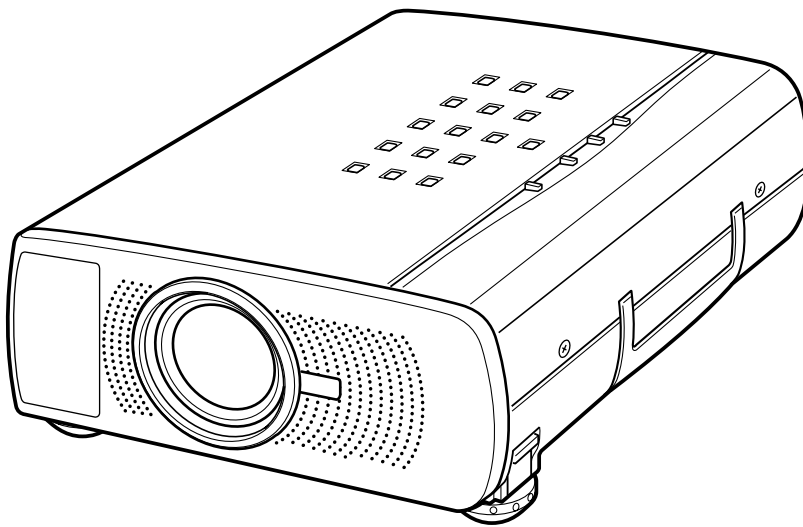


FILE NO.

## SERVICE MANUAL Multimedia Projector

**Model No. PLC-SU20E**  
(Europe, Asia, Africa,  
M.E.)  
**PLC-SU20B**  
(U.K.)

Original Version



**Service Ref. No.: PLC-SU20E-00**  
**PLC-SU20B-00**

Give complete "Service Ref. No." for parts order or servicing, it is shown on the rating sheet on the projector.

### PRODUCT CODE

(PA6A) PLC-SU20E: **1 122 068 00**  
(PA6C) PLC-SU20B: **1 122 068 02**

REFERENCE NO. SM5110048

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# ■ Safety Instructions

## SAFETY PRECAUTIONS

### WARNING:

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

The following precautions must be observed.

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

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

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

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

## PRODUCT SAFETY NOTICE

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

## SERVICE PERSONNEL WARNING

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

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

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

### **CAUTION**



LASER RADIATION  
DO NOT STARE INTO BEAM  
MAX. OUTPUT: 1mW  
WAVE LENGTH: 650±20nm  
CLASS II LASER PRODUCT

This product is complied with 21 CFR  
part 1040.10

LASER RADIATION  
DO NOT STARE INTO BEAM  
CLASS 2 LASER PRODUCT  
LASER-STRAHLUNG  
NICHT IN DEN STRAHL BLICKEN  
LASER KLASSE 2  
レーザ放射クラス2レーザ製品  
ビームをのぞき込まないこと  
IEC60825-1, Am. 1 1997  
MAX OUTPUT (最大出力) : 1 mW  
WAVE LENGTH (波長) : 650±20nm

## ■ Specifications

---

|                                  |                                                                                                                           |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Projector Type                   | Multi-media Projector                                                                                                     |
| Dimensions (W x H x D)           | 239mm x 90mm x 323mm                                                                                                      |
| Net Weight                       | 3.9kg                                                                                                                     |
| LCD Panel System                 | 0.9" TFT Active Matrix type, 3 panels                                                                                     |
| Panel Resolution                 | 800 x 600 dots                                                                                                            |
| Number of Pixels                 | 1,440,000 (800 x 600 x 3 panels)                                                                                          |
| Color System                     | 6 color system (PAL, SECAM, NTSC, NTSC4.43, PAL-M and PAL-N)                                                              |
| Scanning Frequency               | H-sync. 15 ~ 80kHz, V-sync. 50 ~ 100Hz                                                                                    |
| Projection Image Size (diagonal) | Adjustable from 30" to 300"                                                                                               |
| Horizontal Resolution            | 750 TV lines                                                                                                              |
| Projection Lens                  | F1.7 ~ 2.0 lens with f33.2mm ~ 43.1mm Motor zoom and focus                                                                |
| Throw Distance                   | 1.4m ~ 10.8m                                                                                                              |
| Projection Lamp                  | 150watt type                                                                                                              |
| AV Input Jacks                   | RCA Type x 1 (Video, Audio R and L) and DIN 4 pin (S-Video) x 1                                                           |
| Computer Input Jack              | (VGA) HDB15 Terminal x 1                                                                                                  |
| Control Port Jack                | DIN 8 pin x 1                                                                                                             |
| Monitor Output Jack              | (VGA) HDB15 Terminal x 1                                                                                                  |
| Computer Audio Input Jack        | Mini Jack (stereo)                                                                                                        |
| Audio Output Jack                | Mini Jack (stereo)                                                                                                        |
| Internal Audio Amp.              | 1W RMS (monaural)                                                                                                         |
| Built-in Speaker                 | 1 speaker, 40mm x 30mm                                                                                                    |
| Feet Adjustment                  | 0° to 10°                                                                                                                 |
| Voltage                          | AC 200 ~ 240V, 50/60Hz                                                                                                    |
| Power Consumption                | 1.4A (Max. Ampere)                                                                                                        |
| Operating Temperature            | 5°C ~ 35°C                                                                                                                |
| Storage Temperature              | -10°C ~ 60°C                                                                                                              |
| Remote Control Transmitters      | Wireless Remote Control with Laser Beam (Class II Laser)<br>Max. Output 1mW/Wave length 650 ±20nm, batteries (2) AA type. |

● The specifications are subject to change without notice.

# Adjustments after Parts Replacement

● : Adjustment necessary ○ : Check necessary ▲ : Specified adjustment necessary see LCD Panel Replacement

|                        |                                | Disassembly / Replaced Part |   |   |                 |                 |   |   |             |                  |   |   |   |
|------------------------|--------------------------------|-----------------------------|---|---|-----------------|-----------------|---|---|-------------|------------------|---|---|---|
|                        |                                | LCD Panel                   |   |   | Integrator lens | Polarized glass |   |   | P.F.C Board | Main Comp. Board |   |   |   |
|                        |                                | R                           | G | B |                 | R               | G | B |             | A                | B | C | D |
| Optical Adjustments    | Convergence Adjustment         |                             |   |   |                 |                 |   |   |             |                  |   |   |   |
|                        | R-Convergence adjustment       | ●                           | ● |   |                 |                 |   |   |             |                  |   |   |   |
|                        | B-Convergence adjustment       |                             | ● | ● |                 |                 |   |   |             |                  |   |   |   |
|                        | Integrator Lens Adjustment     |                             |   |   | ●               |                 |   |   |             |                  |   |   |   |
|                        | Contrast Adjustment            |                             |   |   |                 |                 |   |   |             |                  |   |   |   |
|                        | R-Contrast adjustment          |                             |   |   |                 | ●               |   |   |             |                  |   |   |   |
|                        | G-Contrast adjustment          |                             |   |   |                 |                 | ● |   |             |                  |   |   |   |
|                        | B-Contrast adjustment          |                             |   |   |                 |                 |   | ● |             |                  |   |   |   |
| Electrical Adjustments | Output voltage adjustment      |                             |   |   |                 |                 |   |   | ●           |                  |   |   |   |
|                        | Pedestal adjustment            |                             |   |   |                 |                 |   |   |             |                  |   |   |   |
|                        | R-pedestal adjustment          |                             |   |   |                 |                 |   |   |             | ●                |   |   |   |
|                        | G-pedestal adjustment          |                             |   |   |                 |                 |   |   |             | ●                |   |   |   |
|                        | B-pedestal adjustment          |                             |   |   |                 |                 |   |   |             | ●                |   |   |   |
|                        | Offset adjustment              |                             |   |   |                 |                 |   |   |             |                  |   |   |   |
|                        | R-offset adjustment            |                             |   |   |                 |                 |   |   |             | ●                |   |   |   |
|                        | G-offset adjustment            |                             |   |   |                 |                 |   |   |             | ●                |   |   |   |
|                        | B-offset adjustment            |                             |   |   |                 |                 |   |   |             | ●                |   |   |   |
|                        | Video gain adjustment-[CG/MCI] |                             |   |   |                 |                 |   |   |             |                  |   |   |   |
|                        | CG-video gain adjustment       |                             |   |   |                 |                 |   |   |             | ●                |   |   |   |
|                        | MCI-video gain adjustment      |                             |   |   |                 |                 |   |   |             | ●                |   |   |   |
|                        | Video gain adjustment-[AV]     |                             |   |   |                 |                 |   |   |             |                  |   |   |   |
|                        | R-video gain adjustment        |                             |   |   |                 |                 |   |   |             | ●                |   |   |   |
|                        | G-video gain adjustment        |                             |   |   |                 |                 |   |   |             | ●                |   |   |   |
|                        | B-video gain adjustment        |                             |   |   |                 |                 |   |   |             | ●                |   |   |   |
|                        | Video center adjustment        |                             |   |   |                 |                 |   |   |             |                  |   |   |   |
|                        | R-video center adjustment      |                             |   |   |                 |                 |   |   |             | ●                | ● |   |   |
|                        | G-video center adjustment      |                             |   |   |                 |                 |   |   |             | ●                | ● |   |   |
|                        | B-video center adjustment      |                             |   |   |                 |                 |   |   |             | ●                | ● |   |   |
|                        | NRS Adjustment                 |                             |   |   |                 |                 |   |   |             | ●                | ● |   |   |
|                        | Gamma off video adjustment     |                             |   |   |                 |                 |   |   |             |                  |   |   |   |
|                        | CG-gamma off video adjustment  |                             |   |   |                 |                 |   |   |             | ●                | ● |   |   |
|                        | AV-gamma off video adjustment  |                             |   |   |                 |                 |   |   |             | ●                | ● |   |   |
|                        | CG/MCI/AV-video adjustment-1   | ▲                           | ▲ | ▲ |                 |                 |   |   |             |                  |   |   |   |
|                        | CG-video adjustment            |                             |   |   |                 |                 |   |   |             | ●                | ● |   |   |
|                        | R-video adjustment             |                             |   |   |                 |                 |   |   |             | ●                | ● |   |   |
|                        | B-video adjustment             |                             |   |   |                 |                 |   |   |             | ●                | ● |   |   |
|                        | CG/MCI/AV-video adjustment-2   |                             |   |   |                 |                 |   |   |             |                  |   |   |   |
|                        | CG-video adjustment            |                             |   |   |                 |                 |   |   |             | ●                | ● |   |   |
|                        | MCI-video adjustment           |                             |   |   |                 |                 |   |   |             | ●                | ● |   |   |
|                        | AV-video adjustment            |                             |   |   |                 |                 |   |   |             | ●                | ● |   |   |
|                        | S/H clock adjustment           |                             |   |   |                 |                 |   |   |             | ●                | ● |   |   |
|                        | Common center adjustment       |                             |   |   |                 |                 |   |   |             |                  |   |   |   |
|                        | R-common center adjustment     | ●                           |   |   |                 |                 |   |   |             | ●                | ● |   |   |
|                        | G-common center adjustment     |                             | ● |   |                 |                 |   |   |             | ●                | ● |   |   |
|                        | B-common center adjustment     |                             |   | ● |                 |                 |   |   |             | ●                | ● |   |   |
|                        | White balance adjustment       |                             |   |   |                 |                 |   |   |             |                  |   |   |   |
|                        | CG-white balance adjustment    | ○                           | ○ | ○ |                 |                 |   |   |             | ○                | ○ | ○ |   |
|                        | MCI-white balance adjustment   | ○                           | ○ | ○ |                 |                 |   |   |             | ○                | ○ | ○ |   |
|                        | AV-white balance adjustment    | ○                           | ○ | ○ |                 |                 |   |   |             | ○                | ○ | ○ |   |
|                        | Black balance adjustment       | ○                           | ○ | ○ |                 |                 |   |   |             | ○                | ○ | ○ |   |
|                        | White Uniformity Adjustment    | ○                           | ○ | ○ |                 |                 |   |   |             | ○                | ○ | ○ |   |

## ■ Circuit Protections

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

### Fuse

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

It should be used the specified fuse as follows;

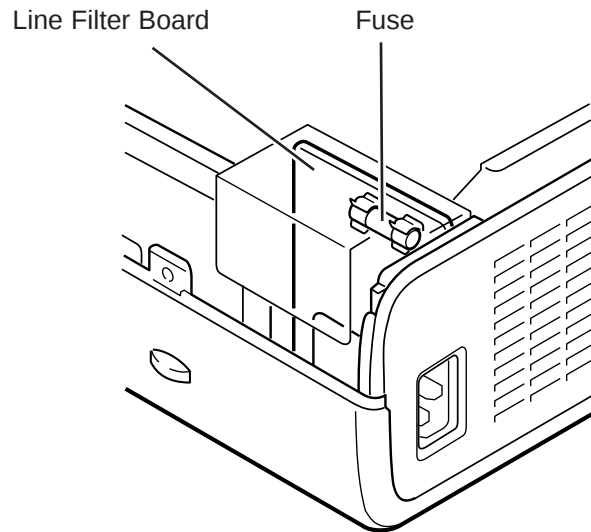
**Fuse Part No.: 423 022 2102**  
**TYPE T4.0AH 250V FUSE**  
**LITTLE FUSE INC. TYPE 215004**

#### How to replace the fuse

1. Remove the cabinet top following to “Mechanical Disassemblies”.

2. Remove the fuse from fuse holder.

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



### Thermal switch

There is the thermal switch (SW902) inside of the projector to prevent the internal temperature from rising abnormally. When the internal temperature reaches near 100°C, turn off the AC main power supply automatically.

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

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

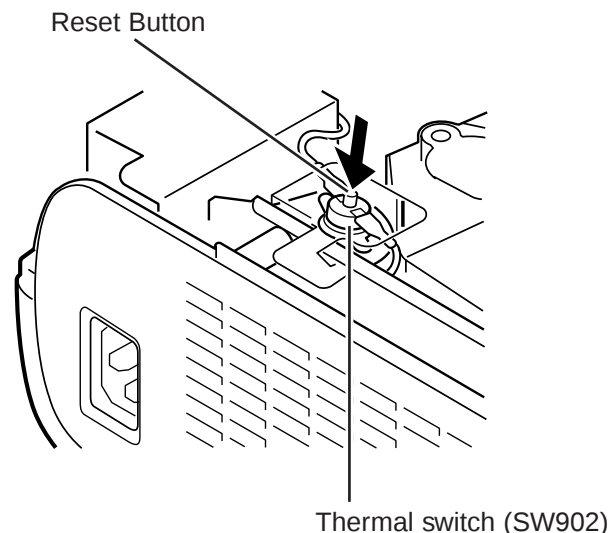
#### How to reset the thermal switch

1. Remove the cabinet top following to “Mechanical Disassemblies”.

2. Press the reset button on the thermal switch.

#### CAUTION:

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



## Warning temperature and power failure protection

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

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

### Possible causes

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

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

## Air filter care and cleaning

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

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

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

### CAUTION:

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

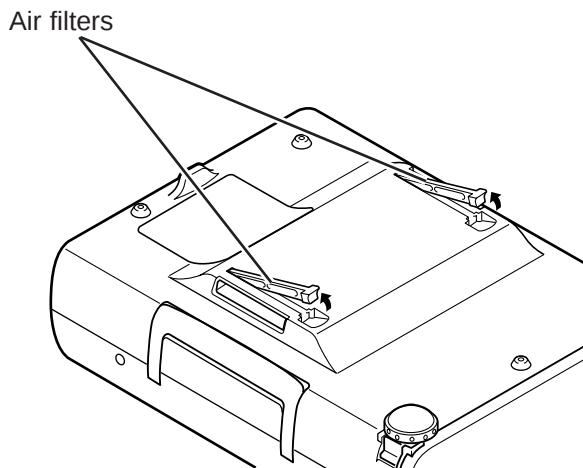
Do not put the small parts into the air filter intake vents. It result in the malfunction of the projector. The air filter is small parts. Take care that children don't eat or swallow it.

### RECOMMENDATION

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

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

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



## ■ Mechanical Disassemblies

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

### Caution:

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

### 1. CABINET TOP REMOVAL

Remove 4 screws and pull cabinet top upward.

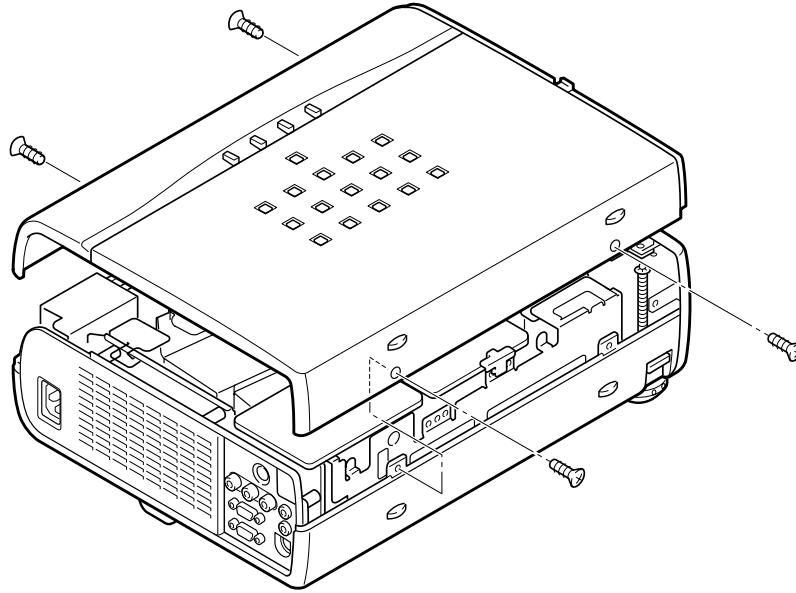


Fig.1

### 2. AV SUB, MAIN-B/C BOARD REMOVAL

- 1) Remove 3 screws (A) and take the AV SUB Board off upward.
- 2) Remove a screw (B) and a fixer, then disconnect the FPC cables.
- 3) Remove 4 screws (C) and pull the Main-B/C Boards off upward.

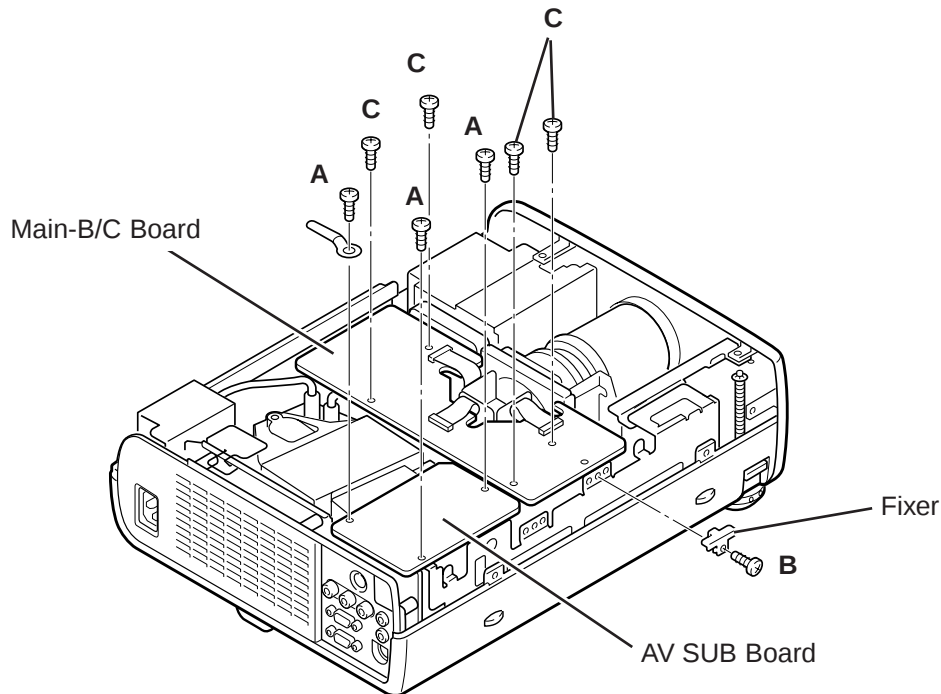


Fig.2

### 3. FRONT CABINET, VIEWER LED BOARD\* REMOVAL

- 1) Remove 4 screws (A) and remove the front cabinet forward.
- 2) Remove a screw (B) and remove the Viewer LED Board.

\* Model without the PC Card slot does not provide the Viewer Board.

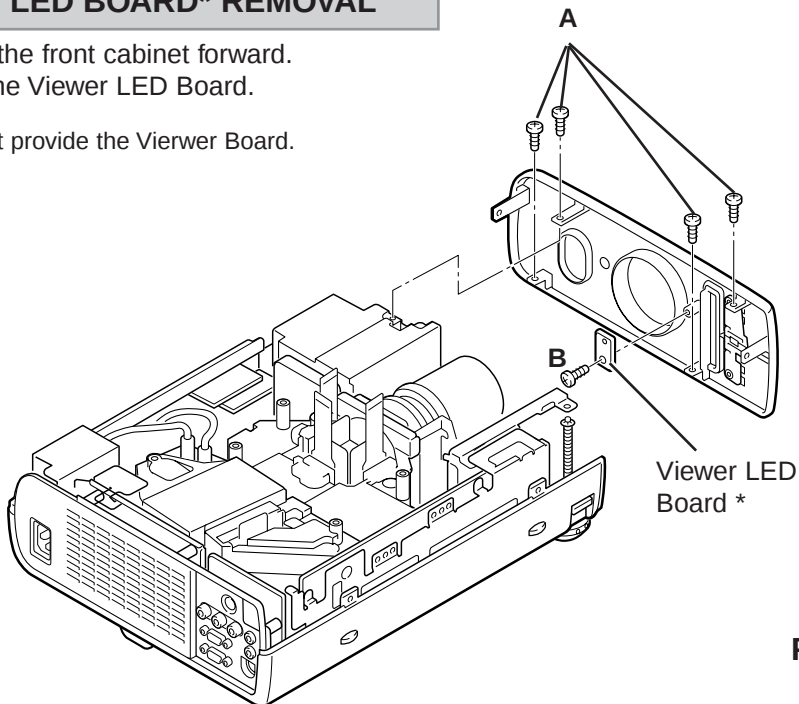


Fig.3

### 4. VIEWER\*, MAIN-A/D BOARD REMOVAL

\* Model without the PC Card slot does not provide the Viewer Board.

- 1) Remove 4 screws (A) and pull the Viewer and Main-A/D Board Ass'y upward.
- 2) Remove 2 screws (B) and disconnect connector K1A, then take the Viewer Board Ass'y off from the Main-A/D Board Ass'y.
- 3) Remove 4 screws (C) and take the Viewer Unit off from the Viewer Mounting Holder.
- 4) Remove 2 screws (D) and remove the Main-D Board.
- 5) Remove 4 screws (E) and take the Main-A Board off from the Main-A Board Holder.

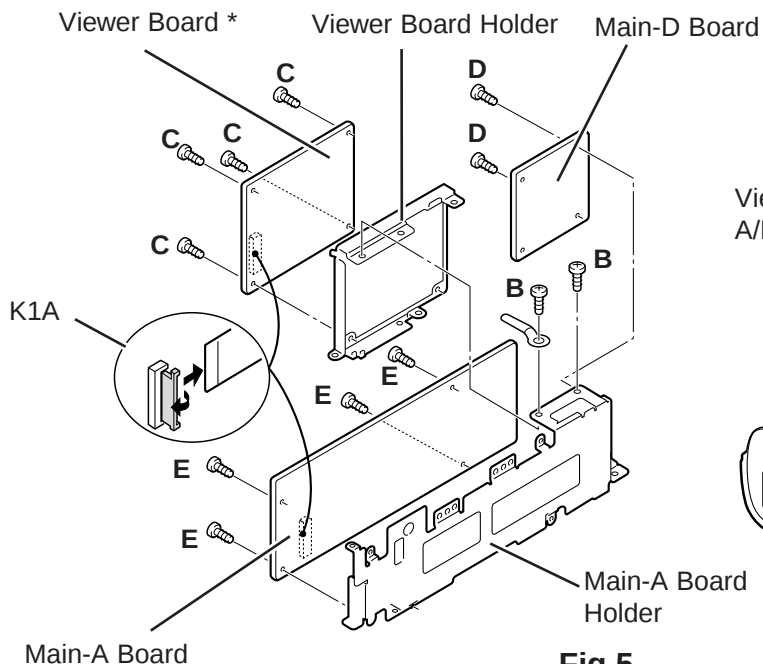


Fig.5

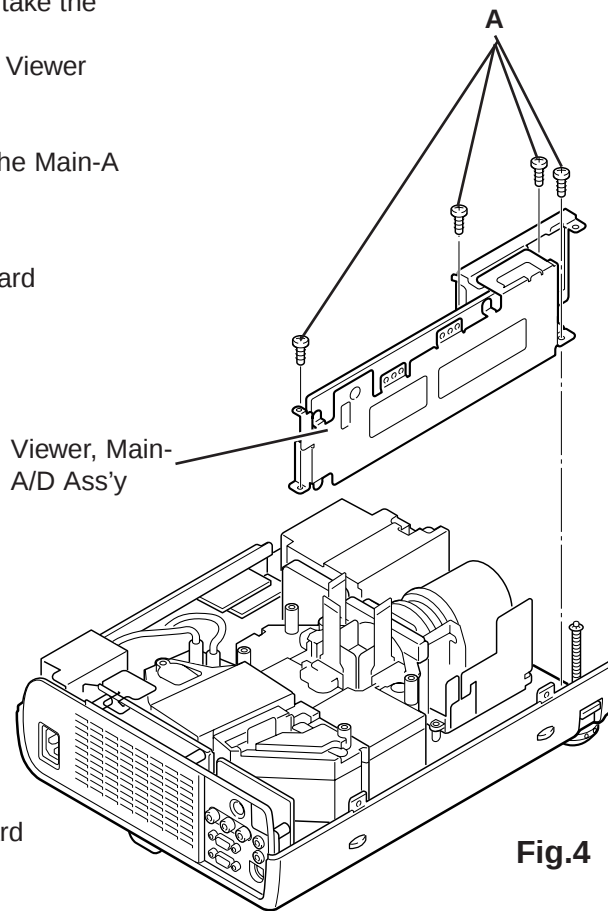


Fig.4

## 5. AV BOARD, REAR CABINET, FAN (FN904, FN905) REMOVAL

- 1) Pull the Rear Cabinet Ass'y upward.
- 2) Remove a screw (A) and take the spacer off.
- 3) Remove 2 screws (B) and remove the Thermal Switch (SW902).
- 4) Remove a screw (C) and remove the grounding lead.
- 5) Remove 4 screws (D) and remove the AV Board.
- 6) Remove 4 screws (E) and remove the fans (FN904, FN905).

