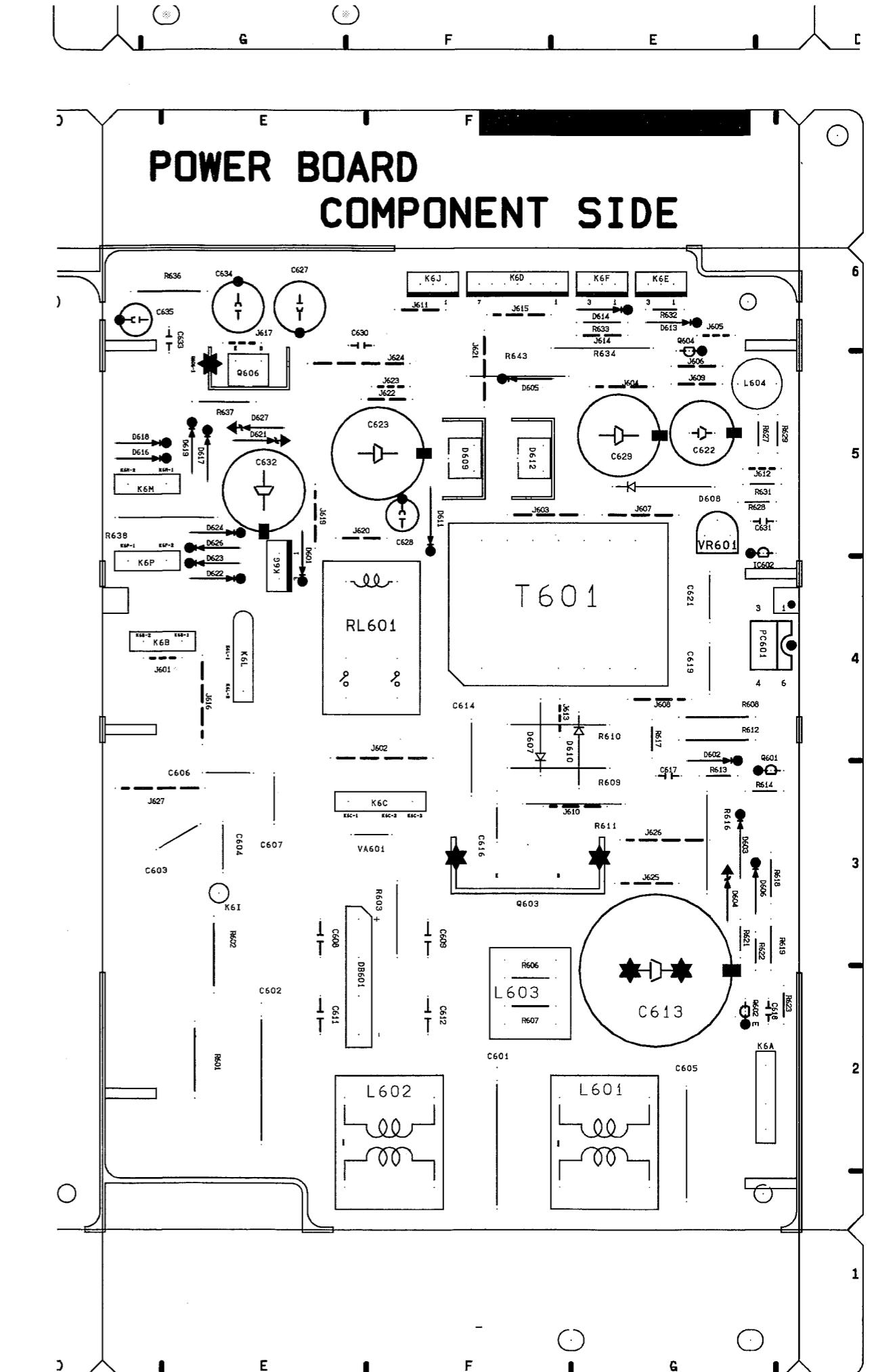
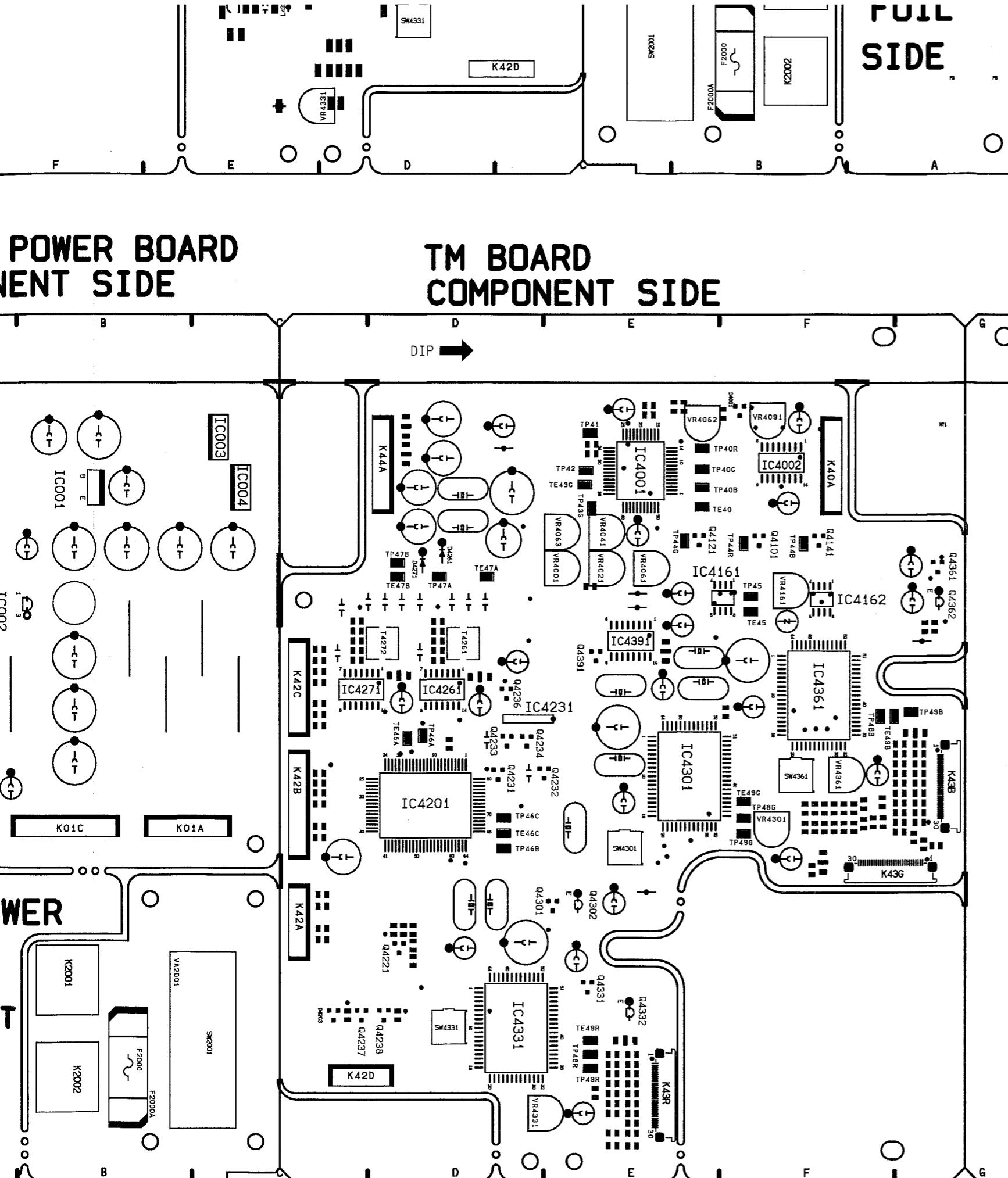


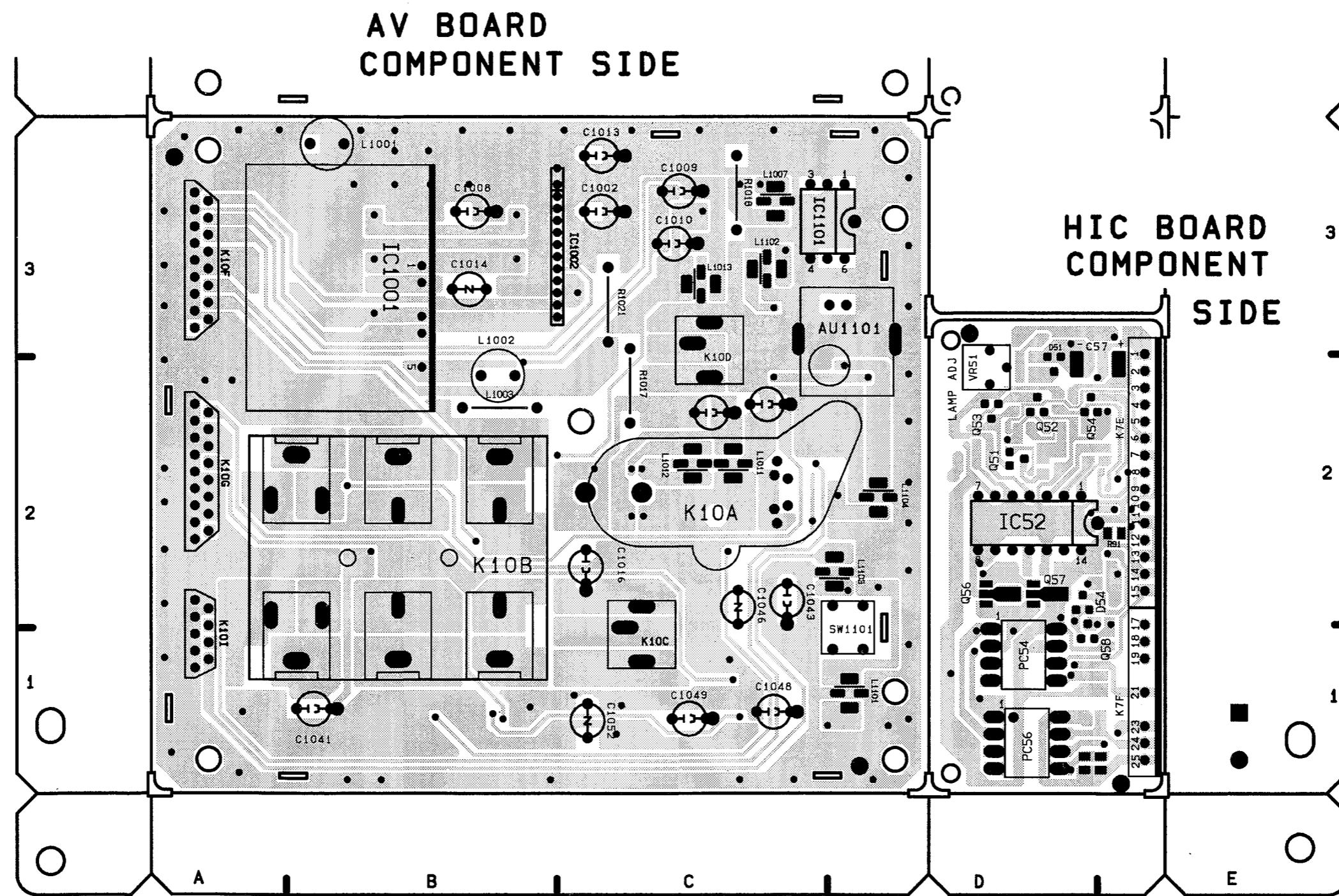
# **LOW+B POWER BOARD COMPONENT SIDE**

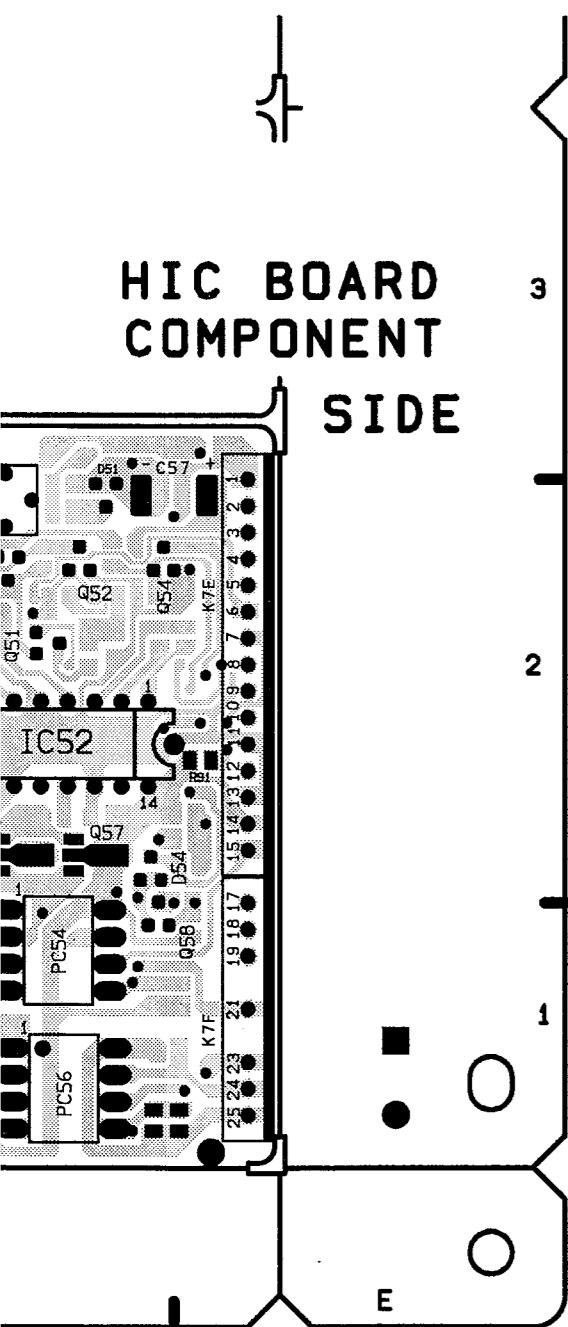