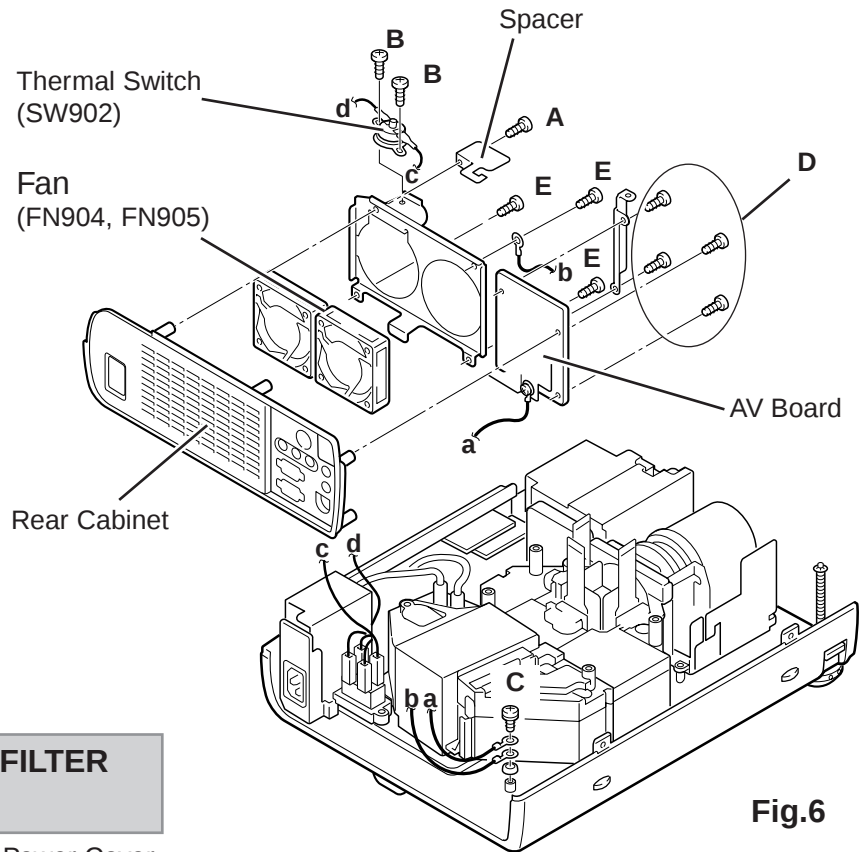


Fig.6

## 6. POWER COVER, FAN (FN901), FILTER BOARD REMOVAL

- 1) Remove 4 screws (A) and remove the Power Cover.
- 2) Remove 2 screws (B) and remove the Fan (FN901).
- 3) Remove 4 screws (C) and remove the Speaker.
- 4) Remove a screw (D) and remove R/C Board.
- 5) Remove 2 screws (E) and remove the grounding leads.
- 6) Remove 2 screws (F) and pull the Filter & Interlock Switch Ass'y.
- 7) Remove 2 screws (G) and then remove the Filter Board and the Interlock Switch Ass'y.

### Note:

- \* When fixing the grounding lead of the Filter Board, disconnect the lamp socket (refer to Fig.8) first, and fix the grounding lead then connect the lamp socket.
- \* Dress the grounding lead (e), (f) as show in Fig.7-2.
- \* Make sure of wires color as shown in Fig.7-2 when connecting the sockets.

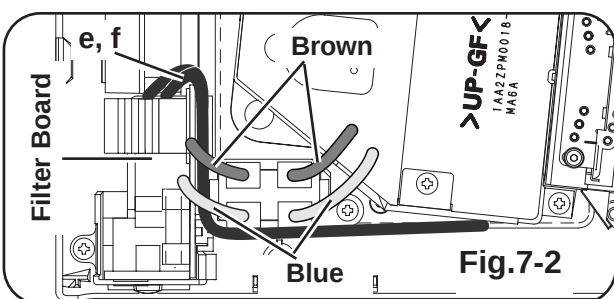


Fig.7-2

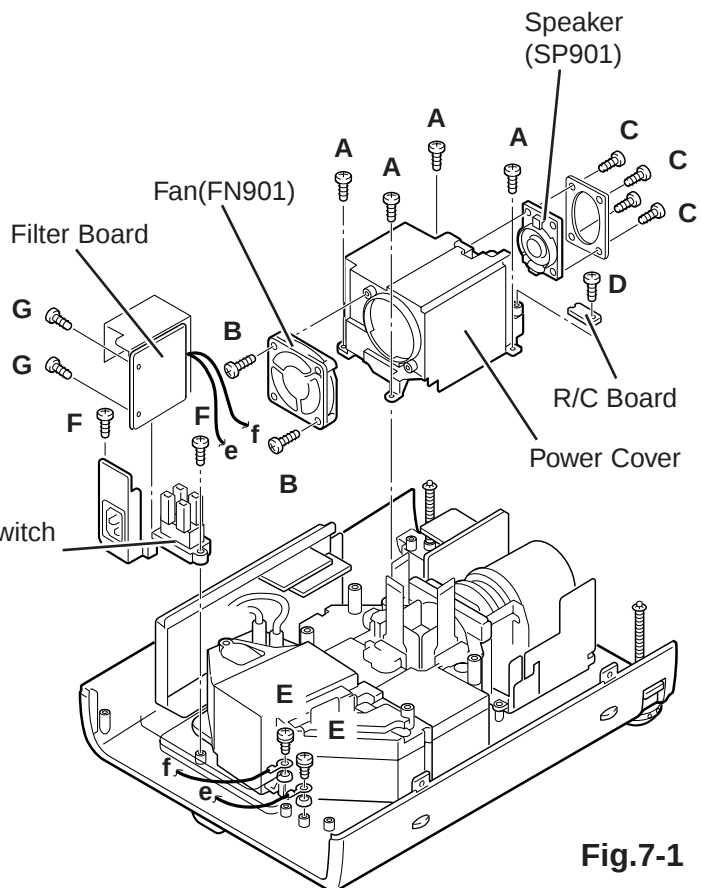


Fig.7-1

## 7. LAMP BALLAST UNIT REMOVAL

- 1) Remove 2 screws (A) and disconnect the lamp socket.
- 2) Remove 2 screws (B) and pull the Lamp Ballast Ass'y upward.
- 3) Remove 2 screws (C) and remove the Lamp Ballast Unit from the Lamp Ballast Holder.

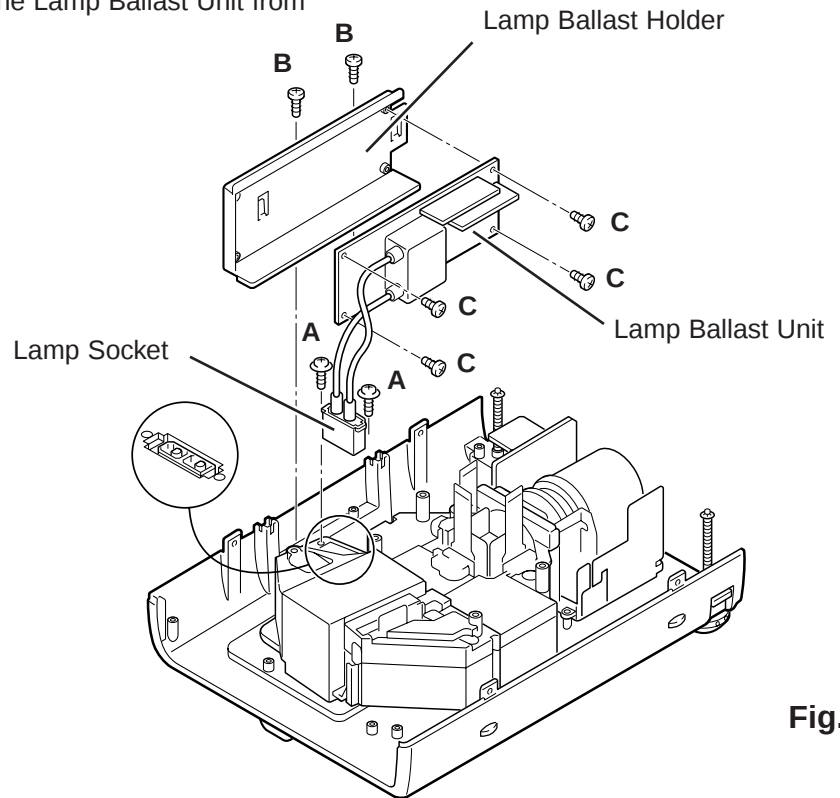


Fig.8

## 8. LENS, OPTICAL UNIT REMOVAL

- 1) Remove 5 screws and pull the Optical Unit upward.

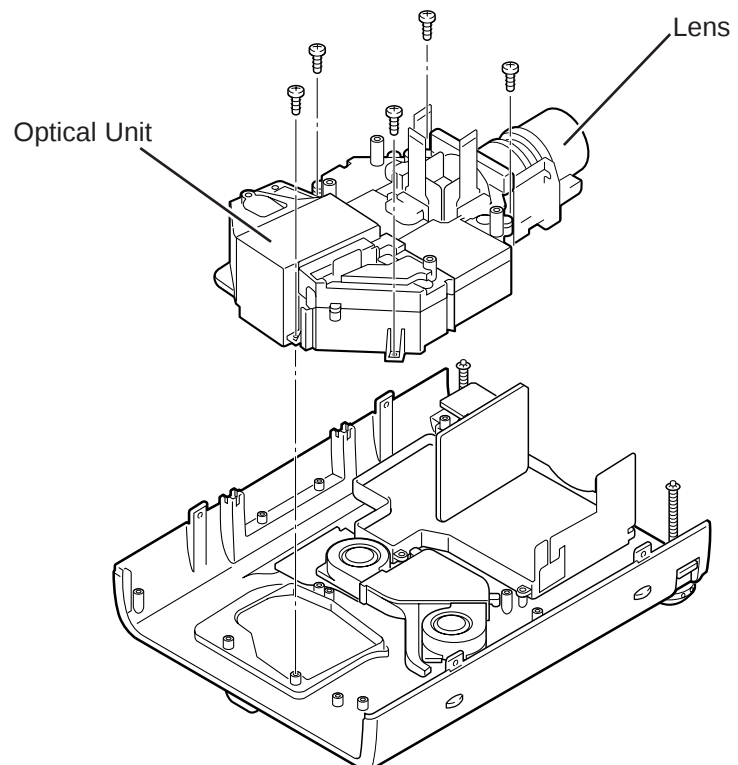


Fig.9

## 9. POWER, P.F. BOARD REMOVAL

- 1) Remove screws (A) and pull the Power Board Ass'y upward.
- 2) Remove 3 screws (B) and take the Power Board off from the Power Board Holder.
- 3) Remove the P.F. Board from the Power Board.

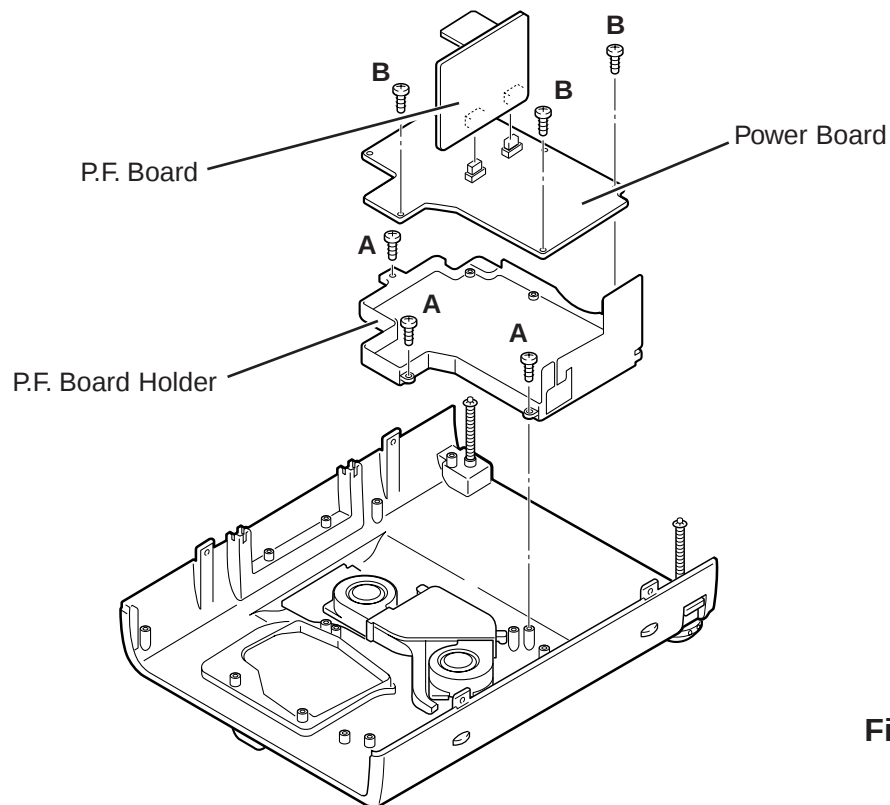


Fig.10

## 10. FAN (FN902, FN903) REMOVAL

- 1) Remove each 2 screws and take the Fans (FN902, FN903) off.

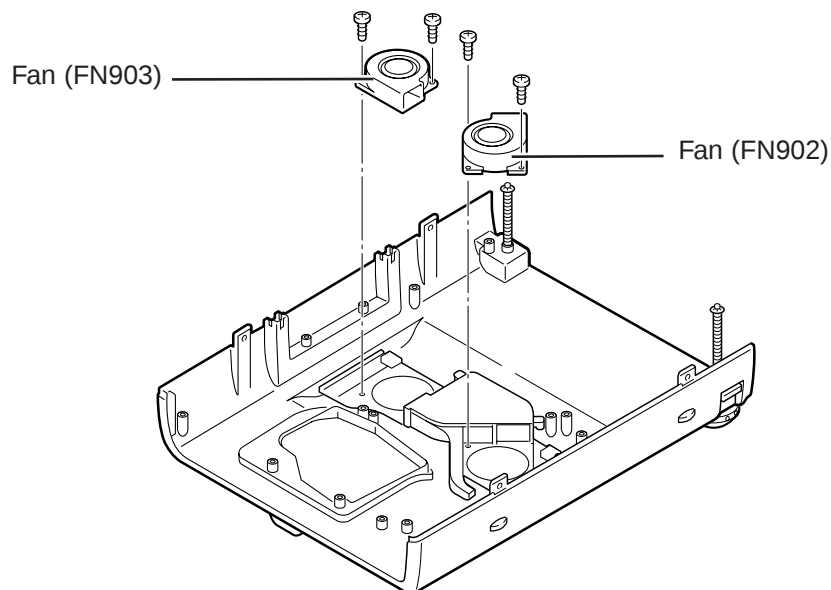


Fig.11

## 11. SERVICE POSITION

For servicing the AV, AV Sub, Main-A and Main-D Board, it is advisable to set up the service position for the checking and testing easily following to below steps

1) Remove the AV, AV Sub and Main-A/D Board following to steps 1~5 of "Mechanical Disassemblies".

\* Should be remove the Main-A Board Holder and Viewer Holder.

2) Mount the AV, AV Sub, and Main-A/D Board to the Main-B Board.

\* Not necessary to connect the Viewer Board.

Note:

In the mounting, make sure of the mounting direction of connectors.

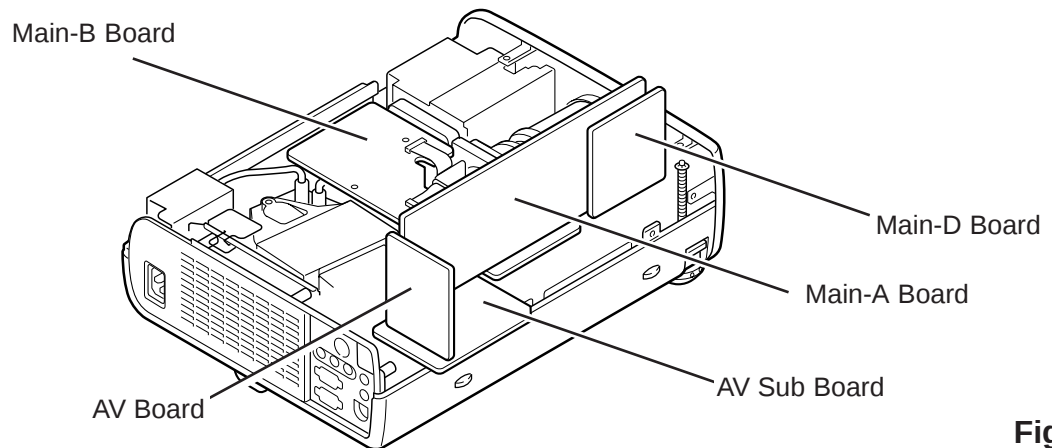


Fig.12

## 12. LEAD WIRE DRESSING

Make sure to dress the lead wires as follows when assembling the chassis and cabinets

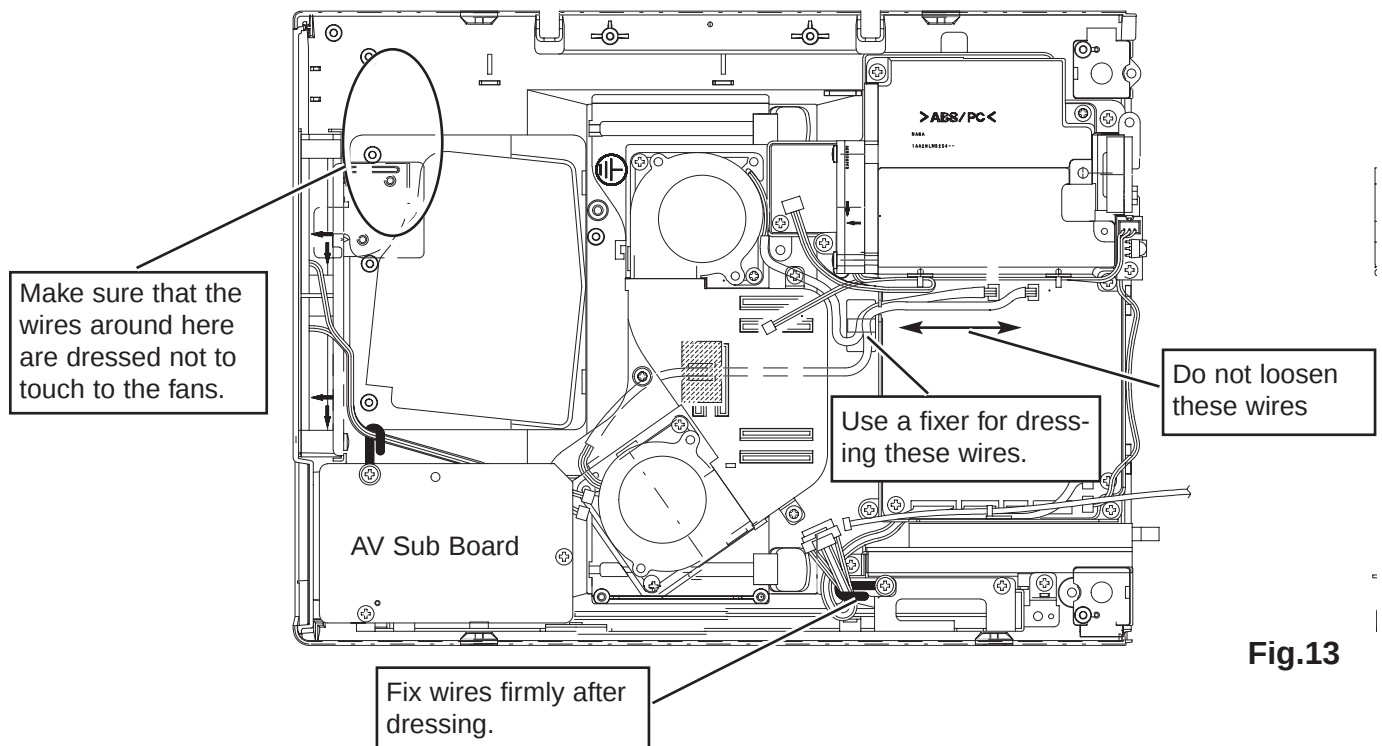


Fig.13

## ■ Optical Parts Disassemblies

Remove the Cabinet Top , AV Sub, Main-B/C Board following to the “Mechanical Disassemblies”, before proceeding these disassemblies.

### 1. PROJECTION LENS REMOVAL

- 1) Remove the Optical Unit/Projection Lens following to the step 8 of “Mechanical Disassemblies”.
- 2) Remove 4 screws and remove the Projection Lens.

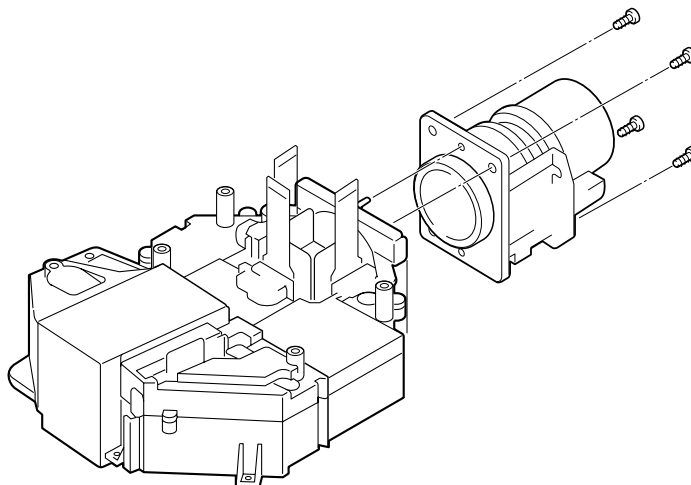


Fig.1

### 2. INTEGRATOR LENS-IN ASS'Y REMOVAL

Remove 2 screws (A) and pull the Integrator Lens-IN Ass'y upward.

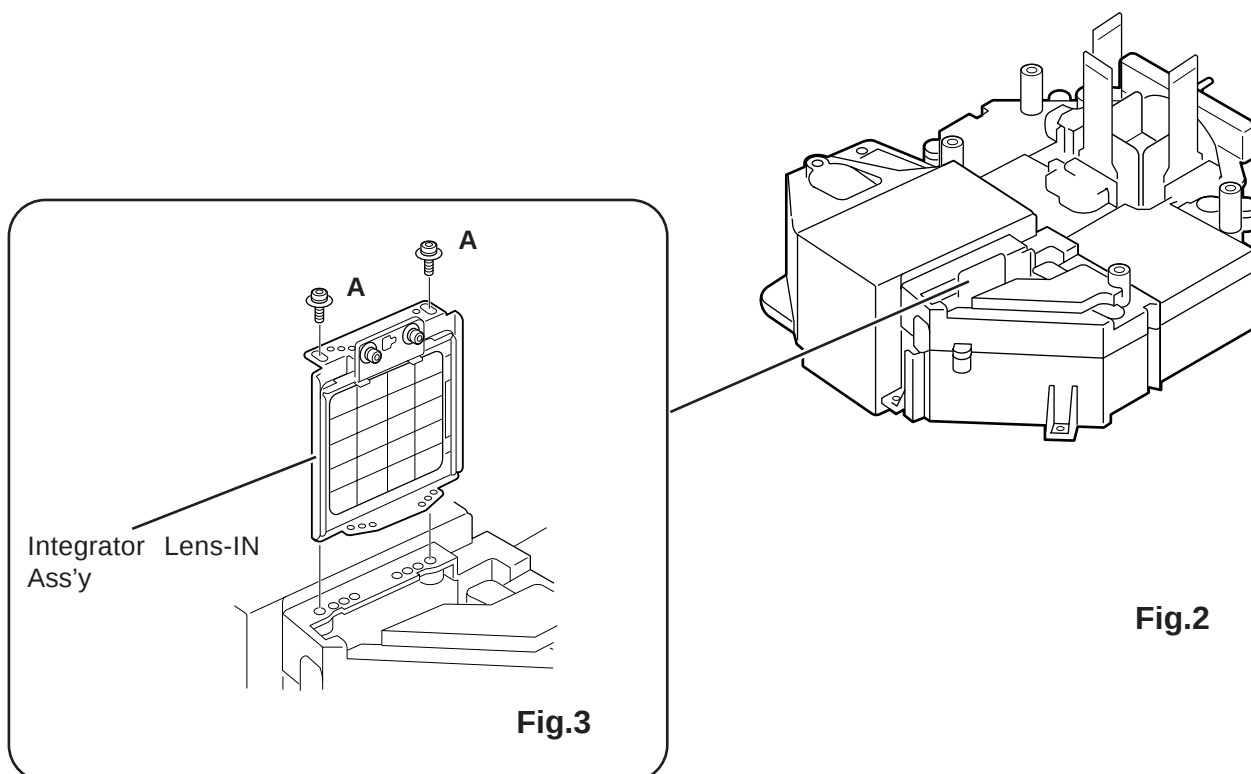


Fig.2

### 3. INTEGRATOR LENS-IN ASS'Y DISASSEMBLY

Remove 2 screws (A) and take the Integrator Lens-IN off from the lens holder.

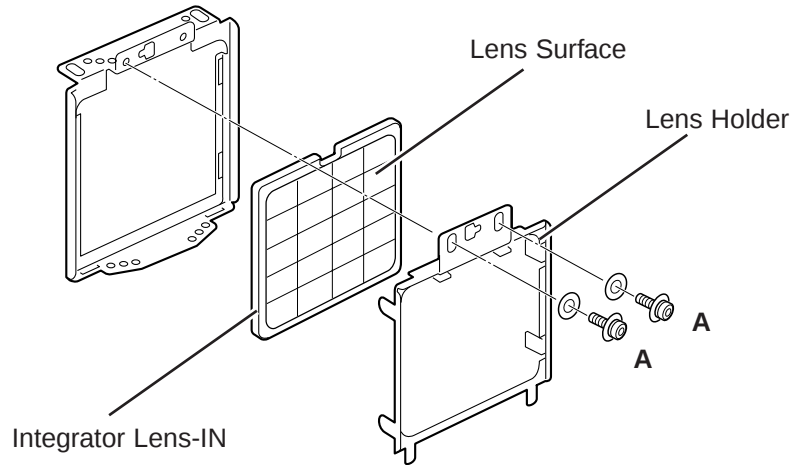


Fig.4

### 4. OPTICAL UNIT TOP REMOVAL

- 1) Remove each screw (A) and remove the Polarized Glass Holders.
- 2) Remove 4 screws (B) and take the Optical Unit Top off.

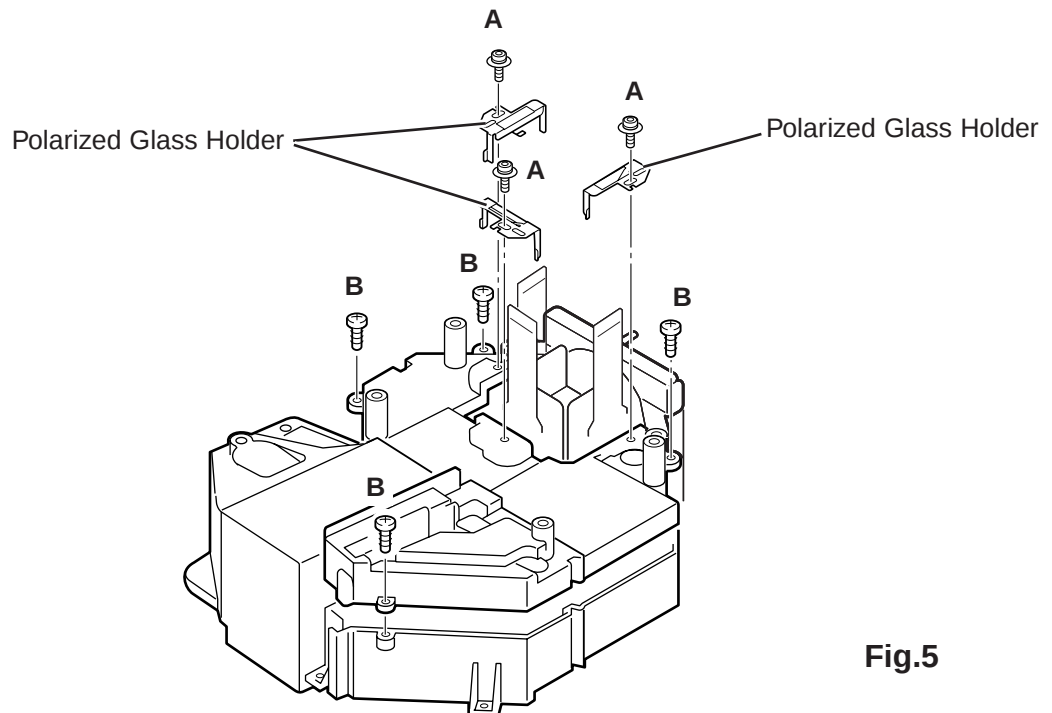
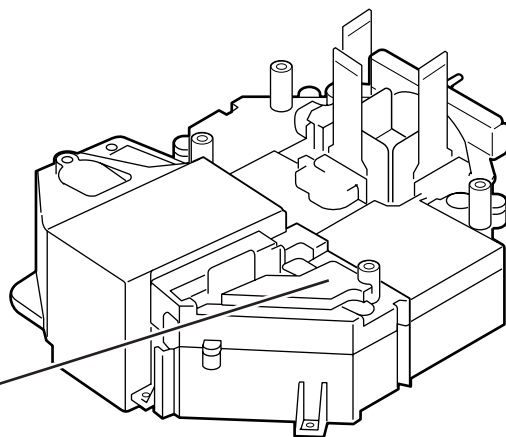
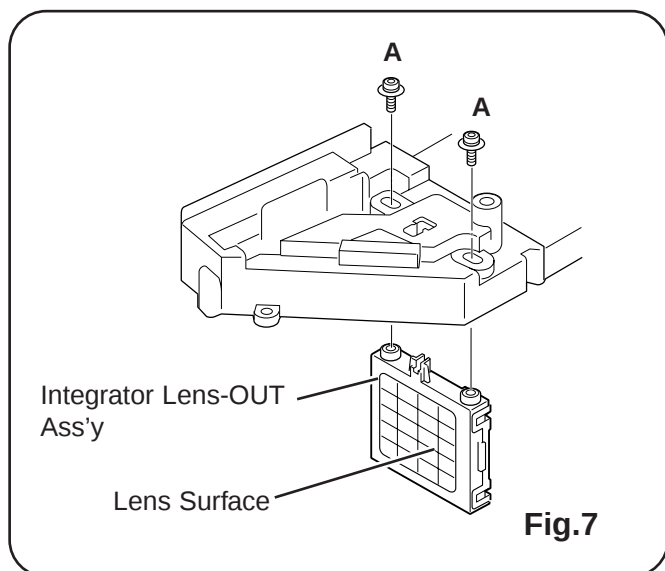


Fig.5

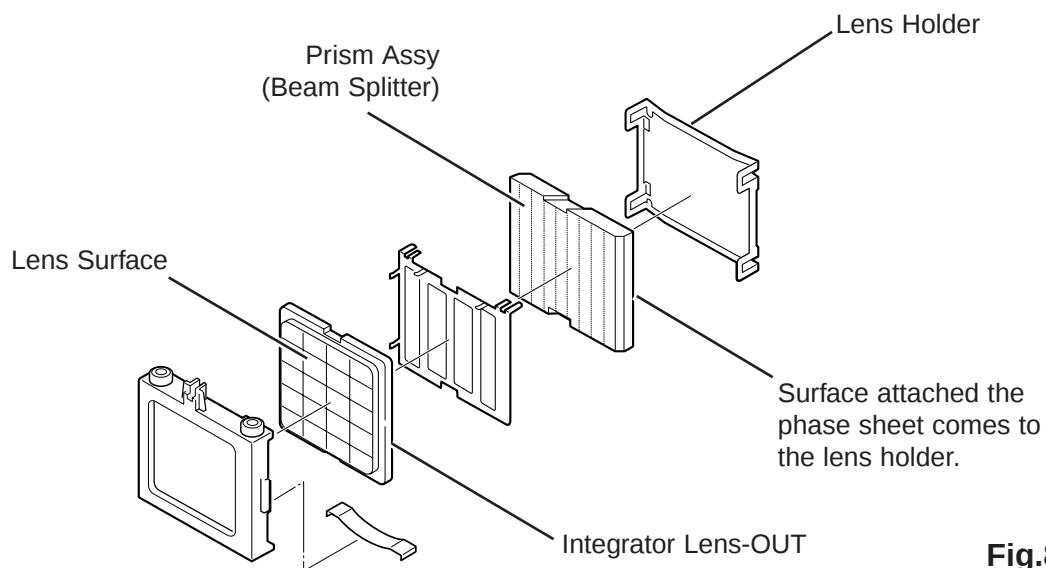
## 5. INTEGRATOR LENS-OUT ASS'Y REMOVAL

Remove 2 screws (A) and pull the Integrator Lens-OUT Ass'y downward.



## 6. INTEGRATOR LENS-OUT ASS'Y DISASSEMBLY

Remove the Lens Holder and disassembly the Integrator Lens-OUT Ass'y.



### Parts Name and Locations

When the optical parts mounting or assembling, the parts must be mounted in the specified location and direction. Please refer to the figure below and "Mounting direction of optical parts" on next page.

| No. | Part name            | No. | Part name                  |
|-----|----------------------|-----|----------------------------|
| 1   | Prism ass'y          | 10  | Mirror (B)                 |
| 2   | Relay lens (IN)      | 11  | Optical Filter (UV cut)    |
| 3   | Relay lens (OUT)     | 12  | Polarized glass (R-filter) |
| 4   | Condenser lens (IN)  | 13  | Polarized glass (IN/G)     |
| 5   | Condenser lens (OUT) | 14  | Polarized glass (IN/B)     |
| 6   | Condenser lens       | 15  | Dichroic mirror (R)        |
| 7   | Condenser lens (B)   | 16  | Dichroic mirror (G)        |
| 8   | Mirror (W)           |     |                            |
| 9   | Mirror (R)           |     |                            |

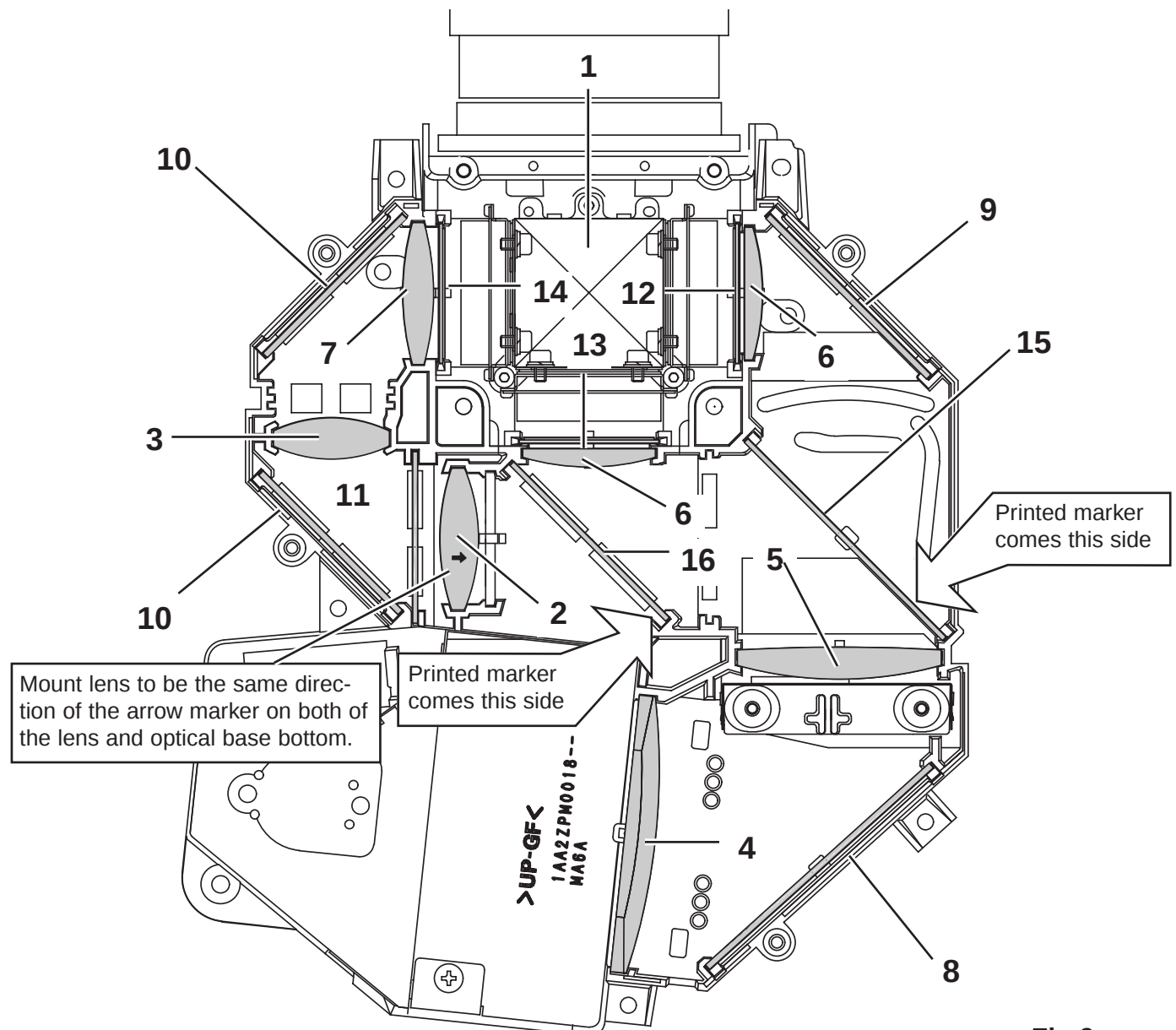


Fig.9

### Mounting direction of optical parts

The optical parts must be mounted in specified direction otherwise the picture image will not reproduce correctly.

- **Mounting direction of Lens (Key No. 2, 3, 4, 5, 6, 7)**

Lens (Key No. 2) is mounted as shown in **Fig.9**.

Lens (Key No. 3, 7) have no specified mounting direction.

Lens (Key No. 4, 5, 6,) are mounted as shown in **Fig.9**.

- **Mounting direction of Mirrors (Key No. 8, 9, 10)**

Mount the mirrors as the coating surface comes inside.

- **Mounting direction of optical filter (Key No. 11)**

The optical filter has no specified mounting direction.

- **Mounting direction of polarized glasses (Key No. 2, 13, 14)**

Mount each polarized glass as the face that the polarized film is attached comes the prism ass'y.

- **Mounting direction of dichroic mirror (Key No. 15,16)**

dichroic mirrors are mounted as shown in **Fig.9**.

## ■ LCD Panel Replacement

### IMPORTANT NOTICE on LCD Panel Replacement

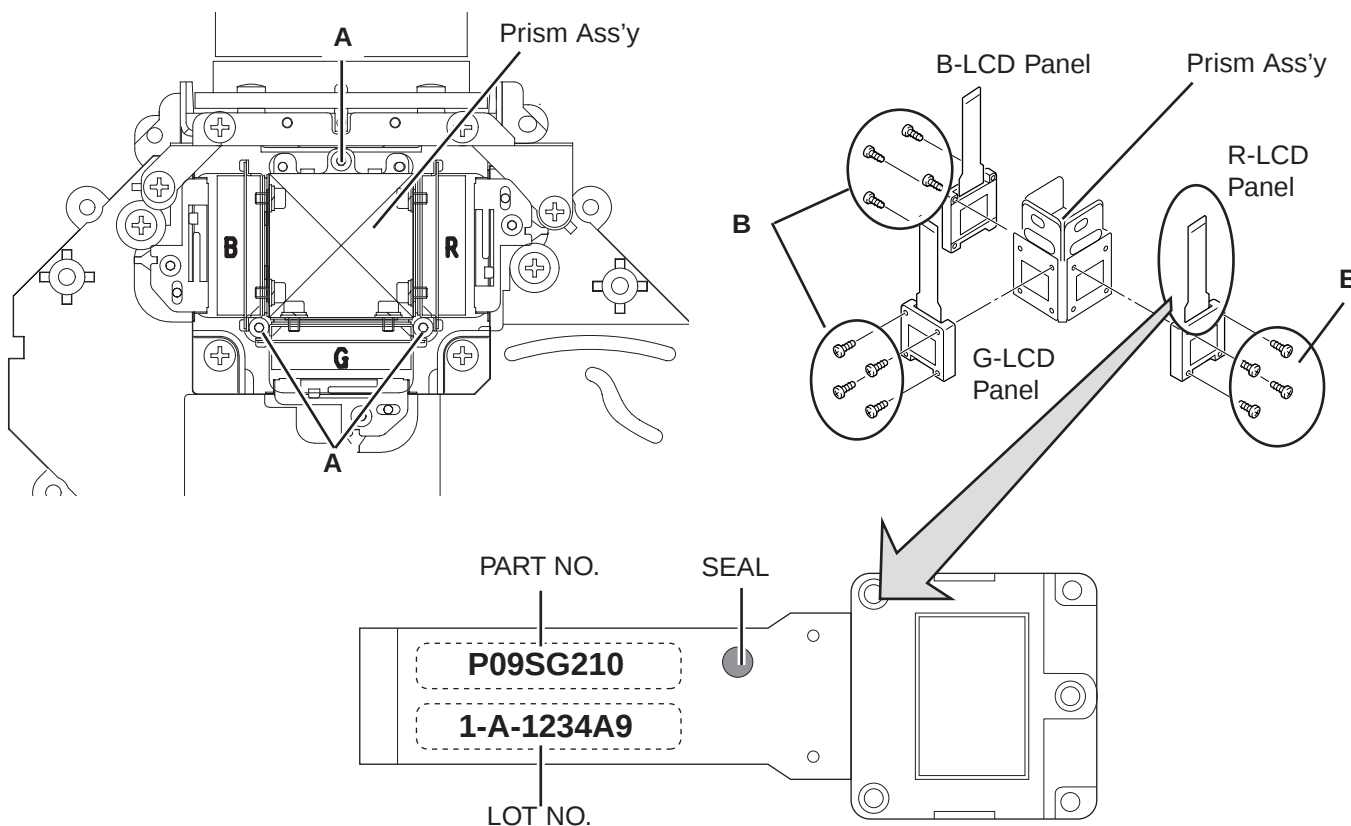
There are 2 types (Type A, Type B listed on next page) of LCD panels which they have a different characteristics used for this model. As the only Type B LCD panels are supplied for the service spare parts, take care the following notice when the LCD panel replacement.

1. When replacing the LCD panel, confirm the indication of the LCD panel, then replace the correct LCD panel. Select either combination (1) or (2) listed on next page when in combine the R, G and B LCD panel, please see the explanation "COMBINATION OF LCD PANELS".
2. After replacing LCD panel, the specified adjustment [Video Adjustment] should be performed for obtaining better performance, please see the explanation "REPLACED LCD PANEL ADJUSTMENT". And also required to adjust the convergence and common center adjustments, and white uniformity adjustment if required. (Refer to the Optical and Electrical adjustments.)

### ● LCD PANEL REMOVAL

1. Remove the cabinet top following to "Mechanical Disassemblies".
2. Remove 3 screws (A) by using 2.0mm hex driver, and then pull the prism/panel ass'y out from the optical base.
3. Remove 4 screws (B) to take off the LCD panel from the prism/panel ass'y.

**Caution:** Do not remove 3 panels (R,G,B) at the same time as it is necessary the standard panel for adjustment. Do not fasten the screws with excessive force when mounting the LCD panel, otherwise focus adjustment may be shifted.

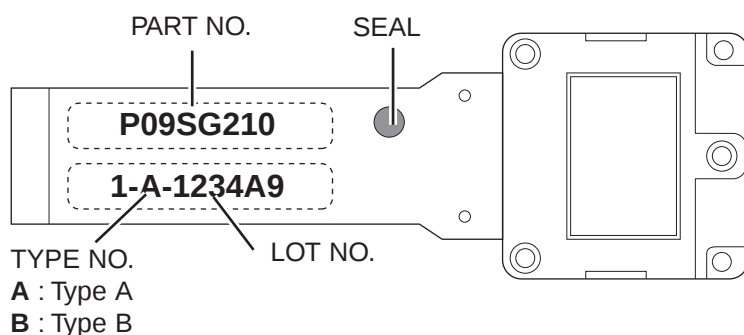


## ● COMBINATION OF LCD PANELS

When replacing the LCD panel, confirm the indication of the LCD panel, then replace the correct LCD panel.  
 Select either combination (1) or (2) when in combine the R, G and B LCD panel.  
There is no combination to be used except them.

As the only Type B LCD panels are supplied for the service spare parts, the service parts for the Type A LCD panels are not available. Please order the Type B LCD panels for replacement.

For example, if you intend to replace the R-LCD panel which is indicated part no. "P09SG220" with red seal, the combination of LCD panels for this projector is employed COMBINATION-(1). So the service parts for R-LCD panel should be PART NO. "P09SG220B" / SERVICE PART NO. "645 041 3995".



### COMBINATION-(1)

|             | SEAL      | Type A * | Type B    |                  |
|-------------|-----------|----------|-----------|------------------|
|             |           | PART NO. | PART NO.  | SERVICE PART NO. |
| R-LCD PANEL | RED SEAL  | P09SG220 | P09SG220B | 645 041 3995     |
| G-LCD PANEL | NO SEAL   | P09SG210 | P09SG210B | 645 041 3988     |
| B-LCD PANEL | BLUE SEAL | P09SG220 | P09SG220B | 645 041 4008     |

### COMBINATION-(2)

|             | SEAL      | Type A * | Type B    |                  |
|-------------|-----------|----------|-----------|------------------|
|             |           | PART NO. | PART NO.  | SERVICE PART NO. |
| R-LCD PANEL | RED SEAL  | P09SG210 | P09SG210B | 645 041 3964     |
| G-LCD PANEL | NO SEAL   | P09SG220 | P09SG220B | 645 041 3957     |
| B-LCD PANEL | BLUE SEAL | P09SG210 | P09SG210B | 645 041 3971     |

\* These are not supplied as a service parts.

---

## ● REPLACED LCD PANEL ADJUSTMENTS

After replacing LCD panels, [Video Adjustment] should be carried out for obtaining better performance. This only required when replacing the LCD panel from "Type A" to "Type B".

### VIDEO ADJUSTMENT

Please change the data value of service data for referring to the following adjustment. This should be performed when replacing the LCD panel.

(To enter the service mode, refer to "Service Adjustment Menu Operation" on page 26.)

#### ● In case of Green LCD panel replaced

1. Enter to the service mode and select **COMPUTER** mode.
2. Select item no. "13" and decrease the data value 6 steps from the current value.
3. Select item no. "14" and decrease the data value 6 steps from the current value.
4. Select **VIDEO** mode and perform the above same adjustment.

#### ● In case of Red LCD panel replaced

1. Enter to the service mode and select **COMPUTER** mode.
2. Select item no. "13" and increase the data value 6 steps from the current value.
3. Select **VIDEO** mode and perform the above same adjustment.

#### ● In case of Blue LCD panel replaced

1. Enter to the service mode and select **COMPUTER** mode.
2. Select item no. "14" and increase the data value 6 steps from the current value.
3. Select **VIDEO** mode and perform the above same adjustment.

#### ● In case of Red and Blue LCD panels replaced

1. Enter to the service mode and select **COMPUTER** mode.
2. Select item no. "13" and increase the data value 6 steps from the current value.
3. Select item no. "14" and increase the data value 6 steps from the current value.
4. Select **VIDEO** mode and perform the above same adjustment.

#### ● In case of Red and Green LCD panels replaced

1. Enter to the service mode and select **COMPUTER** mode.
2. Select item no. "14" and decrease the data value 6 steps from the current value.
3. Select **VIDEO** mode and perform the above same adjustment.

#### ● In case of Blue and Green LCD panels replaced

1. Enter to the service mode and select **COMPUTER** mode.
2. Select item no. "13" and decrease the data value 6 steps from the current value.
3. Select **VIDEO** mode and perform the above same adjustment.

After performing the adjustment, please confirm the white balance in **COMPUTER**, **VIDEO** and **MCI** mode. If required the readjustment, please follow the [WHITE BALANCE ADJUSTMENT] on page 31.

## ■ Lamp Replacement

### WARNING:

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

Service Parts No.: 610 280 6939

Description: Lamp Assy (POA-LMP21J)

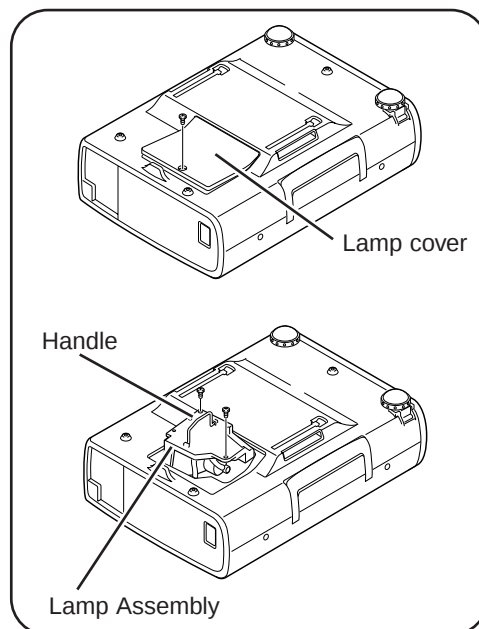
### Procedure

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

**7. Reset the lamp replacement monitor timer, see below explanation.**

### Note:

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



### How to reset the lamp replacement monitor timer

1. Turn the projector on. Press the **MENU** button on the projector and the On-Screen menu will appear. Select setting menu and select "Lamp age" on the setting menu of menu bar.
2. "Lamp replace monitor Reset?" is displayed for confirmation. Select "Yes" to reset the lamp replace timer.

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

### Recommendation

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

Refer to "Air Filter Cleaning".

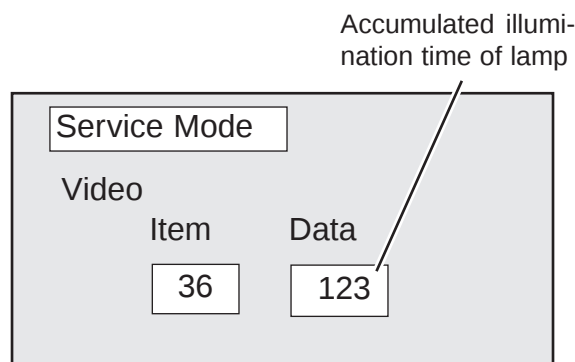
### How to check the lamp replace monitor time

The LAMP REPLACEMENT indicator will illuminate when the accumulated illumination time of the lamp reaches 1000 hours. This is to indicate that lamp replacement is necessary.

You can check the accumulated illumination time of the lamp by following procedure.

1. Press and hold the pointer ▲ on the projector for more than 20 seconds.
2. The projector enters to the service mode and the accumulated time is displayed in the Data column with hours unit. For example, when "123" is displayed,

the accumulated illumination time of the lamp is 123 hours. This will disappear in 5 seconds.



# Optical Adjustments

## CONVERGENCE ADJUSTMENT

For convergence adjustment, use Green as the reference standard. Align Red and Blue with Green by adjusting the position and angle of the Red and Blue LCD panels. Screws "A", "B", "C" (**Fig.1**) are for convergence adjustment.

### [Before adjustment]

- Make sure each Red, Green and Blue LCD panel unit has been correctly installed.
- Input a grid pattern signal.
- Adjustment requires a 2.0mm hex wrench. Remove cabinet top following to the "Mechanical Disassemblies".

### RED/BLUE PANEL CONVERGENCE

1. Insert paper etc. in Red or Blue panel to block the red or blue light so that either green and red or green and blue lights are projected. (For example, when adjust Red panel convergence, project green and red lights, and when adjust Blue panel, project green and blue lights.)
2. Loosen 2 screws "D" (**Fig.1**) using the 2.0mm hex wrench.
3. Turning the screw "A", align so that the Red (or Blue) horizontal lines are parallel to the Green horizontal lines (**Fig.1-a**).
4. Turning screw "B", align the Red (or Blue) vertical lines onto the Green vertical lines (**Fig.1-b**).
5. Turning screw "C", align the Red (or Blue) horizontal lines onto the Green horizontal lines (**Fig.1-b**).
6. By repeating steps 3 to 5, align the Red (or Blue) grid lines onto the green lines.
7. Tighten the 2 screws "D" to fix the Red (or Blue) panel unit.

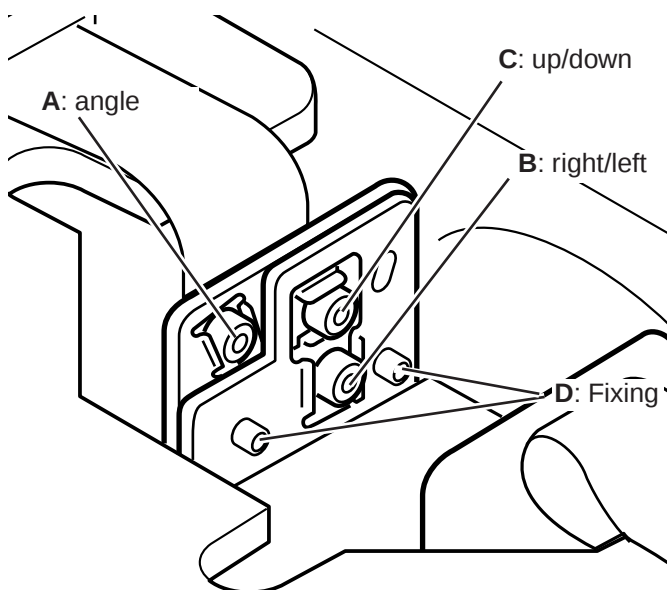


Fig.1

### [Image Movement and Screw Turning]

1. Adjustment screw "A" turns the image (**Fig.1-a**).
2. Adjustment screw "B" moves the image right and left (**Fig.1-b**).
3. Adjustment screw "C" moves the image up and down (**Fig.1-b**).