# TM BOARD COMPONENT SIDE



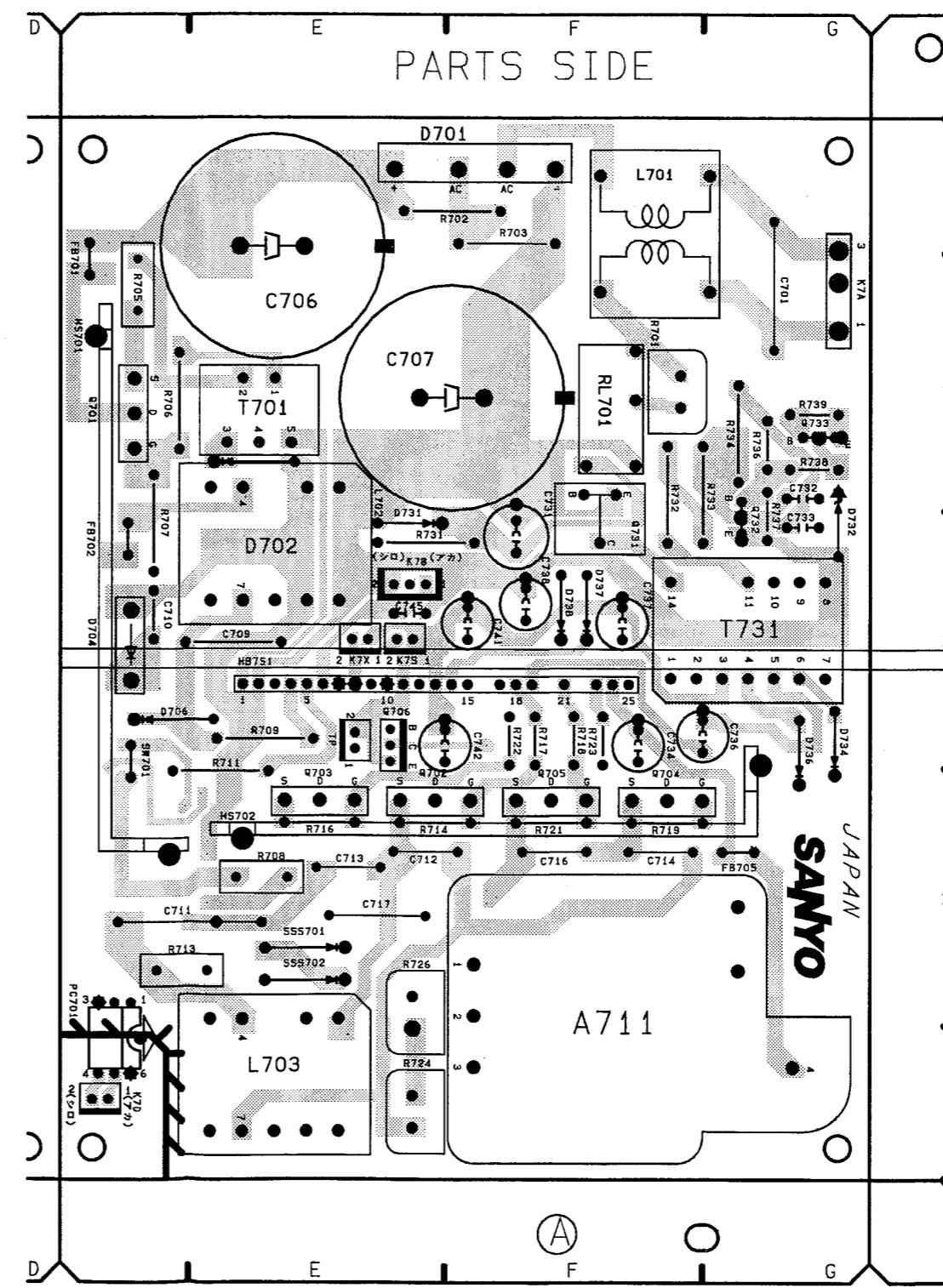
**2 SUB POWER  
BOARD  