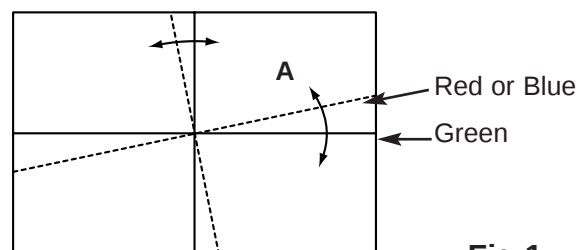


Fig.1-a

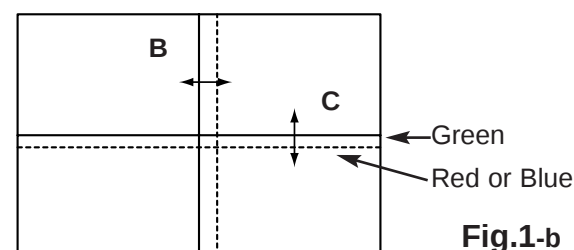


Fig.1-b

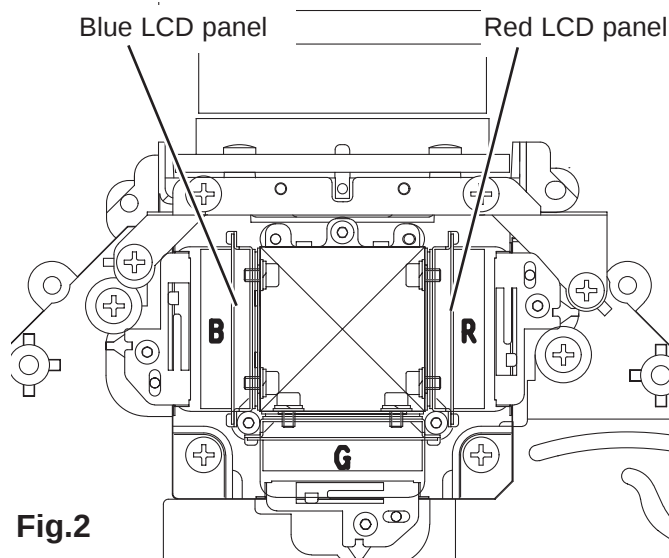


Fig.2

## CONTRAST ADJUSTMENT

### [Before Adjustment]

- Adjustment requires a 2.0mm hex wrench and a slot screwdriver.
- Remove cabinet cover following to step1 of “Mechanical Disassemblies”.
- Input a 100% of black raster signal.

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

1. Insert paper etc. in front of the LCD panels to block unnecessary lights.  
When adjusting the R-Contrast, project red light only.  
When adjusting the G-Contrast, project green light only.  
When adjusting the B-Contrast, project blue light only.
2. Loosen a screw “A” (Fig.3/4) on the polarized glass mounting base which you intend to adjust.
3. Turn the polarized glass mounting base by using a slot driver as shown in Fig.3 to obtain the darkest brightness on the screen.
4. Tighten the screw “A” to fix the polarized glass mounting base.

Repeat steps 1 to 4 for remaining polarized glasses.

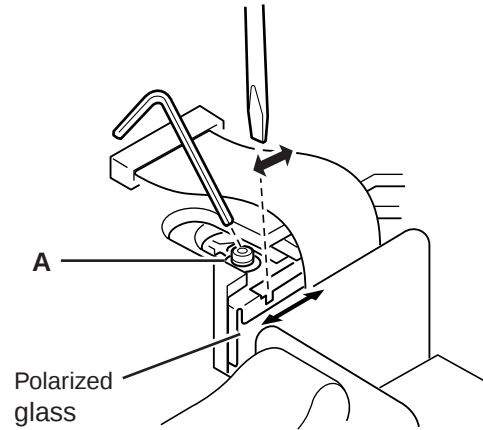


Fig.3

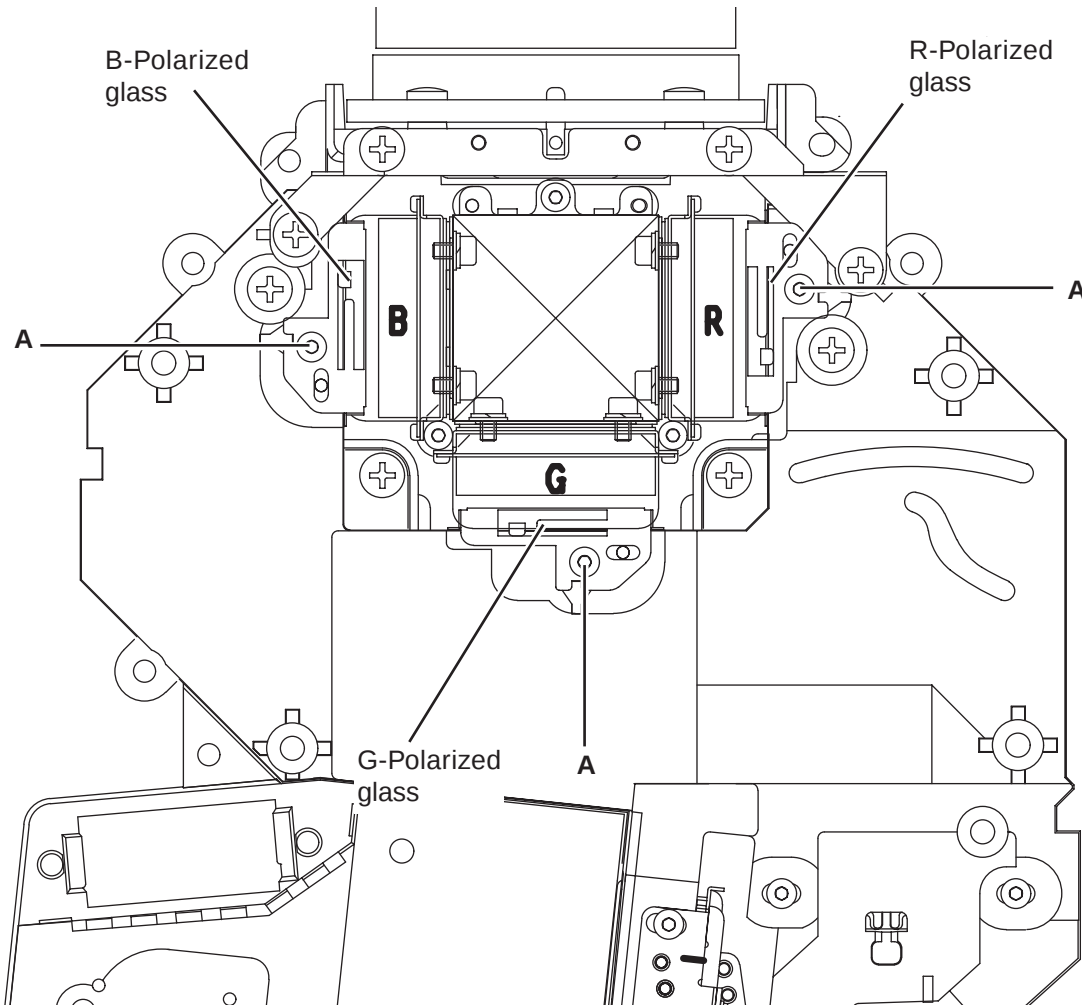


Fig.4

## INTEGRATOR LENS ADJUSTMENT

### [Before Adjustment]

- Adjustment requires a 2.0mm hex driver and a slot screwdriver.
- Remove the cabinet top following to "Cabinet Disassemblies".
- Disconnect AV sub board and connectors FPC cable of LCD panels on the main unit.

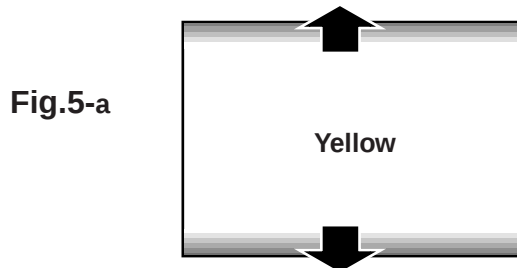
### [Adjustment]

1. Turn on lamp by a state of without FPC cable of LCD panels.
2. Insert a light block sheet in front of the Blue panel to block the blue light so that red and green light are projected.
3. Adjust the adjustment base of integrator lens-IN and integrator lens-OUT to make color uniformity in yellow.
  - 1) If the un-uniform color appears on the top or bottom of the screen as shown in **Fig.5-a**, loosen 2

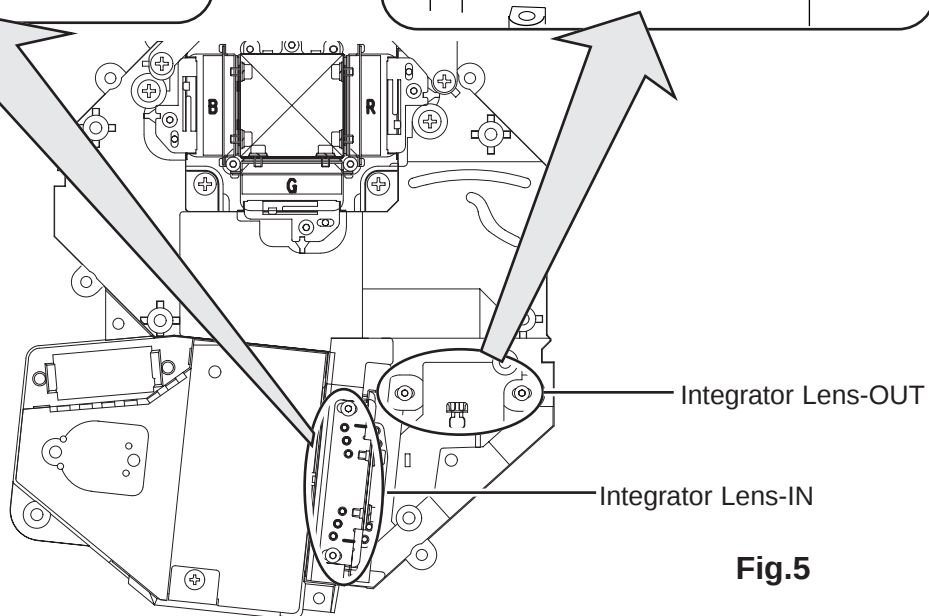
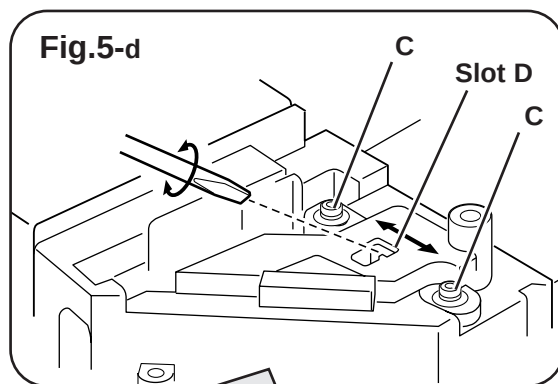
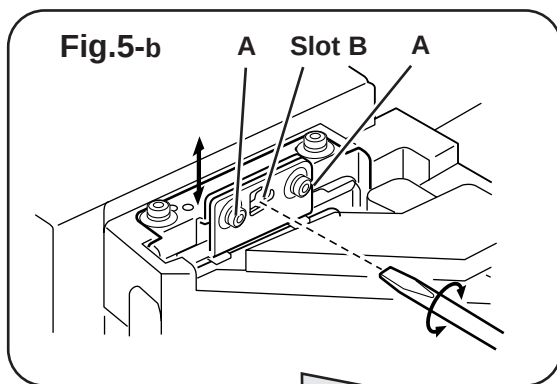
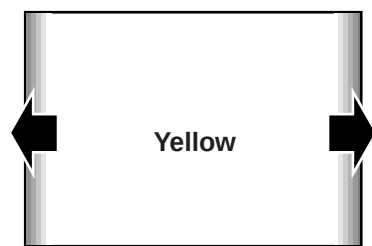
screws "A" (**Fig.5-b**) with hex driver and insert a slot screwdriver into slot "B" and turn it to make color uniformity in yellow.

- 2) If the un-uniform color appears on the left or right of the screen as shown in **Fig.5-c**, loosen 2 screws "C" (**Fig.5-d**) with the hex driver and insert a slot screwdriver into slot "D" and turn it to make color uniformity in yellow.

6. Tighten the 2 screws "A" or "C" to fix the integrator lens-IN and OUT unit.



**Fig.5-c**



**Fig.5**

## ■ Electrical Adjustments

### ● Service Adjustment Menu Operation

#### To enter the service mode

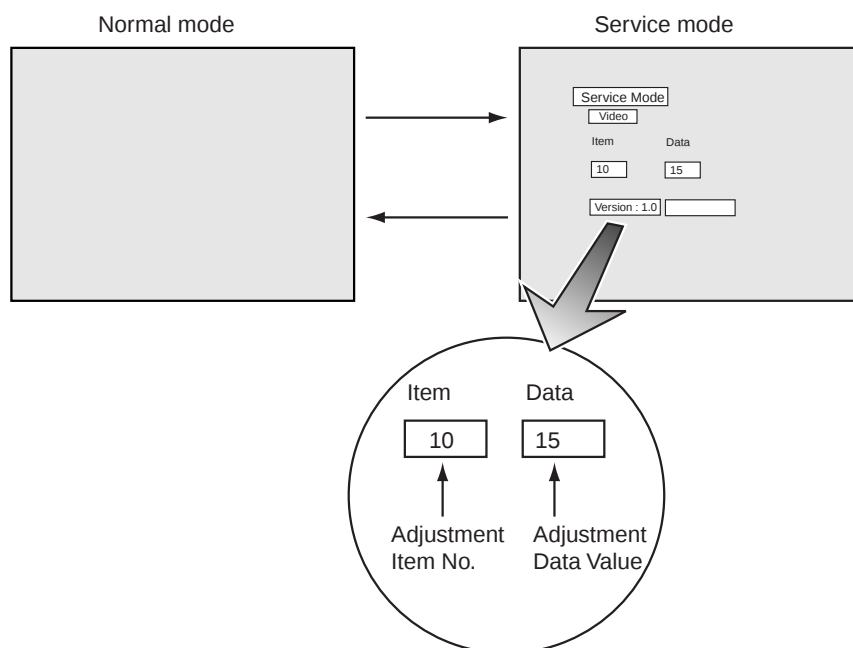
To enter the “Service Mode”, press and hold the **MENU** and **NORMAL** button on the projector for more than 3 seconds. The service mode display appears on the screen as follows.

#### To adjust service data

Select the adjustment item no. by pressing the pointer ▲ or ▼ button, and change the data value by pressing the **VOLUME +** or **VOLUME -** button. Refer to the “Service Adjustment Data Table” for further description of adjustment item no. and data value.

#### To exit the service mode

To exit the service mode, press any of the **POWER ON-OFF**, **MENU**, **MODE**, **FOCUS** or **ZOOM** buttons on the projector or remote control unit.



### ● Memory IC Replacement

IC302 on the main board-A stores the data for the service adjustments, and should not be replaced except for the case of defective device.

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

The lamp replacement monitor timer is stored in the IC302, and it can be confirmed at the item no. 36 of service mode.

Please note that the lamp replacement monitor timer is reset when the memory IC (IC302) is replaced.

(Lamp replacement monitor time can not be set to the previous value.)

#### ● Caution to memory IC replacement

When IC302 is replaced with new one, the CPU writes down the default data of the service adjustments to the replaced IC, refer to the service adjustment table. As these data are not the same data as factory shipped

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

Please note that the lamp replacement monitor timer is reset.

#### ● Caution of Main Board replacement (in the case IC302 is not defective)

When the main board-A is replaced, IC302 should be replaced with the one on previous main board. After replacement, it should be required to perform the re-adjustments following to the “Electrical Adjustments”.

In this case, the lamp replacement monitor timer and the white uniformity compensation data can be kept the value as before.

## ● Circuit Adjustments

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

### [Adjustment Condition]

#### ● Input signal

Video signal .....1.0Vp-p/75Ω terminated, 16 steps gray scale or color bar pattern

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

MCI signal \* .....16 steps gray scale pattern from PC Card

#### ● Picture control mode ----- "NORMAL" mode unless otherwise noted.

### Note:

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

\* It is not available the MCI mode for model which does not provide the PC Card slot.

### OUTPUT VOLTAGE ADJUSTMENT

After replacing the Power Board, P.F.C. Board, readjust the Output voltage adjustment as follows.

1. Connect a digital voltmeter to pins 1 (+) and 3 (-) of K6C.
2. Adjust the voltage by using VR01 as following.

| <u>AC Input</u> | <u>Reading</u> |
|-----------------|----------------|
| 230V            | 370V ±2V       |
| 120V            | 320V ±2V       |

### Caution:

Be sure to connect the lamp when taking this adjustment.

### PEDESTAL ADJUSTMENT

#### Presetting

1. Receive the 16-step grey scale video signal.
2. Set to **VIDEO** mode.

#### [R-PEDESTAL ADJUSTMENT]

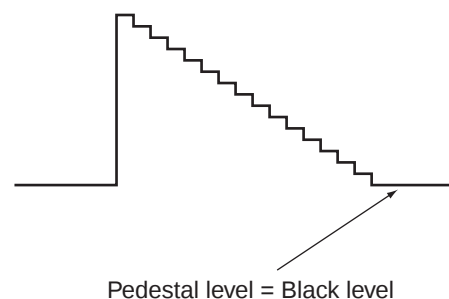
3. Connect an oscilloscope to test point "TP221R" (+) and chassis ground (-).
4. Enter to the service mode, select item no. "27" and change data value to adjust the pedestal level and black level to be same level.

#### [G-PEDESTAL ADJUSTMENT]

5. Connect an oscilloscope to test point "TP221G" (+) and chassis ground (-).
6. Select item no. "28" and change data value to adjust the pedestal level and black level to be same level.

#### [B-PEDESTAL ADJUSTMENT]

7. Connect an oscilloscope to test point "TP221B" (+) and chassis ground (-).
8. Select item no. "29" and change data value to adjust the pedestal level and black level to be same level.



### OFFSET ADJUSTMENT-[CG]

1. Receive the 16-step gray scale video signal.
2. Set to **COMPUTER** mode.

#### [R-OFFSET ADJUSTMENT]

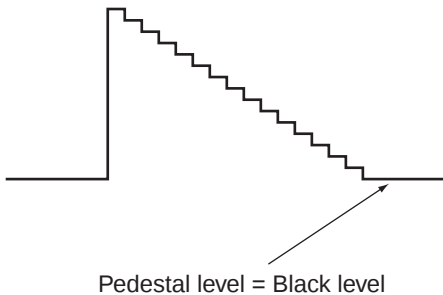
3. Connect an oscilloscope to test point "TP2211R" (+) and chassis ground (-).
4. Enter to the service mode, select item no. "45" and change data value to adjust the pedestal level and black level to be same level.

#### [G-OFFSET ADJUSTMENT]

5. Connect an oscilloscope to test point "TP2221G" (+) and chassis ground (-).
6. Select item no. "46" and change data value to adjust the pedestal level and black level to be same level.

#### [B-OFFSET ADJUSTMENT]

7. Connect an oscilloscope to test point "TP2231B" (+) and chassis ground (-).
8. Select item no. "47" and change data value to adjust the pedestal level and black level to be same level.



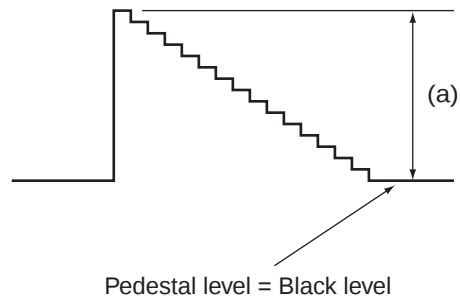
### VIDEO GAIN ADJUSTMENT-[CG/MCI]

#### [CG-VIDEO GAIN ADJUSTMENT]

1. Receive the 16-step grey scale computer signal.
2. Set to **COMPUTER** mode.
3. Connect an oscilloscope to test point "TP2221G" (+) and chassis ground (-).
4. Enter to the service mode, select item no. "48" and change data value to adjust "a" to be  $1.15 \pm 0.01V_{p-p}$ .

#### [MCI-VIDEO GAIN ADJUSTMENT] \*

5. Receive the 16-step grey scale MCI signal.
6. Set to **MCI** mode.
7. Connect an oscilloscope to test point "TP2221G" (+) and chassis ground (-).
8. Enter to the service mode, select item no. "48" and change data value to adjust "a" to be  $1.15 \pm 0.01V_{p-p}$ .



## VIDEO-GAIN ADJUSTMENT-[AV]

### Presetting

1. Receive the 16-step grey scale video signal.
2. Set to **VIDEO** mode.

### [R-VIDEO GAIN ADJUSTMENT]

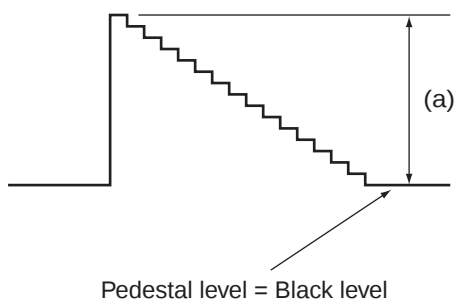
3. Connect an oscilloscope to test point "TP2211R" (+) and chassis ground (-).
4. Enter to the service mode, select item no. "49" and change data value to adjust "a" to be  $1.12 \pm 0.02\text{Vp-p}$ .

### [G-VIDEO GAIN ADJUSTMENT]

5. Connect an oscilloscope to test point "TP2221G" (+) and chassis ground (-).
6. Enter to the service mode, select item no. "50" and change data value to adjust "a" to be  $1.12 \pm 0.02\text{Vp-p}$ .

### [B-VIDEO GAIN ADJUSTMENT]

7. Connect an oscilloscope to test point "TP2231B" (+) and chassis ground (-).
8. Enter to the service mode, select item no. "51" and change data value to adjust "a" to be  $1.12 \pm 0.02\text{Vp-p}$ .



## VIDEO CENTER ADJUSTMENT

### Presetting

1. Receive the 16-step grey scale computer signal.
2. Set to **COMPUTER** mode.

### [R-VIDEO CENTER ADJUSTMENT]

3. Connect a digital voltmeter to test point "TP511" (+) and chassis ground (-).
4. Adjust voltage to be  $7.30 \pm 0.05\text{V}$  by using VR501.

### [G-VIDEO CENTER ADJUSTMENT]

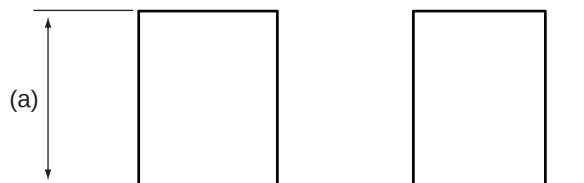
5. Connect a digital voltmeter to test point "TP512" (+) and chassis ground (-).
6. Adjust voltage to be  $7.30 \pm 0.05\text{V}$  by using VR531.

### [B-VIDEO CENTER ADJUSTMENT]

7. Connect a digital voltmeter to test point "TP513" (+) and chassis ground (-).
8. Adjust voltage to be  $7.30 \pm 0.05\text{V}$  by using VR561.

## NRS ADJUSTMENT

1. Receive the 16-step grey scale computer signal.
2. Set to **COMPUTER** mode.
3. Connect an oscilloscope to test point "TP3571" (+) and chassis ground (-).
4. Adjust "a" to be  $5.0 \pm 0.1\text{V}$  by using VR3571.



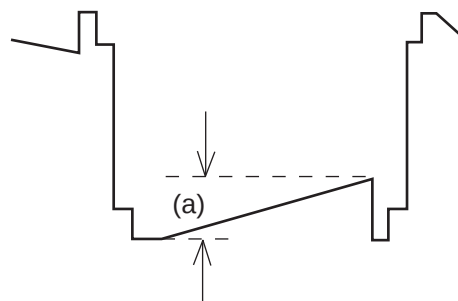
## GAMMA OFF VIDEO ADJUSTMENT

### [GAMMA OFF ADJUSTMENT-CG]

1. Receive the 16-step gray scale computer signal.
2. Set to **COMPUTER** mode.
3. Connect an oscilloscope to test point "TP512" (+) and chassis ground (-).
4. Enter to the service mode, select item no. "0" and change data value to adjust "a" to be  $1.70 \pm 0.01\text{Vp-p}$ .

### [GAMMA OFF ADJUSTMENT-AV]

5. Receive the 16-step gray scale video signal.
6. Set to **VIDEO** mode.
7. Connect an oscilloscope to test point "TP512" (+) and chassis ground (-).
8. Enter to the service mode, select item no. "0" and change data value to adjust "a" to be  $1.70 \pm 0.01\text{Vp-p}$ .



## CG/MCI/AV VIDEO ADJUSTMENT-1

### Presetting

1. Input the 16-step gray scale video signal, MCI signal and computer signal.

### [CG/MCI/AV-VIDEO ADJUSTMENT] \*

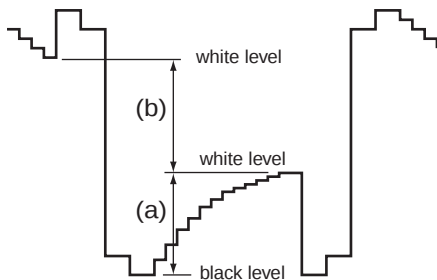
2. Connect an oscilloscope to test point "TP512" (+) and chassis ground (-).
3. Enter to the service mode, select item no. "15" and change data value to adjust "b" to be 1.6Vp-p at each **VIDEO**, **MCI** and **COMPUTER** mode.
4. Select **COMPUTER** and **MCI** mode, select item no. "12" and change data value to adjust "a" to be  $4.05 \pm 0.01Vp-p$ .
5. Select **VIDEO** mode, select item no. "12" and change data value to adjust "a" to be  $4.05 \pm 0.01Vp-p$ .

### [R-VIDEO ADJUSTMENT]

6. Connect an oscilloscope to test point "TP511" (+) and chassis ground (-).
7. Enter to the service mode and select **COMPUTER** mode.
8. Select item no. "13" and change data value to adjust "a" to be  $4.05 \pm 0.01Vp-p$ .
9. Select **VIDEO** mode and item no. "13" and change data value to adjust "a" to be  $4.05 \pm 0.01Vp-p$ .

### [B-VIDEO ADJUSTMENT]

10. Connect an oscilloscope to test point "TP513" (+) and chassis ground (-).
11. Enter to the service mode and select **COMPUTER** mode.
12. Select item no. "14" and change data value to adjust "a" to be  $4.05 \pm 0.01Vp-p$ .
13. Select **VIDEO** mode and item no. "14" and change data value to adjust "a" to be  $4.05 \pm 0.01Vp-p$ .



## CG/MCI/AV VIDEO ADJUSTMENT-2

### [CG-VIDEO ADJUSTMENT-2]

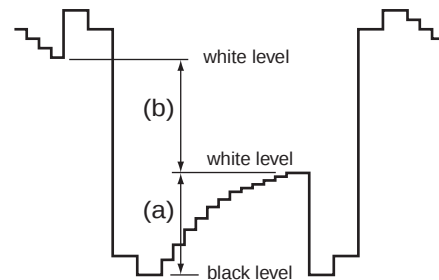
1. Receive the 16-step grey scale computer signal.
2. Set to **COMPUTER** mode.
3. Connect an oscilloscope to test point "TP512" (+) and chassis ground (-).
4. Enter to the service mode, select item no. "15" and change data value to adjust "b" to be  $2.20 \pm 0.01Vp-p$ .

### [MCI-VIDEO ADJUSTMENT-2] \*

5. Receive the 16-step grey scale MCI signal.
6. Set to **MCI** mode.
7. Connect an oscilloscope to test point "TP512" (+) and chassis ground (-).
8. Enter to the service mode, select item no. "15" and change data value to adjust "b" to be  $2.20 \pm 0.01Vp-p$ .

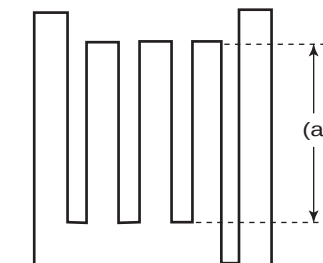
### [AV-VIDEO ADJUSTMENT-2]

9. Receive the 16-step grey scale video signal.
10. Set to **VIDEO** mode.
11. Connect an oscilloscope to test point "TP512" (+) and chassis ground (-).
12. Enter to the service mode, select item no. "15" and change data value to adjust "b" to be  $2.30 \pm 0.01Vp-p$ .



## S/H CLOCK ADJUSTMENT

1. Receive the 16-step gray scale computer signal.
2. Set to **COMPUTER** mode.
3. Connect an oscilloscope to test point "TP512" (+) and chassis ground (-).
4. Enter to the service mode, select item no. "3" and change data value to adjust "a" to be maximum.



### COMMON CENTER ADJUSTMENT

1. Receive the 16-step gray scale computer signal.
2. Set to **COMPUTER** mode.

#### [R-COMMON CENTER ADJUSTMENT]

3. Cover the G and B panel to block the light transit.
4. Adjust VR3502 to obtain the minimum flicker on the picture.

#### [G-COMMON CENTER ADJUSTMENT]

5. Cover the R and B panel to block the light transit.
6. Adjust VR3503 to obtain the minimum flicker on the picture.

#### [B-COMMON CENTER ADJUSTMENT]

7. Cover the G and R panel to block the light transit.
8. Adjust VR3504 to obtain the minimum flicker on the picture.

### WHITE BALANCE ADJUSTMENT

#### [CG WHITE BALANCE ADJUSTMENT]

1. Receive the 16-step grey scale computer signal.
2. Set to **COMPUTER** mode.
3. Enter to the service mode, select item no. "16" (Red) or "17" (Blue), and change data values respectively to make a proper white balance.

#### [MCI WHITE BALANCE ADJUSTMENT] \*

4. Receive the 16-step grey scale MCI signal.
5. Set to **MCI** mode.
6. Select item no. "16" (Red) or "17" (Blue), and change data values respectively to make a proper white balance.

#### [AV WHITE BALANCE ADJUSTMENT]

7. Receive the 16-step grey scale video signal.
8. Set to **VIDEO** mode.
9. Select item no. "16" (Red) or "17" (Blue), and change data values respectively to make a proper white balance.

Confirm that the same white balance is obtained in video, MCI and computer mode.

### BLACK BALANCE ADJUSTMENT

#### [AV BLACK BALANCE ADJUSTMENT]

1. Receive the 16-step grey scale video signal.
2. Set to **VIDEO** mode.
3. Enter to the service mode, select item no. "9" (Red) or "10" (Blue), and change data values respectively to make a proper white balance at darker part of the screen.

## WHITE UNIFORMITY ADJUSTMENT

This adjustment should be carried out when existing unbalanced white uniformity on the screen or after replacing the LCD panels. (When replacing the main board-A, the memory IC, IC302 on the main board-A should be replaced with the one on previous board, so that the white uniformity adjustment may not be required because the data of white uniformity adjustment are stored in this memory IC, IC302.)

White uniformity compensation adjustment system of this model divided the screen into 13 in vertical direction and 16 in horizontal direction and specified the area by using its co-ordinate, and then adjust the RGB white balance on the specified area, refer to the figure below.

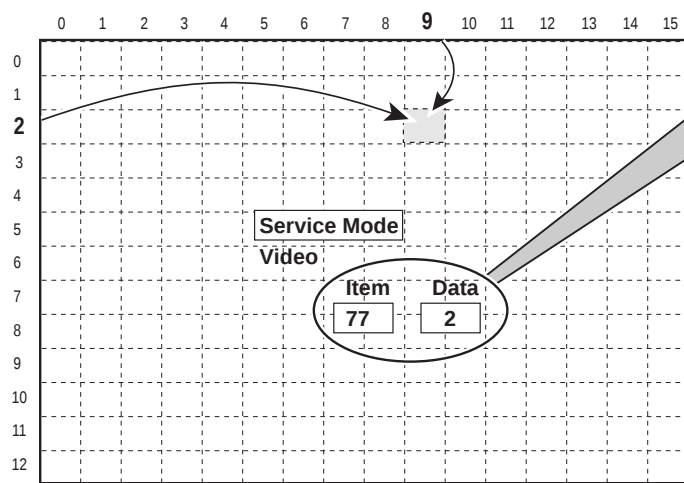
Please note that the selected area and dividing lines are not indicated on the screen. Roughly select the area you wish to adjust with vertical and horizontal address number as shown figure below.

### [Before adjustment]

- Set to normal display mode.
- Confirm the white uniformity compensation mode on.
  - Enter to the service mode , select item no. "83" and confirm that the data value is "186" (mode On). If the data value is "58"(mode OFF), change value to "186" by pressing the **VOLUME +** or **VOLUME -** button.
- Initialize the all of compensation data. **(This is required when the LCD panel is replaced more than 2 panels.)**
  - 1) Enter to the service mode, select item no. "82" and increase the data value from "0" to "10". When the value reaches "10", the data value is automatically return to "0" and the initializing has been completed. The all of compensation data for RGB are to be "32".
- Mode : Video or Computer mode
- Input Signal : White raster signal
- Picture control : Normal level

### [How to adjust white uniformity]

- [1] Enter to the service mode.
- [2] Chose the area you wish to adjust. For example, choosing 3rd area from the top and 10th area from the left.
  - Select Item No. "77" (Vertical area no. selection mode) and select Data No. "2" , and select Item No. "78" (Horizontal area no. selection mode) and select Data No."9" . The area no. starts from "0".
- [3] Adjust white balance in selected area.
  - Select Item No."79" (Red), "80" (Green) or "81" (Blue), and change data value to adjust white balance.
- [4] Repeat steps 2 to 3 until obtaining better white uniformity.
- [5] Exit from the service mode.



Item : <77> Data : <2>

Item : <78> Data : <9>

| Item | Initial Value | Range     | Description                          |
|------|---------------|-----------|--------------------------------------|
| 77   | 0             | 0 ~ 12    | Vertical area no. selection          |
| 78   | 0             | 0 ~ 15    | Horizontal area no. selection        |
| 79   | 32            | 0 ~ 63    | Red white balance adjustment         |
| 80   | 32            | 0 ~ 63    | Green white balance adjustment       |
| 81   | 32            | 0 ~ 63    | Blue white balance adjustment        |
| 82   | 0             | 0 ~ 10    | Reset of white uniformity comp. data |
| 83   | 186           | 58 or 186 | White uniformity comp. On/Off        |

## ● Service Adjustment Data Table

The initial value is the reference data writing to the memory IC by the CPU ROM when the memory IC replacing. The Adjustment item which is indicated with “\*” is required to readjusted in the “Electrical adjustments”. Other items should be used in the initial data value.

| No. | Adjustment Item                          | Initial Value |     |       | Range   | Description                                                                                                                                   |
|-----|------------------------------------------|---------------|-----|-------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|     |                                          | COMPUTER      | MCI | VIDEO |         |                                                                                                                                               |
| 0   | RGB AMP (Gamma OFF) *                    | 20            |     | 20    | * ~ *   | * GAMMA OFF G-VIDEO ADJUSTMENT                                                                                                                |
| 1   | RGB AMP (Gamma ON)                       | 20            |     | 20    | * ~ *   | This operates together with Gamma R/G/B Amps, so when one of the R, G, B value reaches maximum or minimum value, the up/down operation stops. |
| 2   | S&H Display Position of S/H Test Pattern | 3             |     |       | 0 ~ 12  | Display the Test Pattern                                                                                                                      |
| 3   | GAMMA DLY CNT *                          | 46            |     |       | 0 ~ 63  | * S/H CLOCK ADJUSTMENT                                                                                                                        |
| 4   | GAMMA G BIAS                             | 13            |     |       | 0 ~ 63  |                                                                                                                                               |
| 5   | Not Used                                 |               |     |       |         |                                                                                                                                               |
| 6   | GAMMA R BIAS                             | 13            |     |       | 0 ~ 63  |                                                                                                                                               |
| 7   | Not Used                                 |               |     |       |         |                                                                                                                                               |
| 8   | GAMMA B BIAS                             | 13            |     |       | 0 ~ 63  |                                                                                                                                               |
| 9   | GAMMA R-B1P *                            | 27            |     | 26    | 0 ~ 63  | * BLACK BALANCE ADJUSTMENT[RED]                                                                                                               |
| 10  | GAMMA B-B1P *                            | 27            |     | 26    | 0 ~ 63  | * BLACK BALANCE ADJUSTMENT[BLUE]                                                                                                              |
| 11  | GAMMA G-B1P                              | 27            |     | 26    | 0 ~ 63  |                                                                                                                                               |
| 12  | DAC CLAMP LEVEL(SUB BRIGHT) *            | 30            | 30  | 30    | 0 ~ 63  | * CG/MCI/AV-VIDEO ADJUSTMENT-1                                                                                                                |
| 13  | Gamma Amp R *                            | 20            |     | 20    | 0 ~ 63  | * R-VIDEO ADJUSTMENT                                                                                                                          |
| 14  | Gamma Amp B *                            | 20            |     | 20    | 0 ~ 63  | * B-VIDEO ADJUSTMENT                                                                                                                          |
| 15  | DAC RGB BIAS *                           | 50            | 50  | 50    | 0 ~ 127 | * CG/MCI/AV-VIDEO ADJUSTMENT-2                                                                                                                |
| 16  | DAC R BIAS *                             | 50            | 50  | 50    | 0 ~ 127 | * CG-WHITE BALANCE ADJUSTMENT[RED]                                                                                                            |
| 17  | DAC B BIAS *                             | 50            | 50  | 50    | 0 ~ 127 | * CG-WHITE BALANCE ADJUSTMENT[BLUE]                                                                                                           |
| 18  | DAC GAIN(SUB-CONT)                       | 55            | 55  | 58    | 0 ~ 63  |                                                                                                                                               |
| 19  | S&H B-CK                                 | 8             |     |       |         |                                                                                                                                               |
| 20  | S&H G-CK                                 | 8             |     |       |         |                                                                                                                                               |
| 21  | S&H R-CK                                 | 8             |     |       |         |                                                                                                                                               |
| 22  | S&H B-SH                                 | 7             |     |       |         |                                                                                                                                               |
| 23  | S&H G-SH                                 | 7             |     |       |         |                                                                                                                                               |
| 24  | S&H R-SH                                 | 7             |     |       |         |                                                                                                                                               |
| 25  | S & H HCK PHASE ADJUSTMENT               | 5             |     |       |         |                                                                                                                                               |
| 26  | cx2076 AV Sub-Color Adjustment           | 6             |     |       |         |                                                                                                                                               |
| 27  | cx2076 AV RGB Pedestal ADJUSTMENT *      | 35            |     |       | 0 ~ 63  | * R-PEDESTAL ADJUSTMENT                                                                                                                       |
| 28  | cx2076 AV G Pedestal ADJUSTMENT *        | 150           | 150 | 150   | 0 ~ 255 | * G-PEDESTAL ADJUSTMENT                                                                                                                       |
| 29  | cx2076 AV B Pedestal ADJUSTMENT *        | 150           | 150 | 150   | 0 ~ 255 | * B-PEDESTAL ADJUSTMENT                                                                                                                       |
| 30  | Not Used                                 |               |     |       |         |                                                                                                                                               |
| 31  | Not Used                                 |               |     |       |         |                                                                                                                                               |
| 32  | Not Used                                 |               |     |       |         |                                                                                                                                               |
| 33  | cx2076 AV Sub Sharpness                  | 3             |     |       | 0 ~ 15  |                                                                                                                                               |
| 34  | Sub Tint For NTSC                        | 7             |     |       | 0 ~ 63  |                                                                                                                                               |
| 35  | Sub Tint For NTSC4.43                    | 7             |     |       | 0 ~ 63  |                                                                                                                                               |
| 36  | Lamp Monitor Timer                       | 0             |     |       | —       | Read Only(can not be modified)                                                                                                                |
| 37  | Shootout ON/OFF                          | 0             |     |       | 0 ~ 1   | 1:AV Signal Exist:AV, Not Exit :PC                                                                                                            |
| 38  | Not Used                                 |               |     |       |         |                                                                                                                                               |
| 39  | Fan Operating Period on Power Off        | 3             |     |       | 0 ~ 255 | 1:30 second 3:90 second                                                                                                                       |
| 40  | Fan Speed Up                             | 0             |     |       | 0 ~ 1   |                                                                                                                                               |
| 41  | Logo Display Option                      | 1             |     |       | 0 ~ 1   | 0:Logo Display Off 1:Logo Display On                                                                                                          |
| 42  | GAMMA R_WHP                              | 57            |     | 57    | 0 ~ 63  |                                                                                                                                               |
| 43  | GAMMA G_WHP                              | 57            |     | 57    | 0 ~ 63  |                                                                                                                                               |
| 44  | GAMMA B_WHP                              | 57            |     | 57    | 0 ~ 63  |                                                                                                                                               |
| 45  | PIXEL OFFSET R *                         | 38            |     |       | 0 ~ 63  | * R-OFFSET ADJUSTMENT-[CG]                                                                                                                    |
| 46  | PIXEL OFFSET G *                         | 38            |     |       | 0 ~ 63  | * G-OFFSET ADJUSTMENT-[CG]                                                                                                                    |
| 47  | PIXEL OFFSET B *                         | 38            |     |       | 0 ~ 63  | * B-OFFSET ADJUSTMENT-[CG]                                                                                                                    |
| 48  | DAC D/A GAIN *                           | 180           | 195 | 180   | 0 ~ 255 | * VIDEO GAIN ADJUSTMENT-[CG/MCI]                                                                                                              |
| 49  | cx2076 AV RGB GAIN *                     | 26            |     |       | 0 ~ 63  | * R-VIDEO GAIN ADJUSTMENT                                                                                                                     |
| 50  | cx2076 AV G GAIN *                       | 42            |     |       | 0 ~ 63  | * G-VIDEO GAIN ADJUSTMENT                                                                                                                     |
| 51  | cx2076 AV B GAIN *                       | 42            |     |       | 0 ~ 63  | * B-VIDEO GAIN ADJUSTMENT                                                                                                                     |
| 52  | PIXEL GAIN R                             | 192           |     |       | 0 ~ 255 |                                                                                                                                               |
| 53  | PIXEL GAIN G                             | 192           |     |       | 0 ~ 255 |                                                                                                                                               |

[illegible]

[illegible]

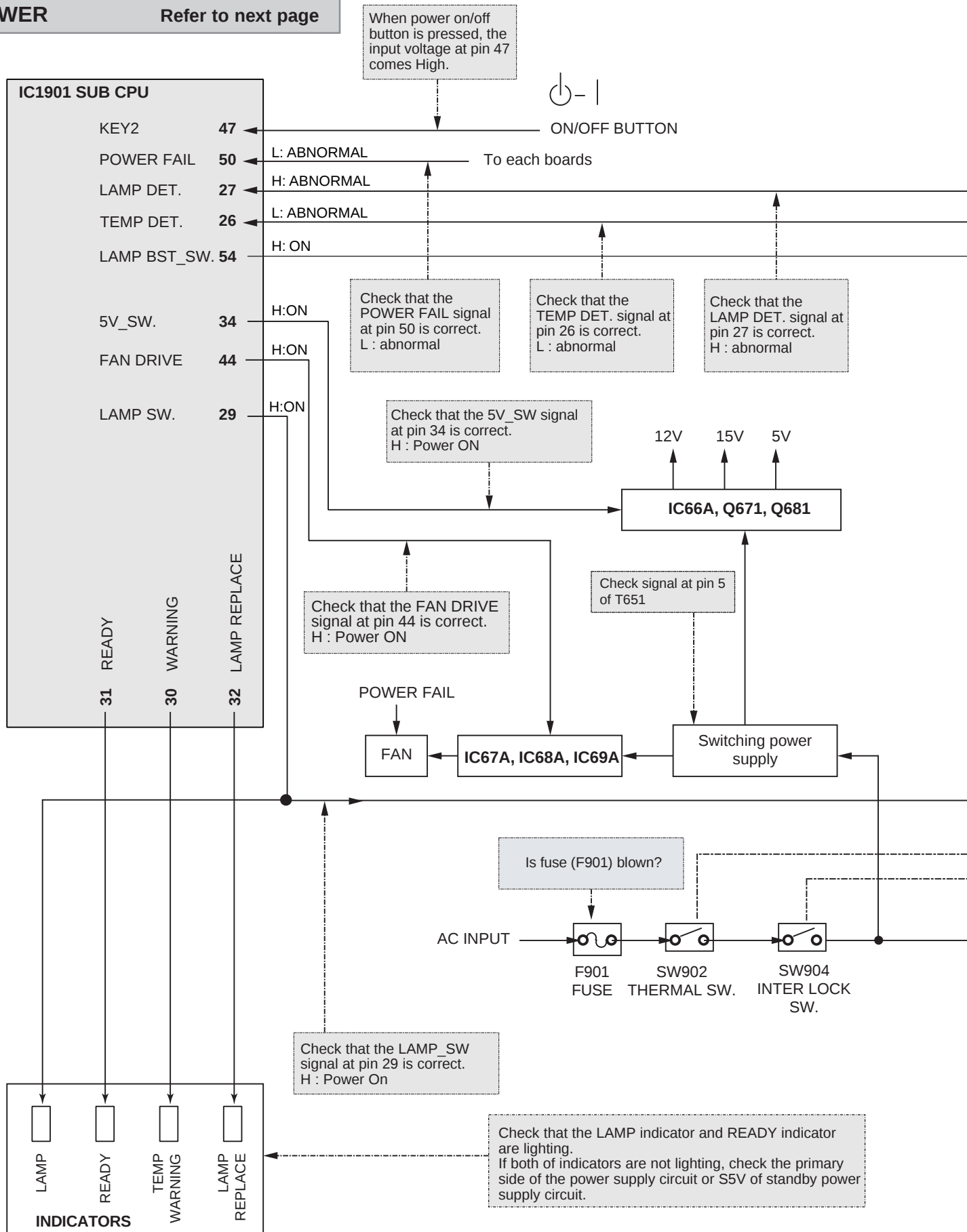
A schematic diagram of a laboratory layout. The diagram shows a rectangular room with a thick black border. Inside, several pieces of equipment are represented by rectangles. At the top center is a large rectangle labeled 'K1'. To its left is a smaller rectangle labeled 'K6B'. Below 'K6B' is a vertical line with a small rectangle at the bottom labeled 'K6E'. To the right of 'K6B' is a horizontal line with a small rectangle at the end. Below this horizontal line is a long horizontal line with a small rectangle at the end, which then turns 90 degrees downward into a vertical line labeled 'K6F' at the bottom right. To the right of 'K6F' is a small rectangle labeled 'K6C'. A legend on the right side shows a rectangle with a horizontal line through it, corresponding to the symbols used in the diagram.

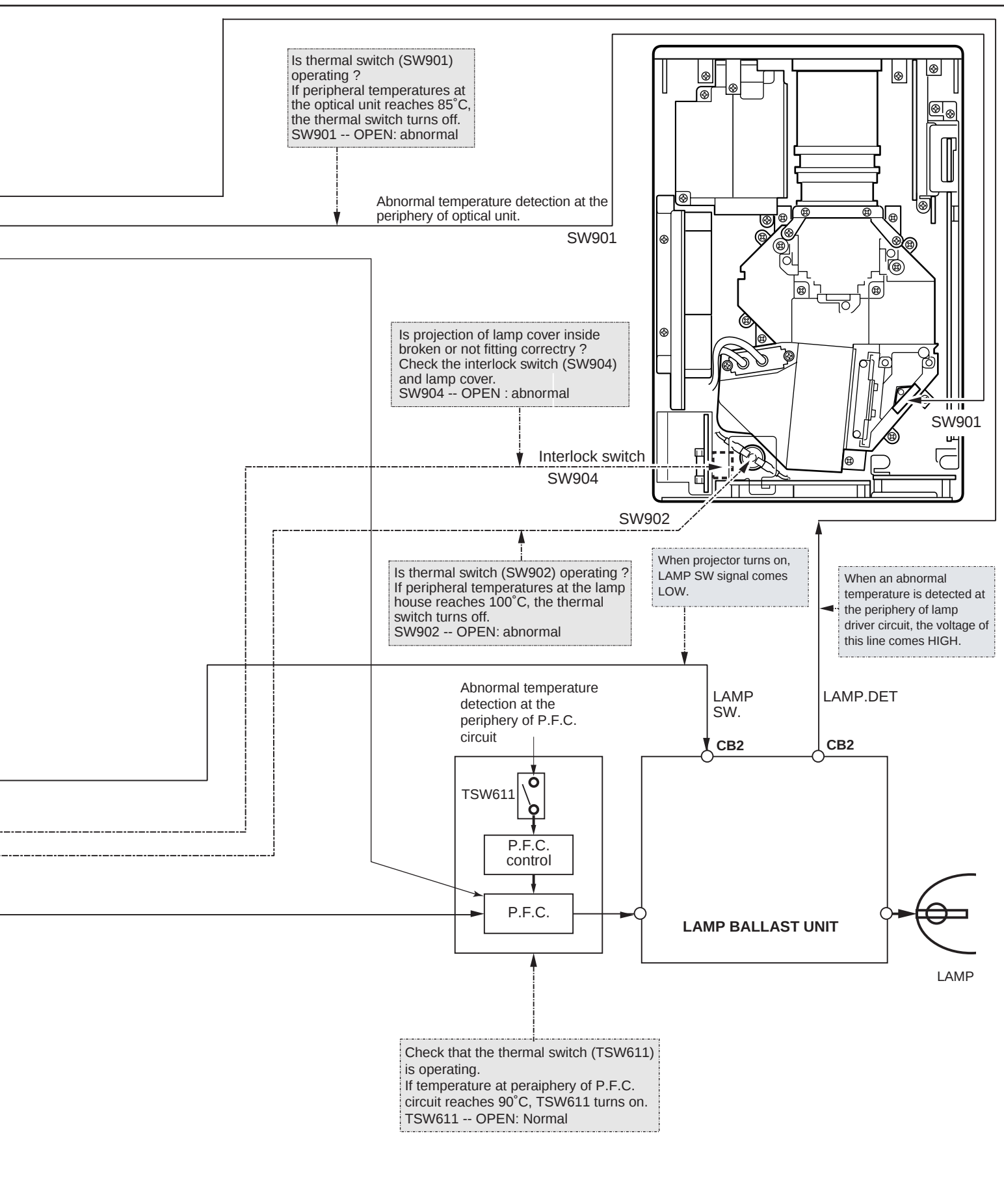
The schematic diagram shows a control panel with three main components: IC01 (a rectangular component with a small circle on its left side), VR01 (a square component), and K1A (a horizontal rectangular component at the bottom). The components are arranged in a simple layout within a rectangular frame.