- COMPONENT  
SIDE**

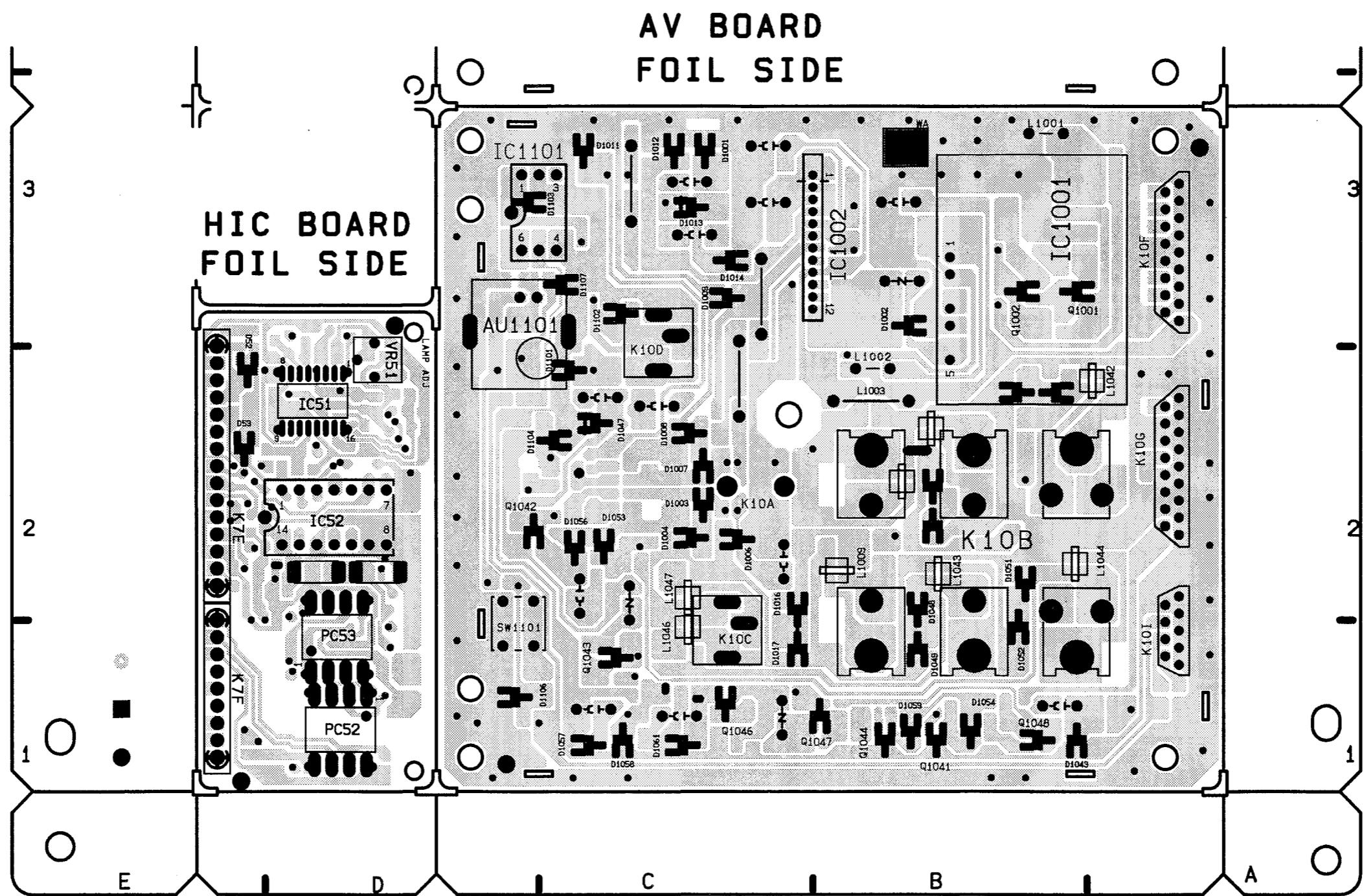


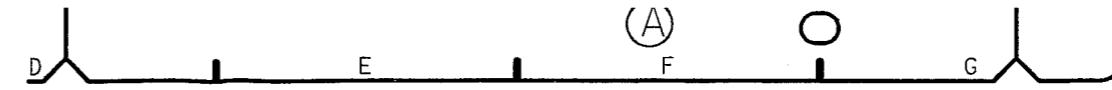