# Troubleshooting

## NO POWER

Refer to next page





## NO POWER

### PERIPHERY OF CHASSIS

1. Is fuse (F901) blown?  
Fuse may be opened when either the LAMP indicator or the READY indicator isn't illuminated. Check the fuse.  
● For continued safety, replace with a fuse of the same type.  
TYPE T4.0AH 250V FUSE. (LITTLE FUSE INC. TYPE 215004)
2. Is projection of lamp cover inside broken or not fitting?  
Check the INTER LOCK switch(SW904) and lamp cover.  
SW904 ..... OPEN : abnormal
3. Is thermal switch(SW902) operating?  
If temperatures periphery of lamp house reaches 100°C, the thermal switch will be turned off automatically.  
SW902 ..... OPEN : abnormal
4. Is thermal switch(SW901) operating? (with the WARNING TEMP. indicator flashing)?  
If temperatures periphery of optical unit reaches 85°C, the thermal switch will be turned off automatically.  
SW901 ..... OPEN : abnormal

### MAIN COMP-C BOARD

1. Check that the Vcc-voltage(+5V) is applied to pins 4, 5 of K30R and pins 61-64 of K30EE.

### MAIN COMP-B BOARD

1. Check that the Vcc-voltage(+5V) is applied to pin 11 of IC1901, pin 38-40 of K15EE.
2. Check that the POWER FAIL signal is correct.  
Pin 50 of IC1901 ..... L : abnormal
3. Check that the TEMP DET. signal is correct.  
Pin 26 of IC1901, pin 4 of K5M ..... L : abnormal
4. Check that the LAMP DET. signal is correct.  
Pin 27 of IC1901, pin 3 of K5A ..... H : abnormal
5. Check that the LAMP\_SW signal is correct.  
Pin 29 of IC1901 ..... H : ON  
Pin 1 of K5A ..... L : ON
6. Check that the 5V\_SW signal is correct.  
Pin 34 of IC1901, pin 5 of K5P ..... H : ON
7. Check that the FAN DRIVE signal is correct.  
Pin 44 of IC1901, pin 3 of K5P ..... H : ON
8. Check that the LAMP BST\_SW signal is correct.  
Pin 54 of IC1901, pin 2 of K5P ..... H : ON

### POWER, P.F.C. BOARD

1. Are the LAMP indicator(red) and READY indicator(green) light?  
If the LAMP and READY indicators do not illuminated, check the primary circuit and S5V of standby power supply circuit.
2. Check that the FAN DRIVE signal is correct.  
Pin 3 of K6P ..... H : ON
3. Check that the LAMP BST-SW signal is correct.  
Pin 2 of K6P ..... H : ON
4. Check that the 5V\_SW signal is correct.  
Pin 5 of K6P ..... H : ON
5. Check that the POWER FAIL signal is correct.  
Pin 6 of K6P ..... L : abnormal
6. Is thermal switch(TSW611) operating?  
If temperatures periphery of P.F.C. circuit reaches 90°C, the thermal switch will be turned on automatically.  
TSW611 ..... SHORT : abnormal
7. Check the signal at pin 5 of T651. (Switching power IC output signal)

**NO PICTURE****AV, AV SUB BOARD**

- Check that the Vcc-voltages(+5V, -5V) are applied to AV circuits.  
Pins 45-48 of K3001, pins 29-32 of K3002 .....5V  
Pins 51-54 of K3001, pins 35-38 of K3002 .....-5V  
Check IC1001 and IC1002.
- Check that the following input signals are observed correctly.

| SIGNAL | K3001-pin No. | K3002-pin No. |
|--------|---------------|---------------|
| V-Sync | 17-18         | 1-2           |
| H-Sync | 19-20         | 3-4           |
| B      | 23-24         | 7-8           |
| G      | 25-26         | 9-10          |
| R      | 27-28         | 11-12         |
| Video  | 35-35         | 15-16         |
| S-C    | 39-40         | 25-26         |
| S-Y    | 43-44         | 19-20         |

**MAIN COMP-D BOARD**

- Check the signals at following test points.
  - Video signal at TP2101
  - V-sync signal at TP6131
  - H-sync signal at pin 9 of IC6131

**MAIN COMP-A BOARD**

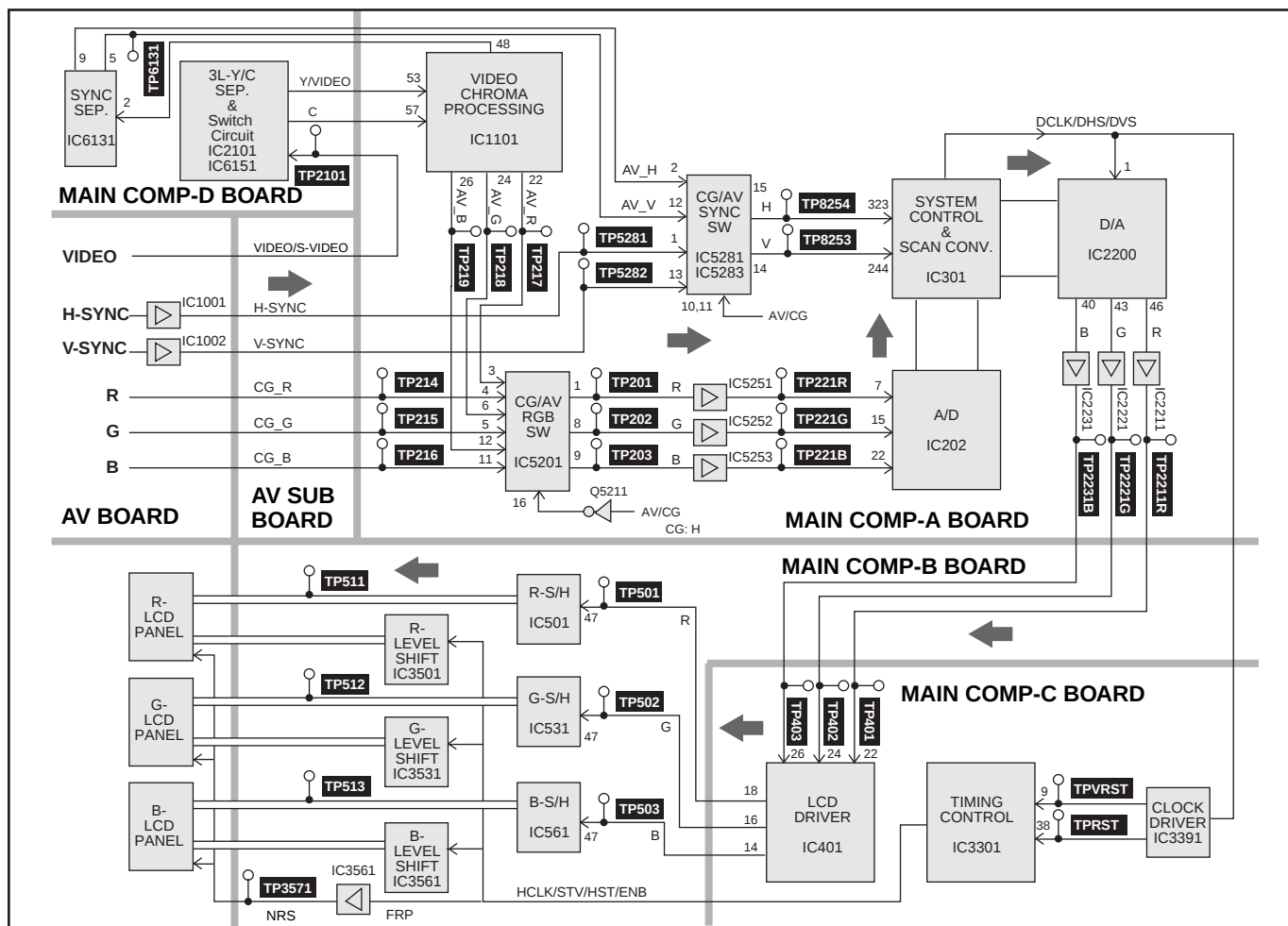
- Check that the AV/CG switching signal is correct.  
Pin 16 of IC5201 .....AV: H, CG: L  
Pins 10, 11 of IC5282 .....AV: L, CG: H
- Check that the sync signals are correct.  
TP5281, TP8254 .....H-Sync  
TP5282, TP8253 .....V-Sync
- Check that the RGB signals are observed at following test points.  
TP214, TP217, TP201, TP221R, TP2211R .....R-signal  
TP215, TP218, TP202, TP221G, TP2221G .....G-signal  
TP216, TP219, TP203, TP221B, TP2231B .....B-signal

**MAIN COMP-C BOARD**

- Check that the signals are observed at following test points.  
TP401, TP402, TP403 .....R, G, B signals  
TPVRST, TPRST .....V-Sync, H-Sync

**MAIN COMP-B BOARD**

- Check that the signals are observed at following test points.  
TP501, TP502, TP503, TP511, TP512, TP513  
.....R, G, B Drive signals



## NO SOUND

### AV, AV SUB BOARD

1. Check that the Vcc-voltage(+9V) is applied at pins 3-6 of K3802.
2. Check that the AV/CG switching signal is correct.  
Pin 9, 10 of IC5001 ..... AV : L  
CG : H
3. Check that audio signal is observed at following points.  
Pins 9-10 of K3802, pins 11-14 of K3801

### POWER BOARD

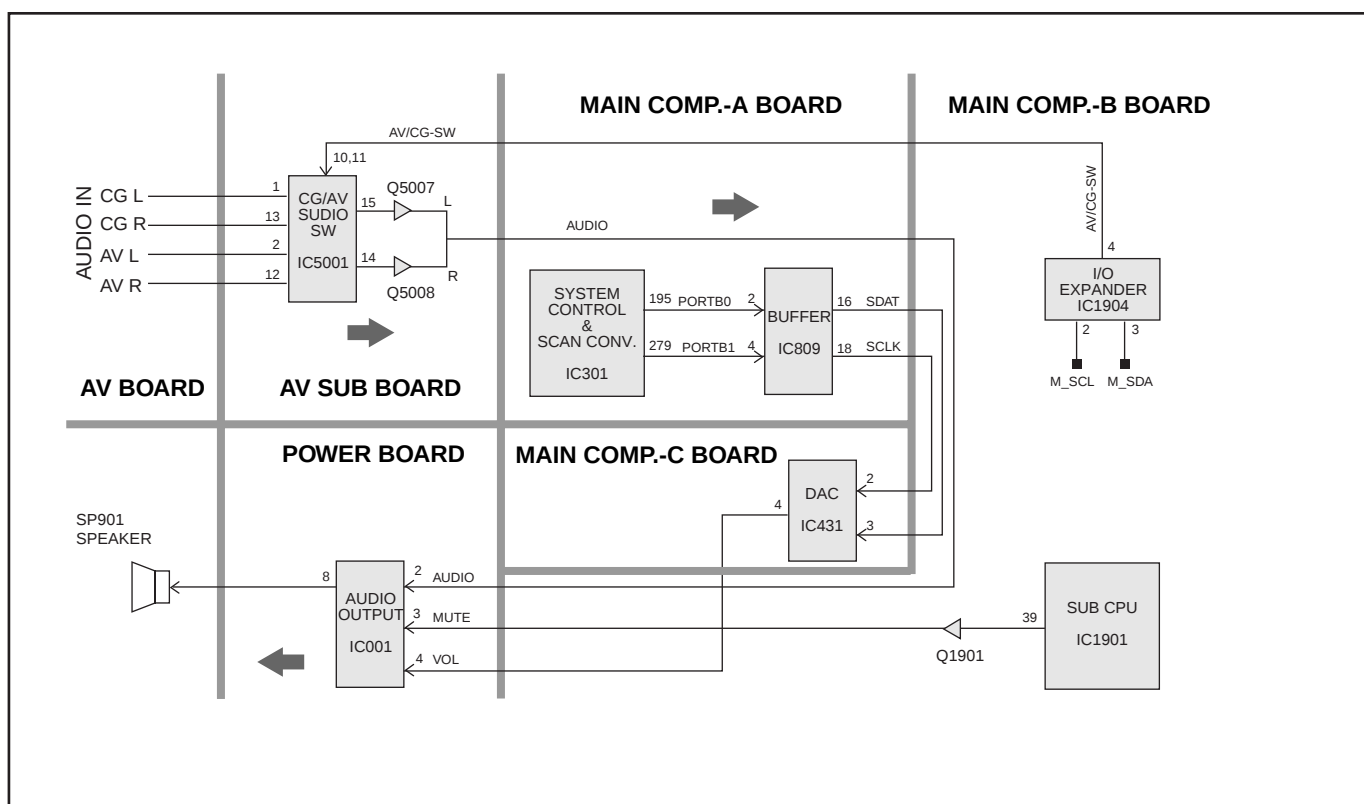
1. Check that sound volume control signal is correct.  
Pin 4 of IC001
2. Check that audio signal is observed at pin 2 of IC001.
3. Check the MUTE signal at pin 3 of IC001.  
Pin 3 of IC001 .....MUTE On: H
4. Check that Vcc-voltage(+12V) is applied at pins 1 and 9 of IC001.

### MAIN COMP-B BOARD

1. Check that the AV/CG switching signal is correct.  
Pin 4 of IC1904 ..... AV : L  
CG : H
2. Check that the MUTE signal is correct.  
Pin 39 of IC1901 .....MUTE On: H

### MAIN COMP-C BOARD

1. Check that sound volume control signal is correct.  
Pin 4 of IC431



## ■ Control Port Functions

### ● SUB CPU (IC1901) Port Functions

| Pin No. | Function Name | Function                                 | Polarity      | I/O |
|---------|---------------|------------------------------------------|---------------|-----|
| 1       | RXD0          | RXD 0(Write for Sub CPU flash ROM)       | active: L     | I   |
| 2       | TXD1          | TXD 0(Write for Sub CPU flash ROM)       | active: L     | O   |
| 3       | CNVSS         | Write for Sub CPU flash ROM              | -             | I   |
| 4       | MSCL          | S-IIC SCL                                | active: L     | I/O |
| 5       | MSDA          | S-IIC SDA                                | active: L     | I/O |
| 6       | RESET         | Reset Input                              | L: reset      | I   |
| 7       | N.C.          | -                                        | -             | -   |
| 8       | XOUT          | CPU Reference Clock Output               | 8MHz          | O   |
| 9       | VSS           | Vss                                      | -             | I   |
| 10      | XIN           | CPU Reference Clock Input                | 8MHz          | I   |
| 11      | VCC           | Vcc                                      | -             | I   |
| 12      | R/C IN        | Remote Control Signal Input              | active: L     | I   |
| 13      | N.C.          | -                                        | -             | -   |
| 14      | reserved      | no use                                   |               | O   |
| 15      | RXD 1         | RXD 1(Communication for Main CPU)        | active: L     | I   |
| 16      | 1 SEC         | 1Second Counter                          | pulse         | O   |
| 17      | TXD 1         | TXD 1(Communication for Main CPU)        | active: L     | O   |
| 18      | N.C.          | -                                        | -             | -   |
| 19      | PIX RESET     | Pixel Works Reset                        | H: PW off     | O   |
| 20      | reserved      | no use                                   |               | O   |
| 21      | reserved      | no use                                   |               | O   |
| 22      | reserved      | no use                                   |               | O   |
| 23      | reserved      | no use                                   |               | O   |
| 24      | reserved      | no use                                   |               | O   |
| 25      | TXD_SW1       | RS232C SW1(Write for MCI Card)           |               | O   |
| 26      | TEMP ERROR    | Abnormal Temperature                     | L: Abnormal   | I   |
| 27      | LAMP ERROR    | Lamp Status                              | H: No Light   | I   |
| 28      | TXD_SW2       | RS232C SW2(Write for Main CPU Flash ROM) |               | O   |
| 29      | LAMP SW       | Lamp Power                               | H: ON         | O   |
| 30      | WARNING LED   | WARNING LED ON/OFF                       | H: ON         | O   |
| 31      | READY LED     | READY LED ON/OFF                         | H: ON         | O   |
| 32      | LAMP REP LED  | LAMP REPLACE LED ON/OFF                  | H: ON         | O   |
| 33      | FAN_SPEED UP  | Fun Speed Up                             | L: ON         | O   |
| 34      | 5V_SW         | 5V Power Supply ON/OFF                   | H: ON         | O   |
| 35      | reserved      | no use                                   |               | O   |
| 36      | reserved      | no use                                   |               | O   |
| 37      | reserved      | no use                                   |               | O   |
| 38      | reserved      | no use                                   |               | O   |
| 39      | MUTE SW       | Audio Mute                               | H: ON         | O   |
| 40      | reserved      | no use                                   |               | O   |
| 41      | N.C.          | N.C.                                     | -             | -   |
| 42      | WRM           | PW Write Mode                            | L: Write Mode | I   |
| 43      | TXD_SW3       | RS232C SW3                               |               | O   |
| 44      | FAN_DRIVE     | Fun Drive                                | H: ON         | O   |
| 45      | OPTION        | Destination Option                       |               | I   |
| 46      | KEY3          | Key SW 3                                 |               | I   |
| 47      | KEY2          | Key SW 2                                 |               | I   |
| 48      | KEY1          | Key SW 1                                 |               | I   |
| 49      | AVSS          | GND                                      | -             | I   |
| 50      | POWER FAIL    | Power Fail Detection Input               | L: Abnormal   | I   |
| 51      | VREF          | Vcc                                      | -             | I   |
| 52      | AVCC          | Vcc                                      | -             | I   |
| 53      | N.C.          | -                                        | -             | -   |
| 54      | LAMP_BST_ON   | Lamp Ballast ON/OFF                      | H: ON"        | O   |
| 55      | CLKS(BUSY)    | Write for Sub CPU Flash ROM              | active: H     | O   |
| 56      | CLKO          | Write for Sub CPU Flash ROM              | active: L     | I   |

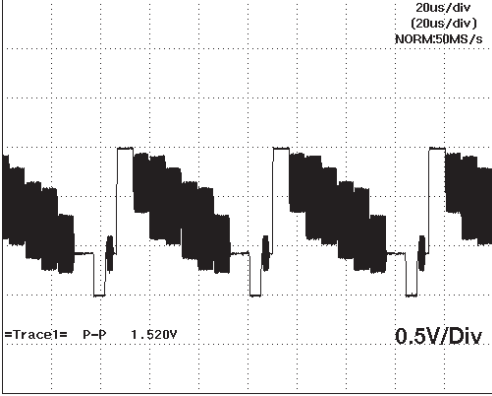
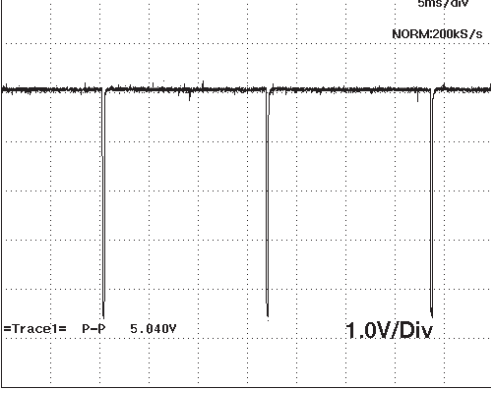
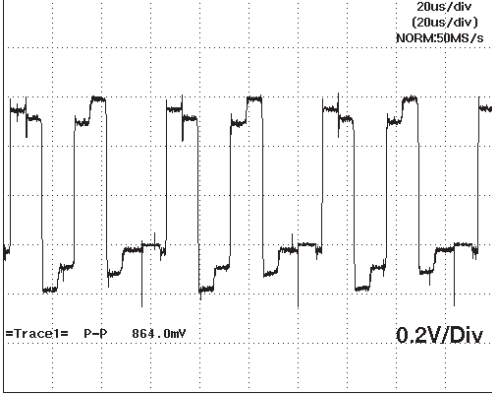
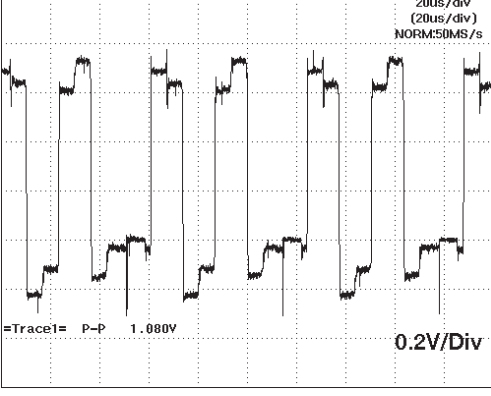
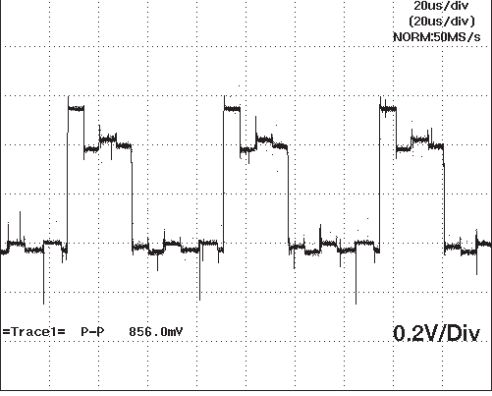
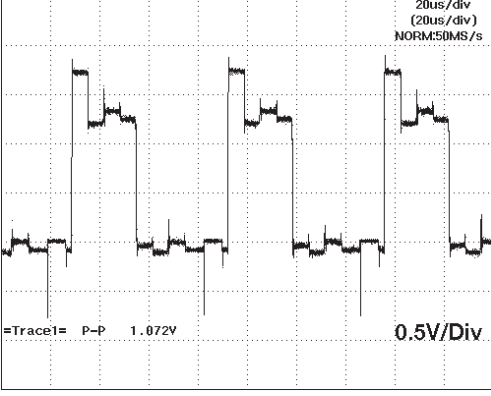
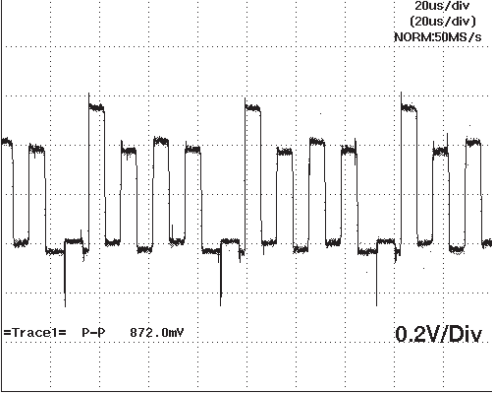
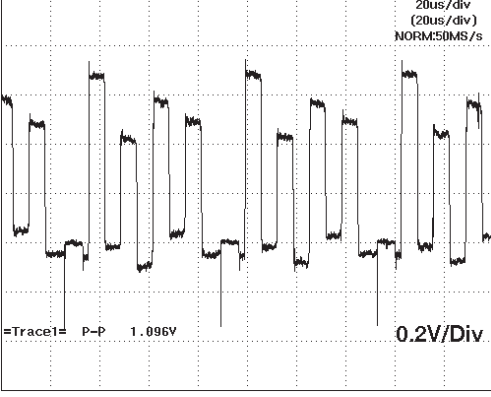
## ● I/O Expander (IC1904) Port Functions

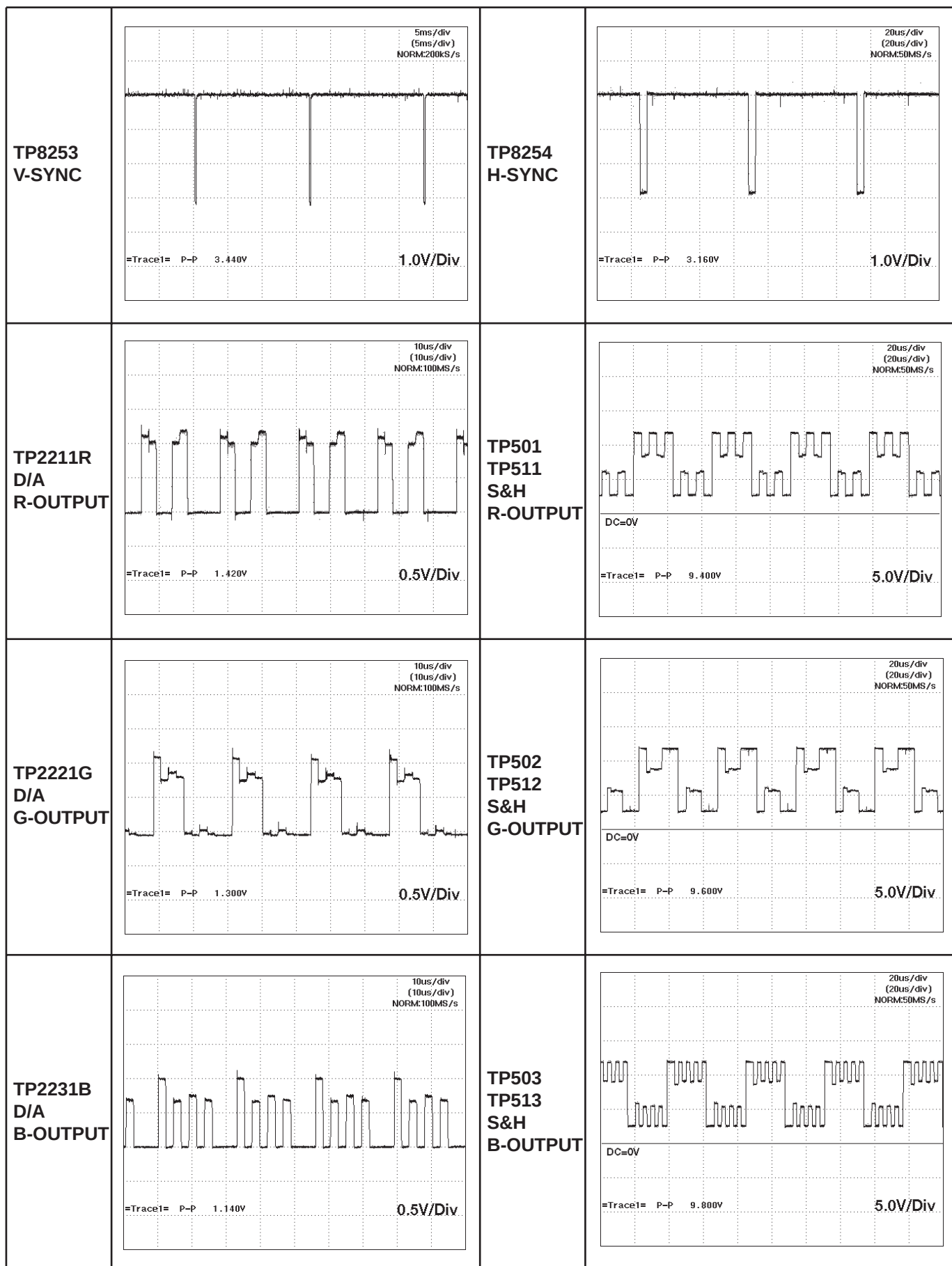
| Pin No. | Function Name | Function     | Action         | I/O |
|---------|---------------|--------------|----------------|-----|
| 1       |               | no use       |                | O   |
| 2       | SCL           | SCL          | L: active      | I/O |
| 3       | SDA           | SDA          | L: active      | I/O |
| 4       |               | AV/CG Switch |                | O   |
| 5       |               | NTSC/OTHER   |                | O   |
| 6       |               | ADPD         | L: MCI H: else | O   |
| 7       |               | MCISEL       | L: MCI H: else | O   |
| 8       | GND           | -            | -              | -   |
| 9       |               | FOCUS -      | L: ON H: OFF   | O   |
| 10      |               | FOCUS +      | L: ON H: OFF   | O   |
| 11      |               | ZOOM -       | L: ON H: OFF   | O   |
| 12      |               | ZOOM +       | L: ON H: OFF   | O   |
| 13      |               | 5 V          | -              | -   |
| 14      |               |              |                |     |
| 15      |               |              |                |     |
| 16      |               |              |                |     |