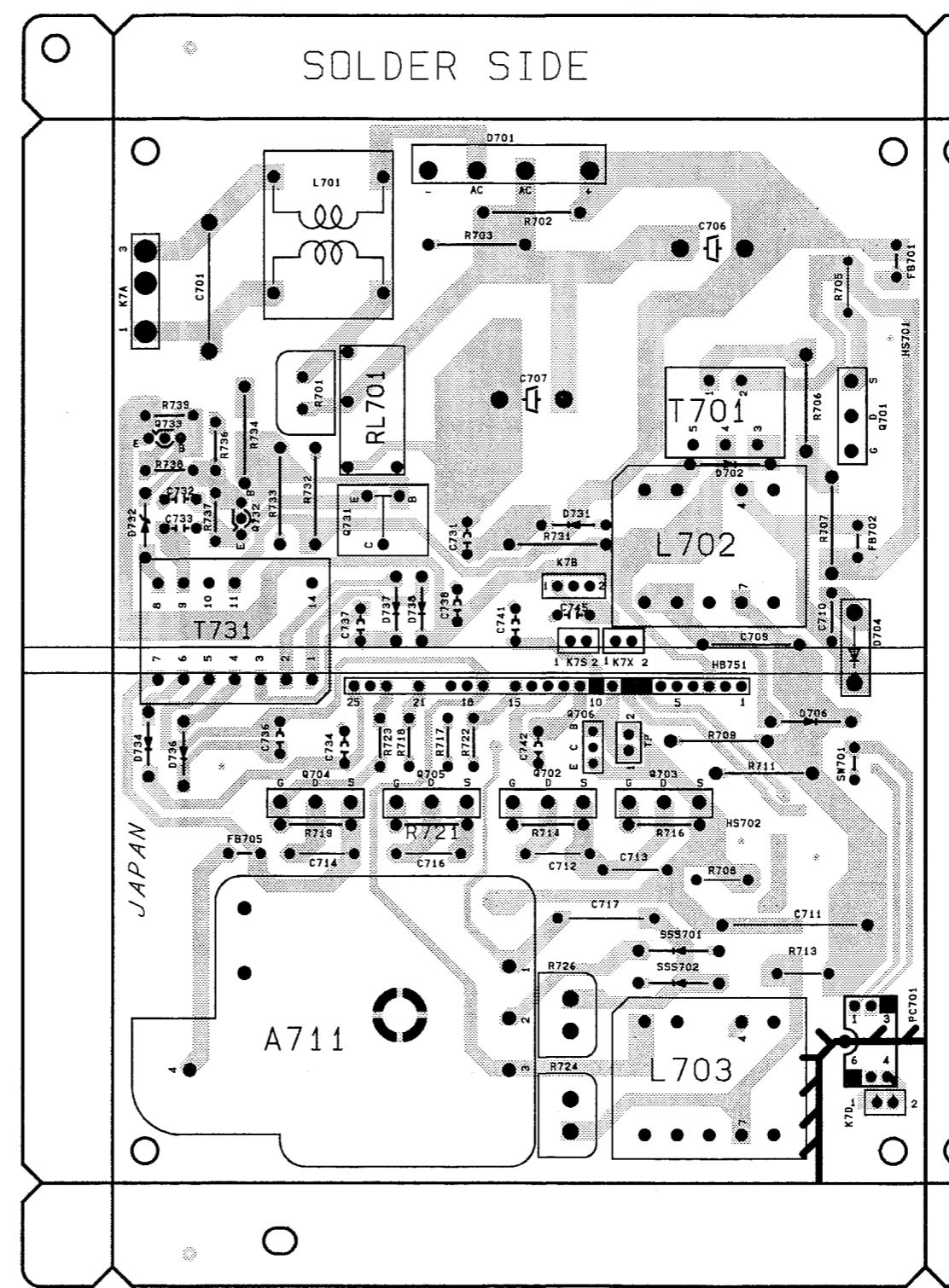
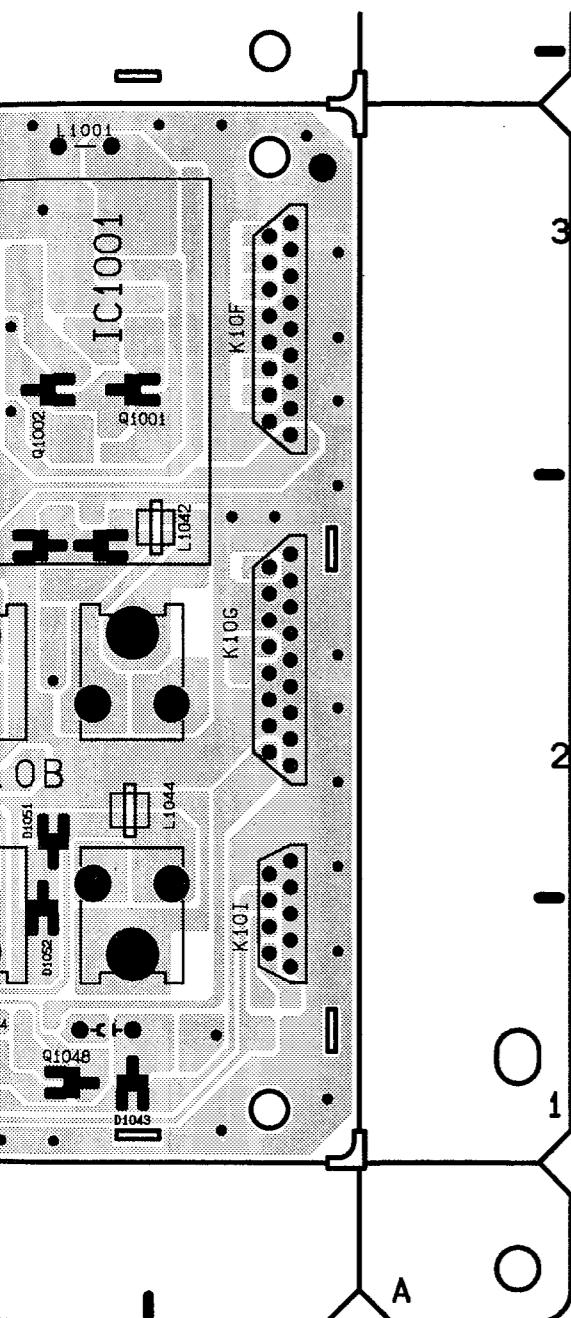
## LAMP BALLAST BOARD COMPONENT SIDE







## LAMP BALLAST BOARD FOIL SIDE



**SANYO**

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SANYO Electric Co., Ltd.

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