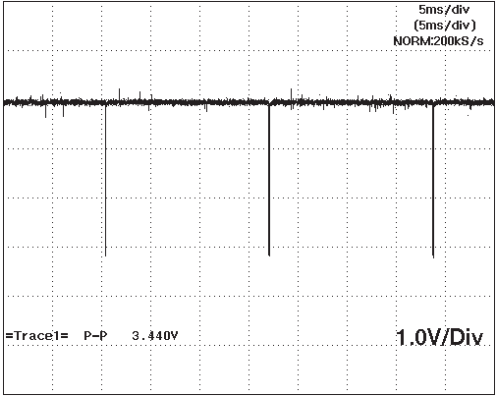
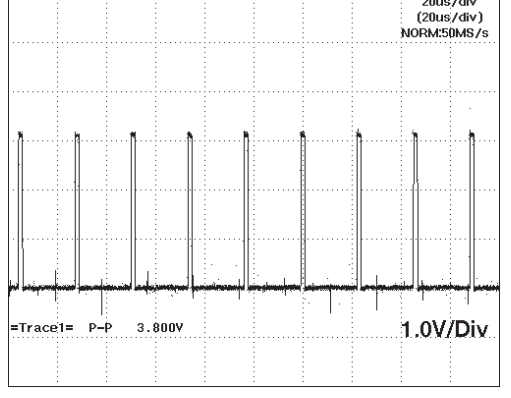
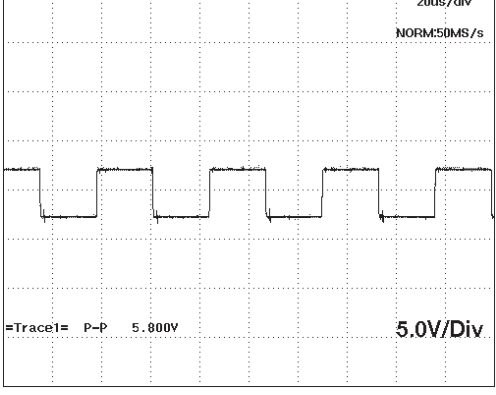
## ● I/O Expander (IC1905) Port Functions

| Pin No. | Function Name | Function          | Action         | I/O |
|---------|---------------|-------------------|----------------|-----|
| 1       |               | no use            |                | O   |
| 2       | SCL           | SCL               |                | I/O |
| 3       | SDA           | SDA               |                | I/O |
| 4       |               | MCI CARD IN       | L: active      | I   |
| 5       |               | MCI CARD ACCESS   | L: active      | I   |
| 6       |               | S-Input Detection |                |     |
| 7       |               | VIEW _ BUSY       |                | O   |
| 8       | GND           | -                 | -              |     |
| 9       |               | VW _ OFF          | L: MCI H: else | O   |
| 10      |               | PALM/N            |                | O   |
| 11      |               | AUDIO MUTE        | H: OFF L: ON   | O   |
| 12      |               | MOUSE             |                | O   |
| 13      |               | 5 V               | -              | -   |
| 14      |               |                   |                |     |
| 15      |               |                   |                |     |
| 16      |               |                   |                |     |

# Waveforms

|                                                          |                                                                                                                                                                         |                                                        |                                                                                                                                                                          |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>TP2101</b><br/><b>AV VIDEO</b></p>                 |  <p>20us/div<br/>(20us/div)<br/>NORM:50MS/s</p> <p>=Trace1= P-P 1.520V 0.5V/Div</p>    | <p><b>TP6131</b><br/><b>AV</b><br/><b>V-SYNC</b></p>   |  <p>5ms/div<br/>NORM:200K/s</p> <p>=Trace1= P-P 5.040V 1.0V/Div</p>                   |
| <p><b>TP217</b><br/><b>TP201</b><br/><b>R-INPUT</b></p>  |  <p>20us/div<br/>(20us/div)<br/>NORM:50MS/s</p> <p>=Trace1= P-P 864.0mV 0.2V/Div</p>  | <p><b>TP221R</b><br/><b>A/D</b><br/><b>R-INPUT</b></p> |  <p>20us/div<br/>(20us/div)<br/>NORM:50MS/s</p> <p>=Trace1= P-P 1.080V 0.2V/Div</p>  |
| <p><b>TP218</b><br/><b>TP202</b><br/><b>G-INPUT</b></p>  |  <p>20us/div<br/>(20us/div)<br/>NORM:50MS/s</p> <p>=Trace1= P-P 856.0mV 0.2V/Div</p> | <p><b>TP221G</b><br/><b>A/D</b><br/><b>G-INPUT</b></p> |  <p>20us/div<br/>(20us/div)<br/>NORM:50MS/s</p> <p>=Trace1= P-P 1.072V 0.5V/Div</p> |
| <p><b>TP-219</b><br/><b>TP203</b><br/><b>B-INPUT</b></p> |  <p>20us/div<br/>(20us/div)<br/>NORM:50MS/s</p> <p>=Trace1= P-P 872.0mV 0.2V/Div</p> | <p><b>TP221B</b><br/><b>A/D</b><br/><b>B-INPUT</b></p> |  <p>20us/div<br/>(20us/div)<br/>NORM:50MS/s</p> <p>=Trace1= P-P 1.096V 0.2V/Div</p> |



|                         |                                                                                                                                                                    |                         |                                                                                                                                                                        |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>TPDVS<br/>V-SYNC</b> |  <p>5ms/div<br/>(5ms/div)<br/>NORM:200K/s</p> <p>=Trace1= P-P 3.440V 1.0V/Div</p> | <b>TPDHS<br/>H-SYNC</b> |  <p>20us/div<br/>(20us/div)<br/>NORM:50MS/s</p> <p>=Trace1= P-P 3.800V 1.0V/Div</p> |
| <b>TP3571<br/>NRS</b>   |  <p>20us/div<br/>NORM:50MS/s</p> <p>=Trace1= P-P 5.800V 5.0V/Div</p>             |                         |                                                                                                                                                                        |
|                         |                                                                                                                                                                    |                         |                                                                                                                                                                        |
|                         |                                                                                                                                                                    |                         |                                                                                                                                                                        |

## ■ Cleaning

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

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

### Cleaning with air spray

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

#### Caution:

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

### Disassembly Cleaning

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

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

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

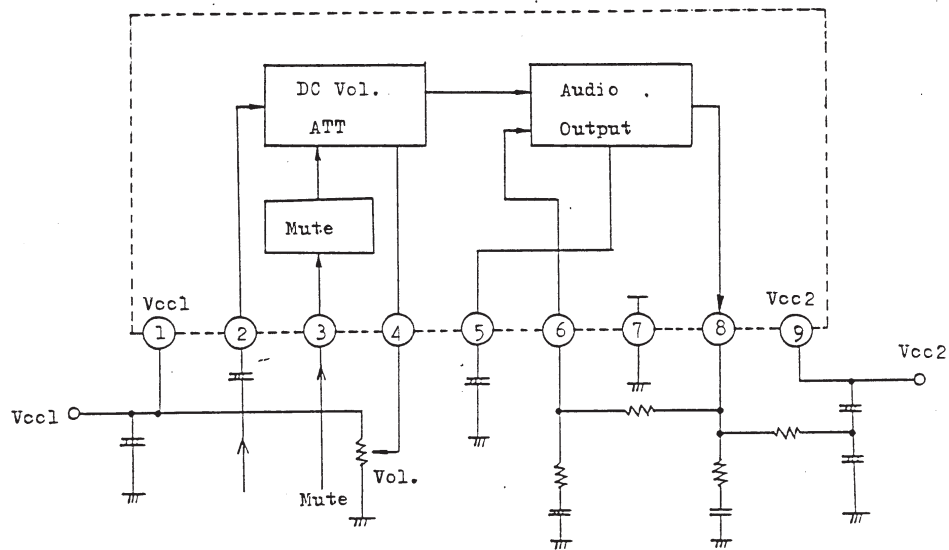
#### Caution:

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

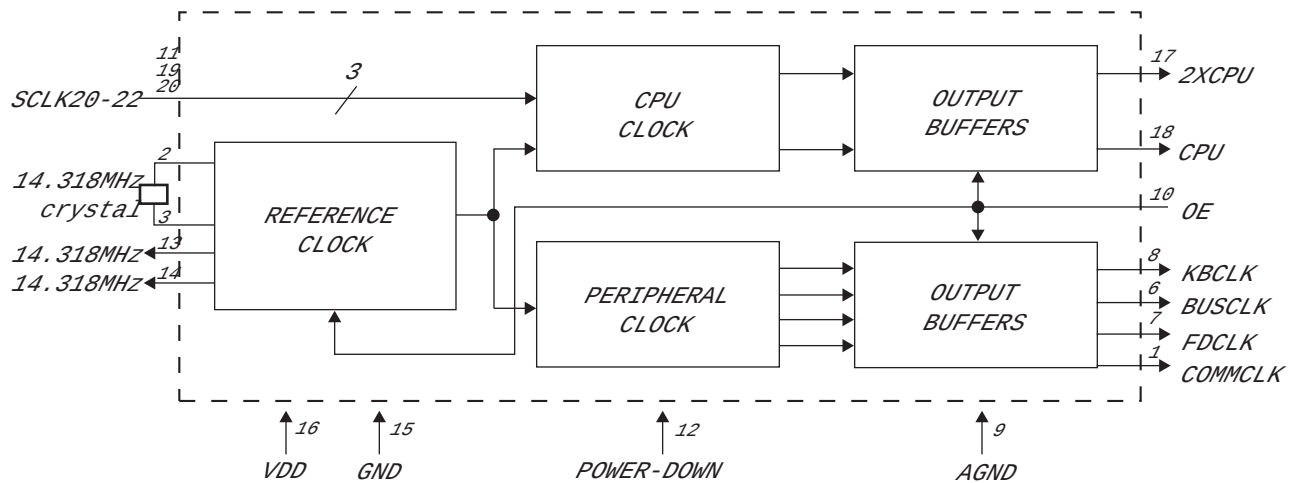
Since the LCD panel is equipped with an electronic circuit, never use any liquids (water, etc.) to clean the unit. Use of liquid may cause the unit to malfunction.

## ■ IC Block Diagrams

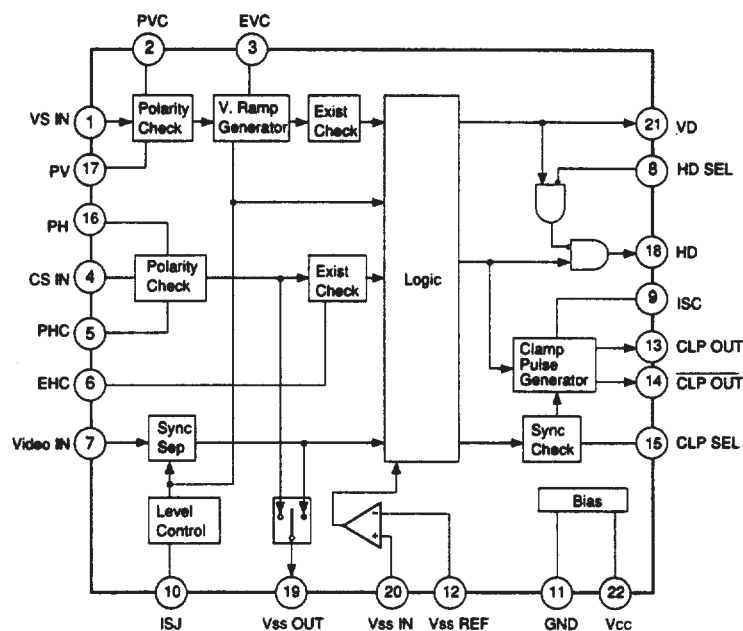
### ● AN5265 <AUDIO OUTPUT, IC001>



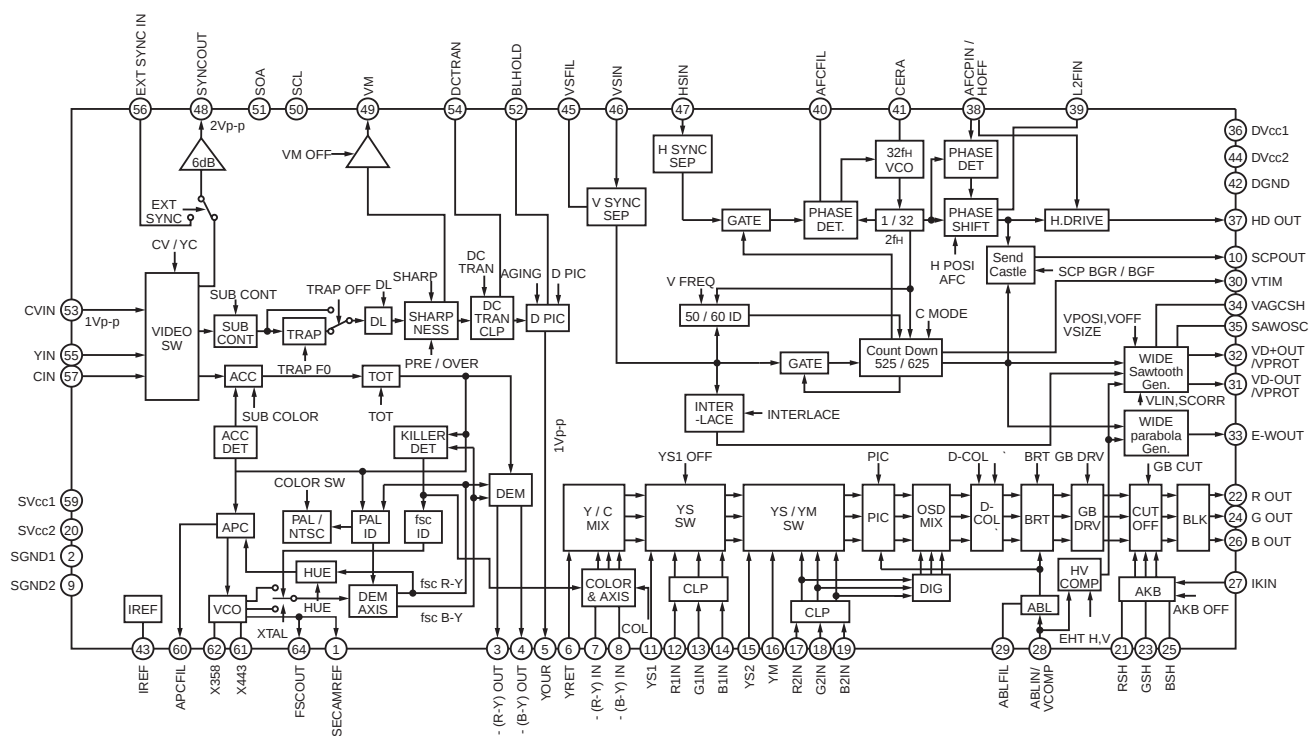
### ● AV9155C <PLL, IC1301>



# ● CXA2016S <Sync Separator, IC3031>

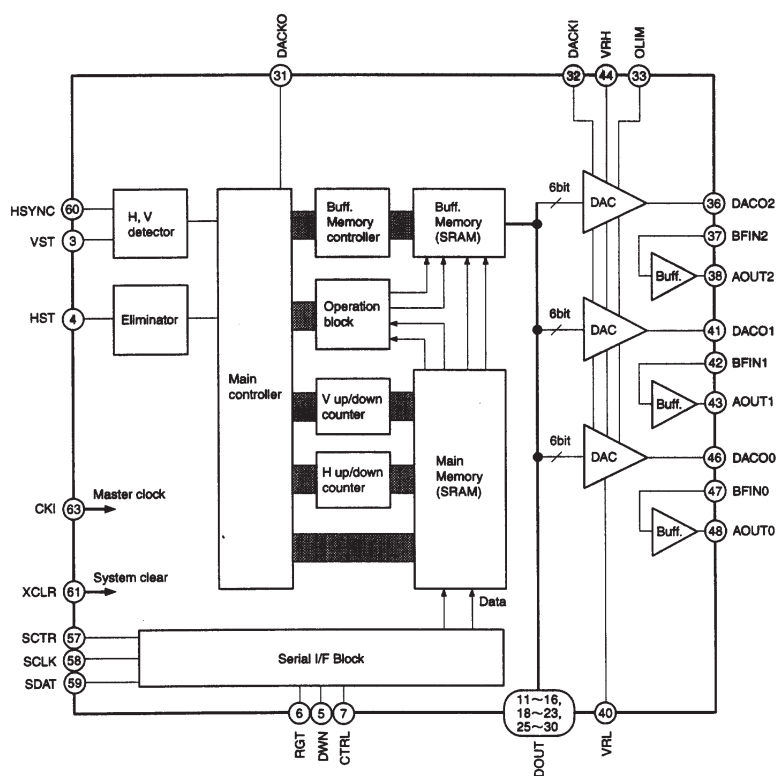


# ● CXA2076Q <Video/Chroma, IC1101>

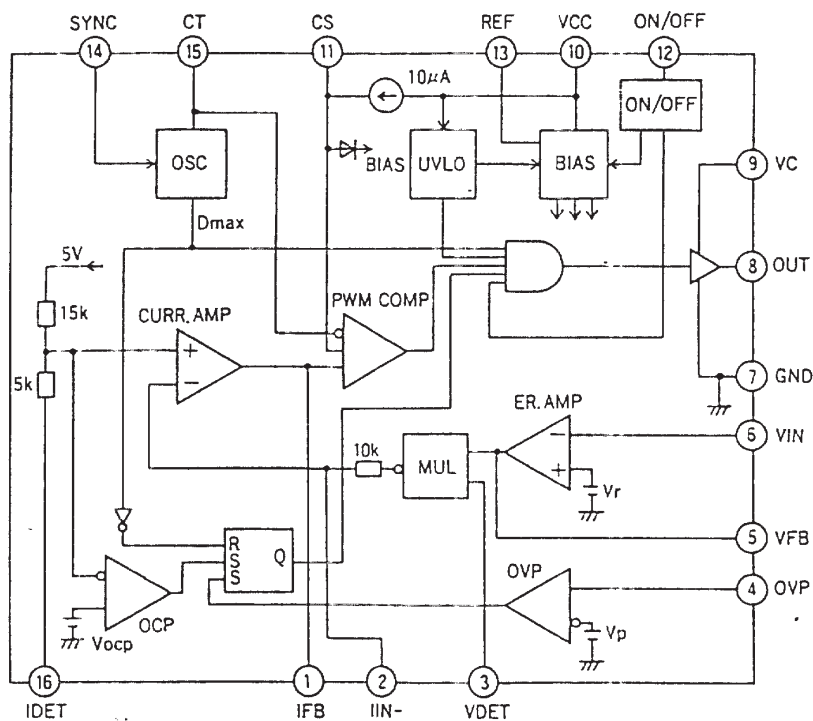




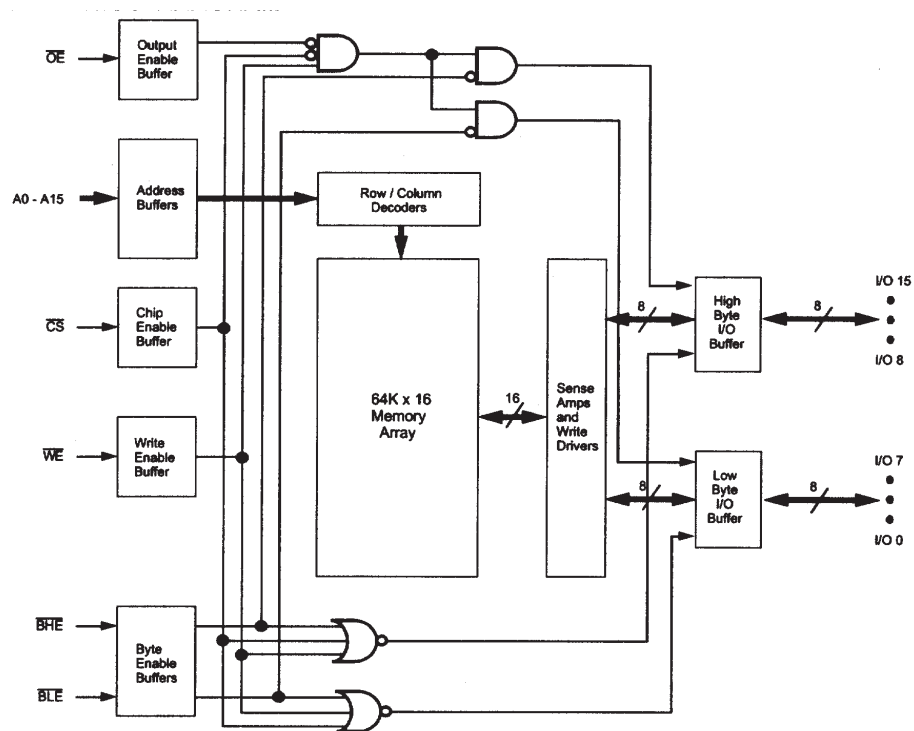
## ● CXD3503R <White Uniformity Compensation, IC471>



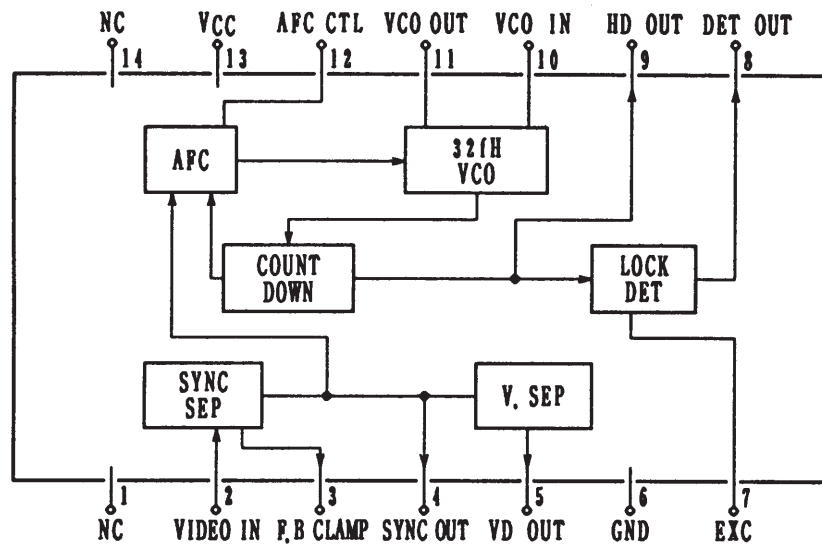
## ● FA5331M <Power Factor Control, IC01>



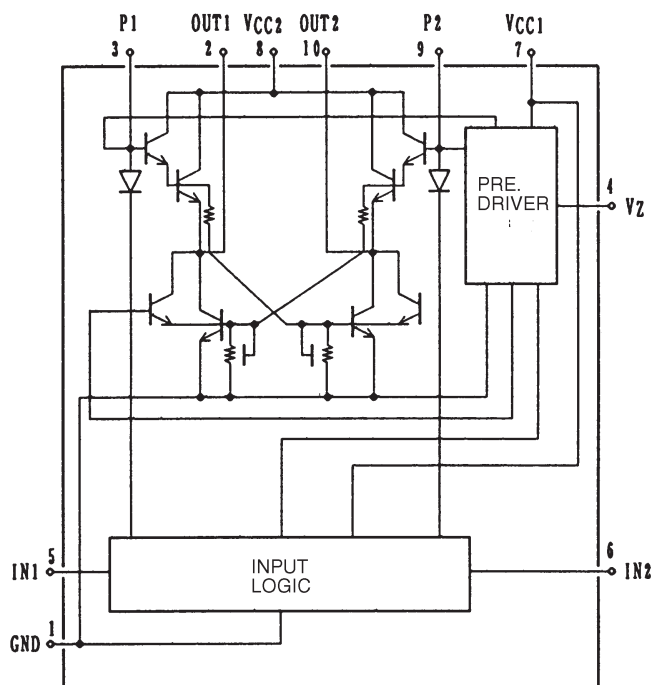
● IDT71V016S <RAM, IC805>



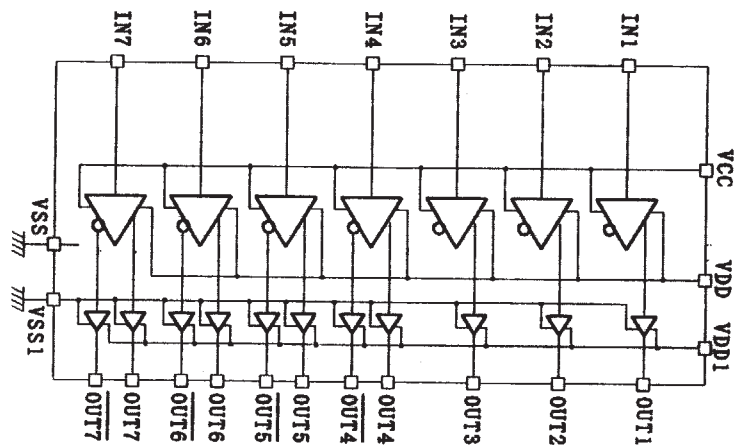
● LA7217M <Sync. Separator, IC6131>



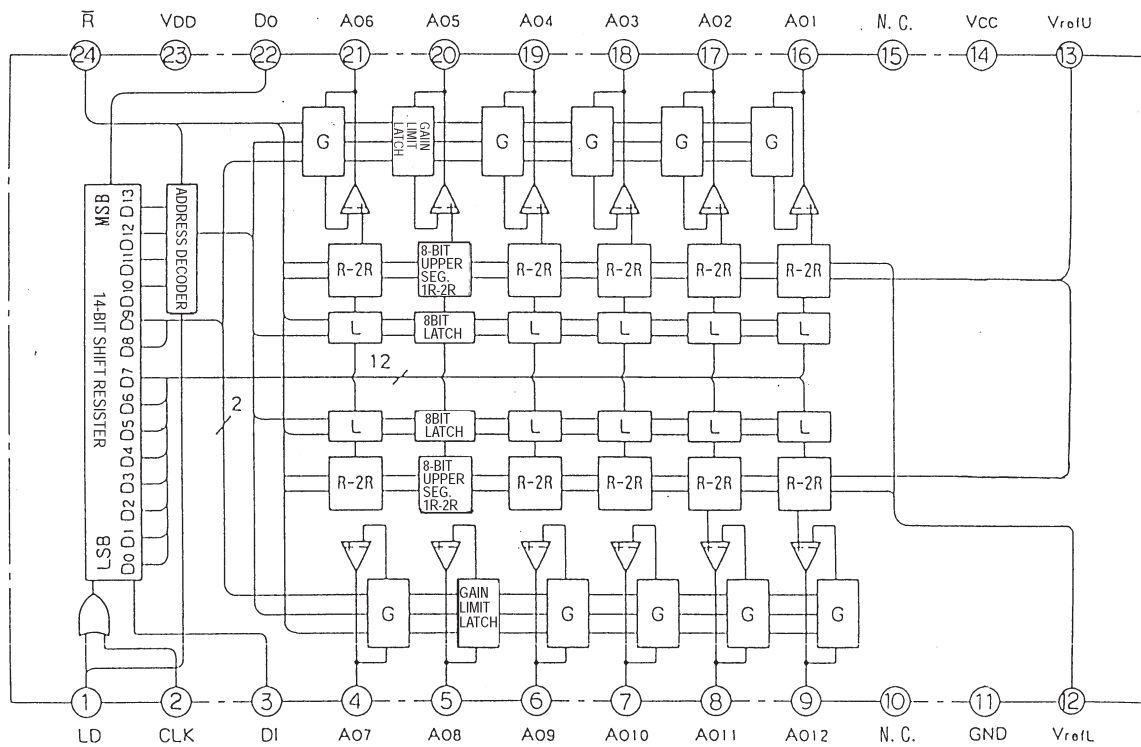
● LB1641<Motor Drive, IC5501, IC5551>



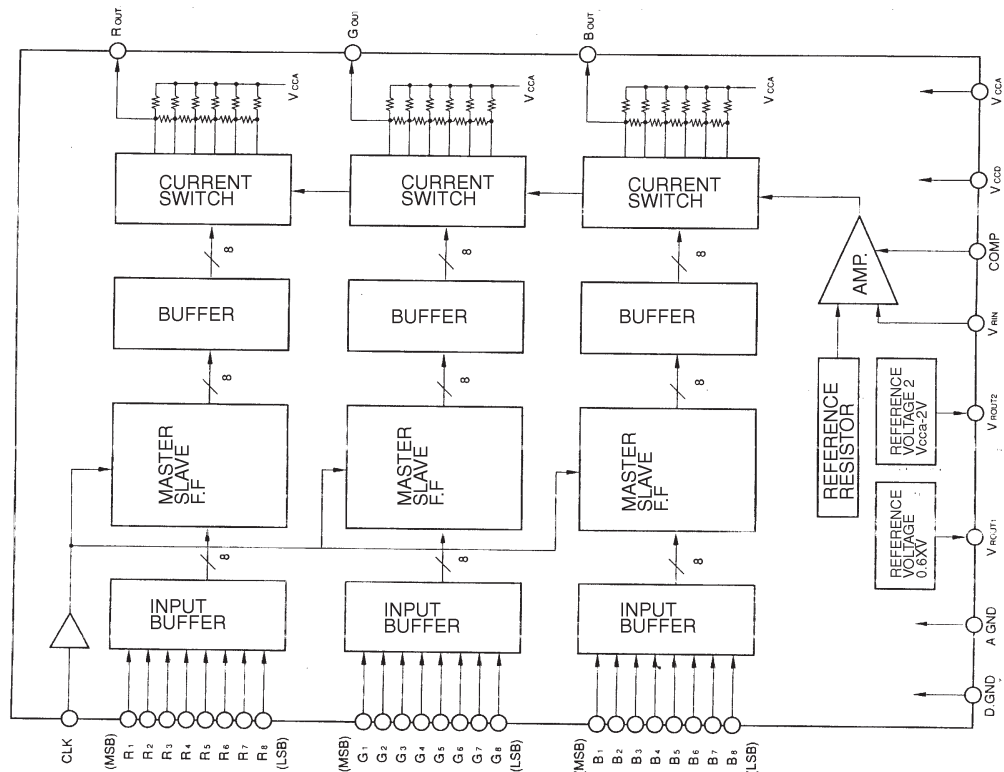
● LC4105V <Buffer, IC3501, IC3521, IC3541>



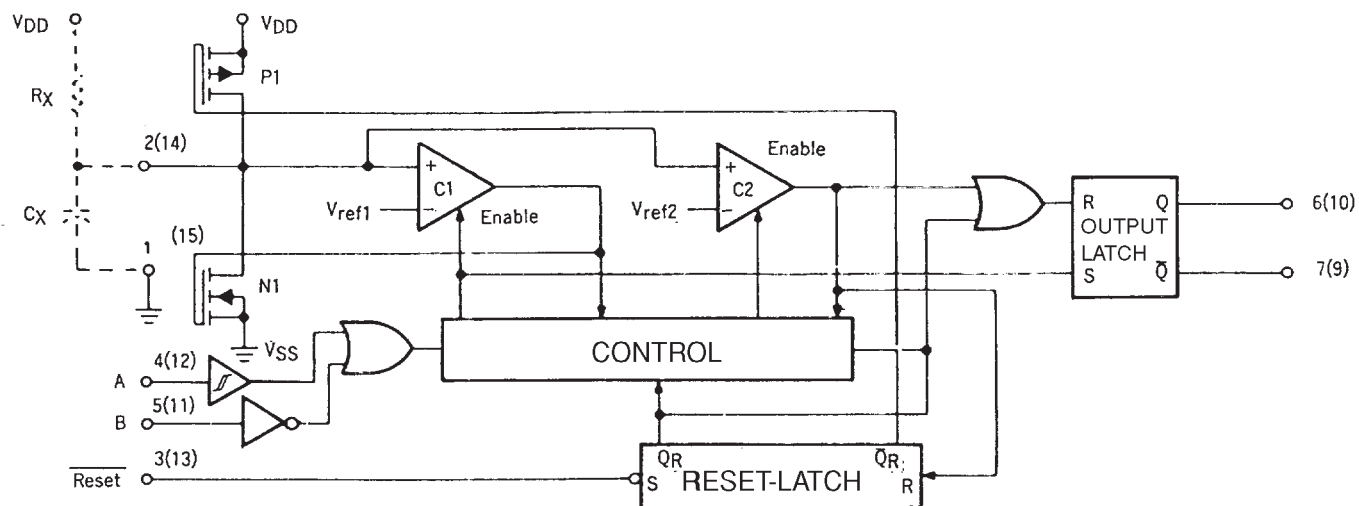
● M62358FP <DAC, IC431>



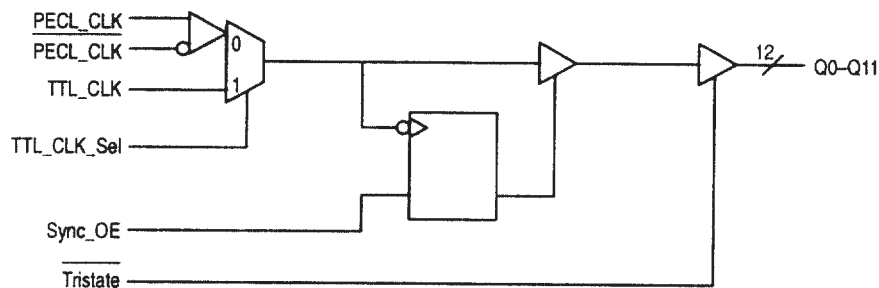
● MB40988PFQ <D/A Converter, IC2200>



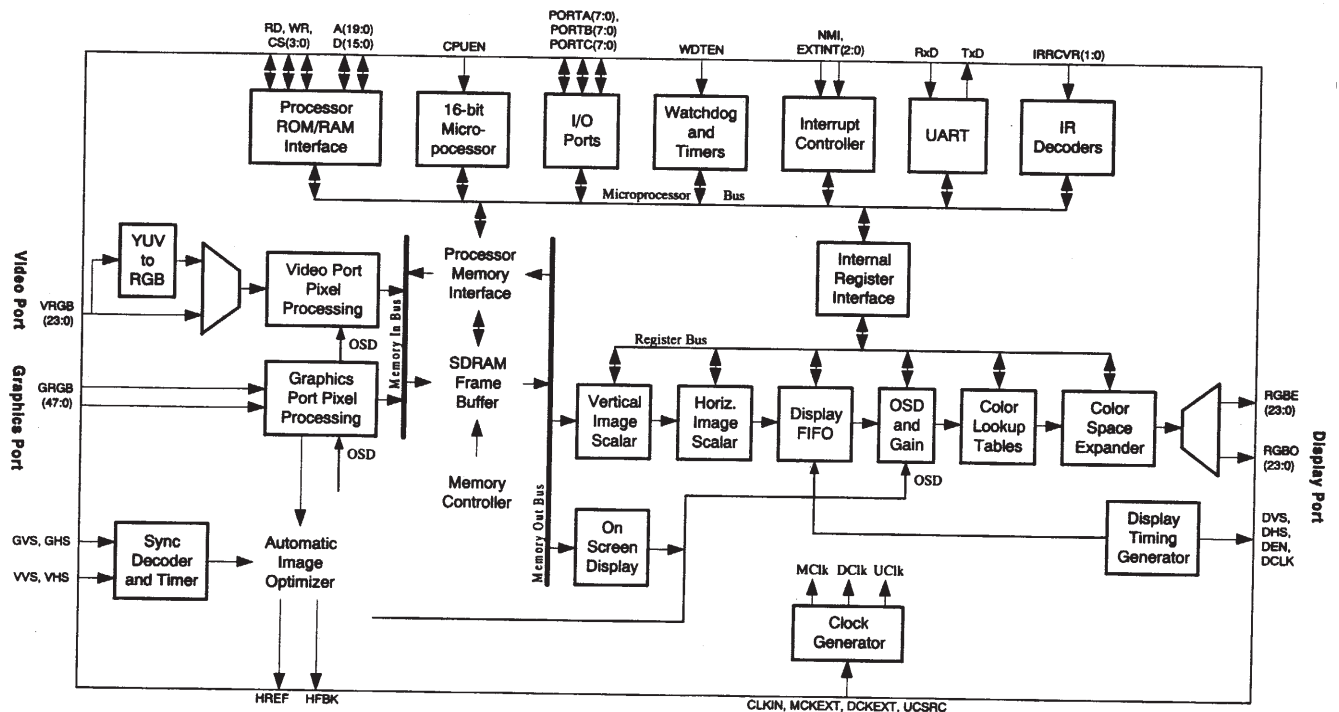
## ● MC14538BF <IC7201>



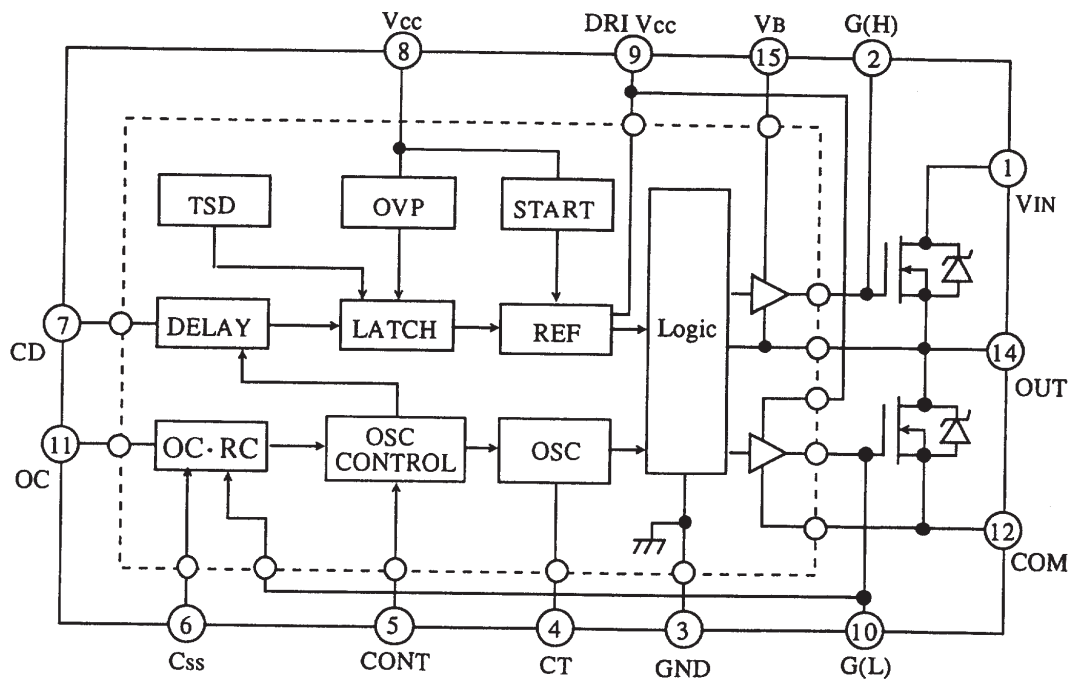
## ● MPC948FA <Clock Driver, IC1302>



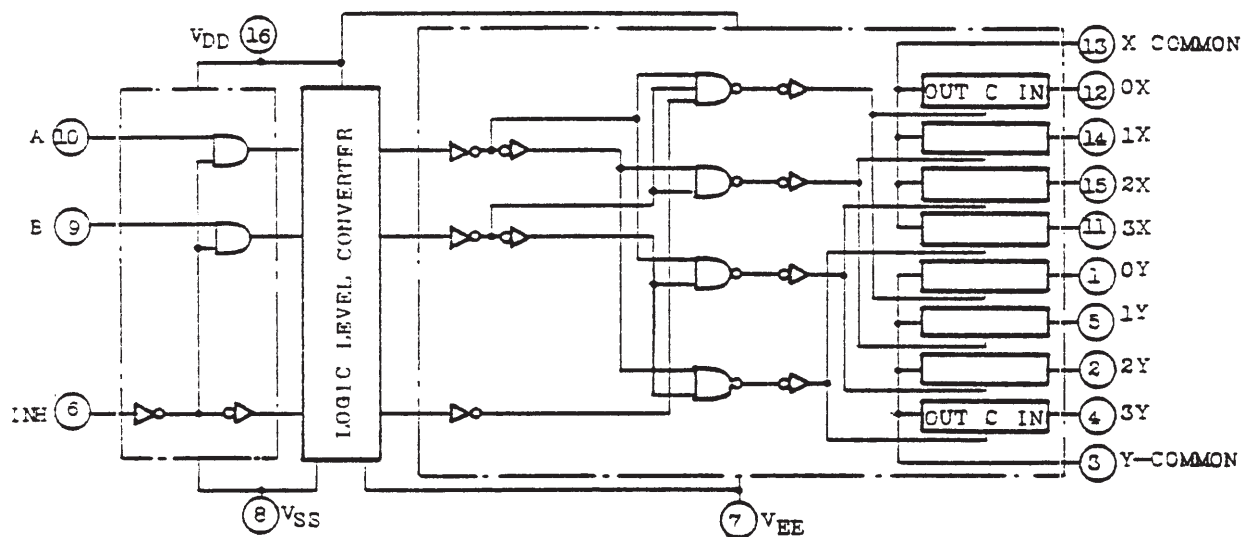
# ● PW264 <System Control & Scan Converter, IC301>



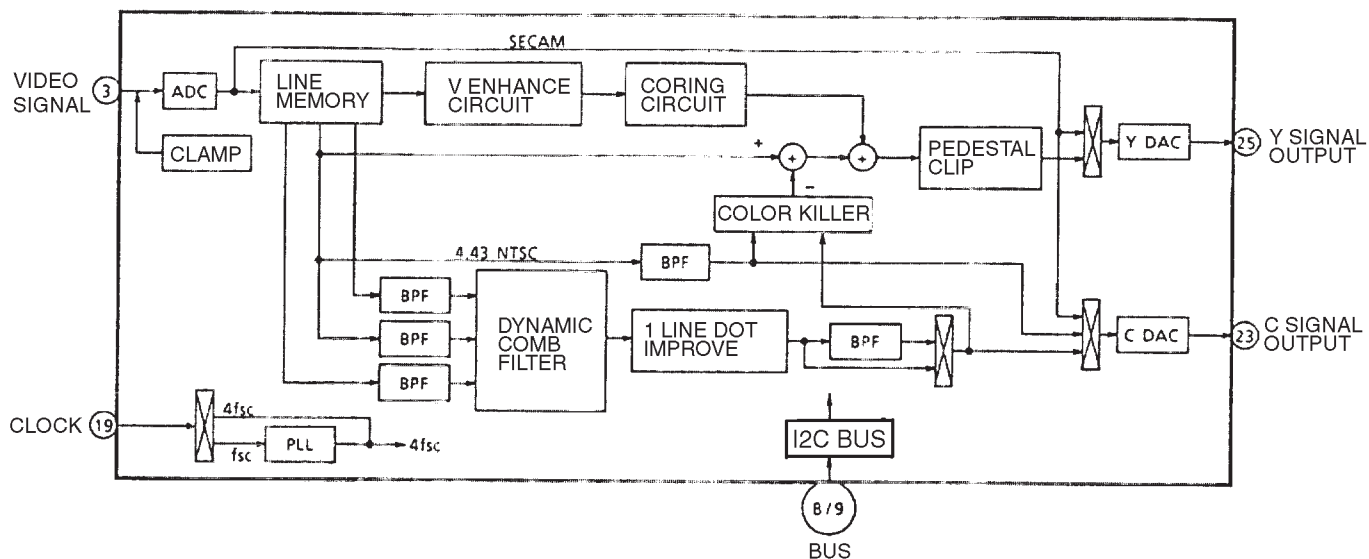
# ● STR-Z2156 <Power Switching Control, IC631>



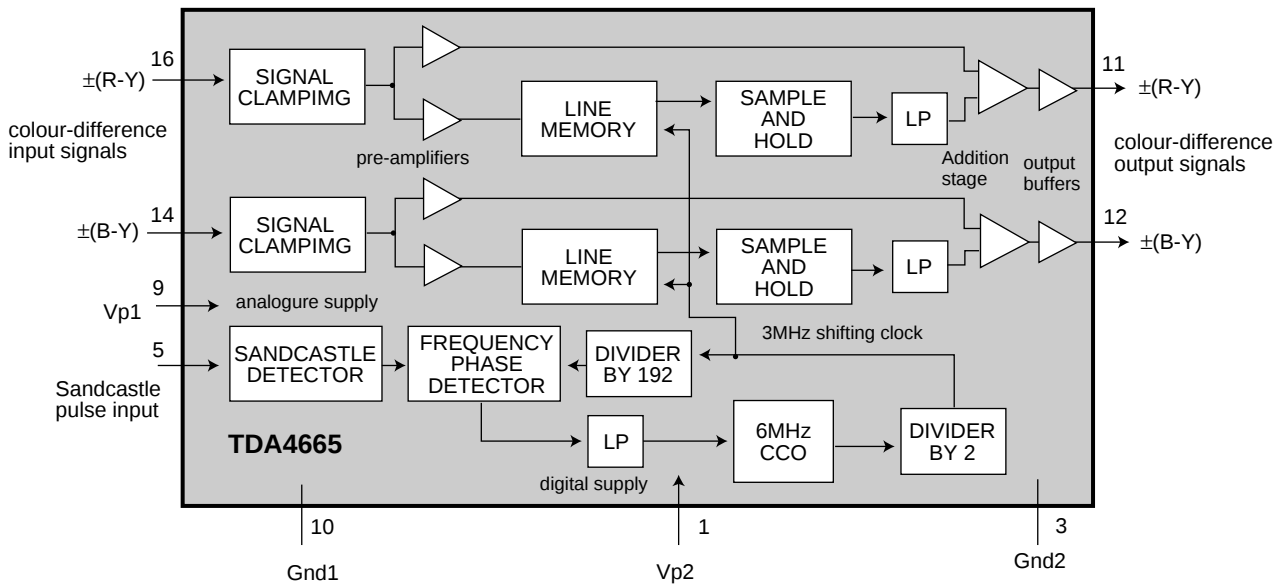
● TC4053BP <Switching, IC101, IC3001, IC3002, IC3571, IC5001, IC5282, IC6101, IC6151>



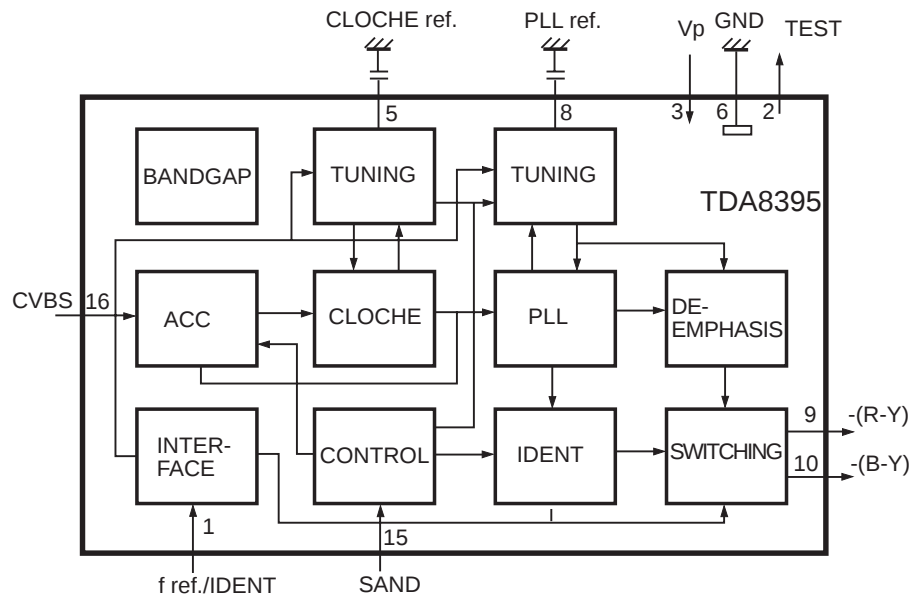
## ● TC9090AF <3-Line Y/C Separator, IC2101>



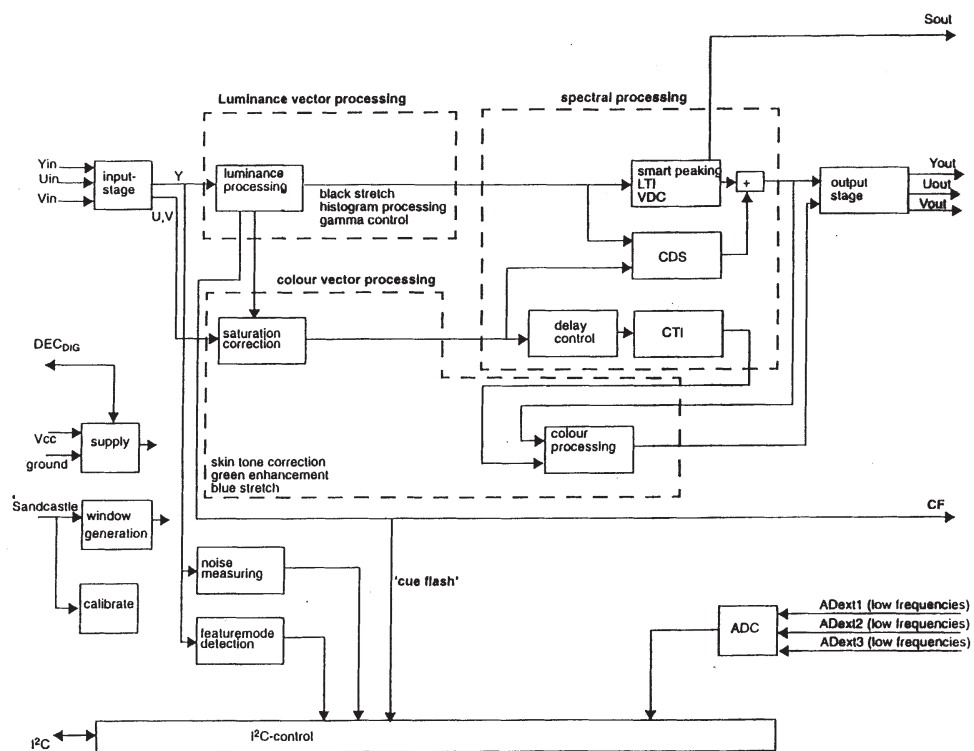
## ● TDA4665T <1H Delay Line, IC181>



## ● TDA8395T <SECAM Decoder, IC161>



# TDA9178T <Picture Improvement, IC121>

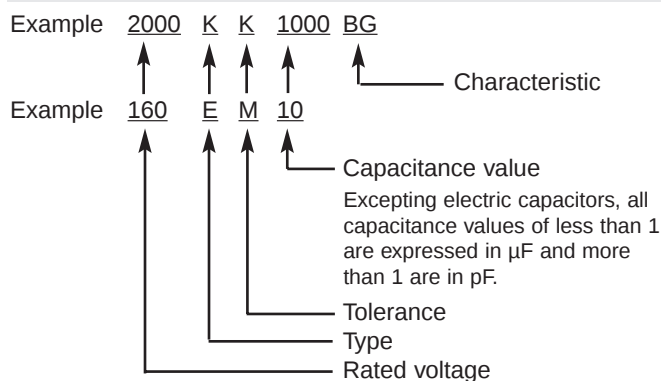




# Parts description and reading in schematic diagram

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

## Capacitor Reading



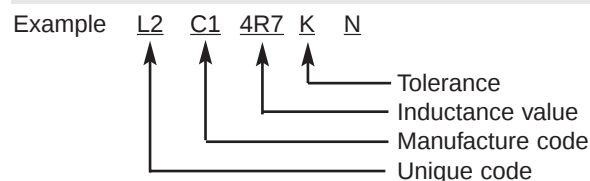
### Material table

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

### Tolerance table

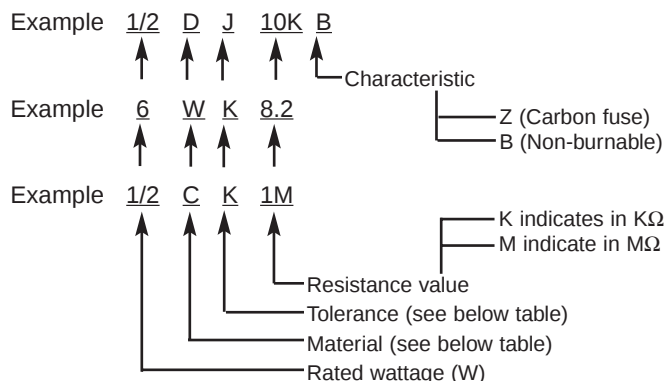
| Mark | Tolerance     |
|------|---------------|
| A    | not specified |
| B    | $\pm 0.1$     |
| C    | $\pm 0.25$    |
| D    | $\pm 0.5$     |
| F    | $\pm 1$       |
| G    | $\pm 2$       |
| E    | $\pm 2.5$     |
| H    | $\pm 3$       |
| J    | $\pm 5$       |
| K    | $\pm 10$      |
|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

## Coil Reading



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

## Resistor Reading



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

### Material table

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

### Tolerance table

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

## Diode/Transistor Type Reading

### Diode

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

### Transistor

#### (1) NPN type

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

#### (2) PNP type

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

#### (3) Chip type

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

# ■ Electrical Parts List

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

## ● Read Description in the parts list

Read description in the Capacitor and Resistor as follows:

| 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 : $\pm 0.5\text{pF}$ E : $+0 -1\text{pF}$ F : $\pm 1\text{PF}$   |
|           |         |      |   |     | G : $\pm 2\text{pF}$ H : $+0.1 -0\text{pF}$ L : $+0 -0.1\text{pF}$ |
|           |         |      |   |     | R : $\pm 0.25 -0\text{pF}$ S : $+0 -0.25\text{pF}$                 |
|           |         |      |   |     | 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 : $\pm 100-0\%$ Q : $\pm 30-10\%$ T : $\pm 50-10\%$              |
|           |         |      |   |     | U : $\pm 75-10\%$ V : $\pm 20-10\%$ W : $\pm 100-10\%$             |
|           |         |      |   |     | X : $\pm 40-20\%$ Y : $\pm 150-10\%$ Z : $\pm 80-20\%$             |
|           |         |      |   |     | 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 Oxide Solid Electrolytic  
AL-SOLID..... Aluminium Solid Electrolytic  
ELECT..... Aluminum Foil Electrolytic  
NP-ELECT..... Non-polarised Electrolytic  
OS-SOLID..... Aluminium Solid with Organic Semiconductive Electrolytic  
POS-SOLID..... Polymerized Organic Semiconductive  
DL-ELECT..... Double Layered Electrolytic  
PPS-FILM..... Polyphenylene Sulfide Film  
MT-PPS-FILM.....Metalized Polyphenylene Sulfide Film  
MT-PEN-FILM.....Metalized Polyethylenenaphthalate Film  
CAPACITOR.....Other

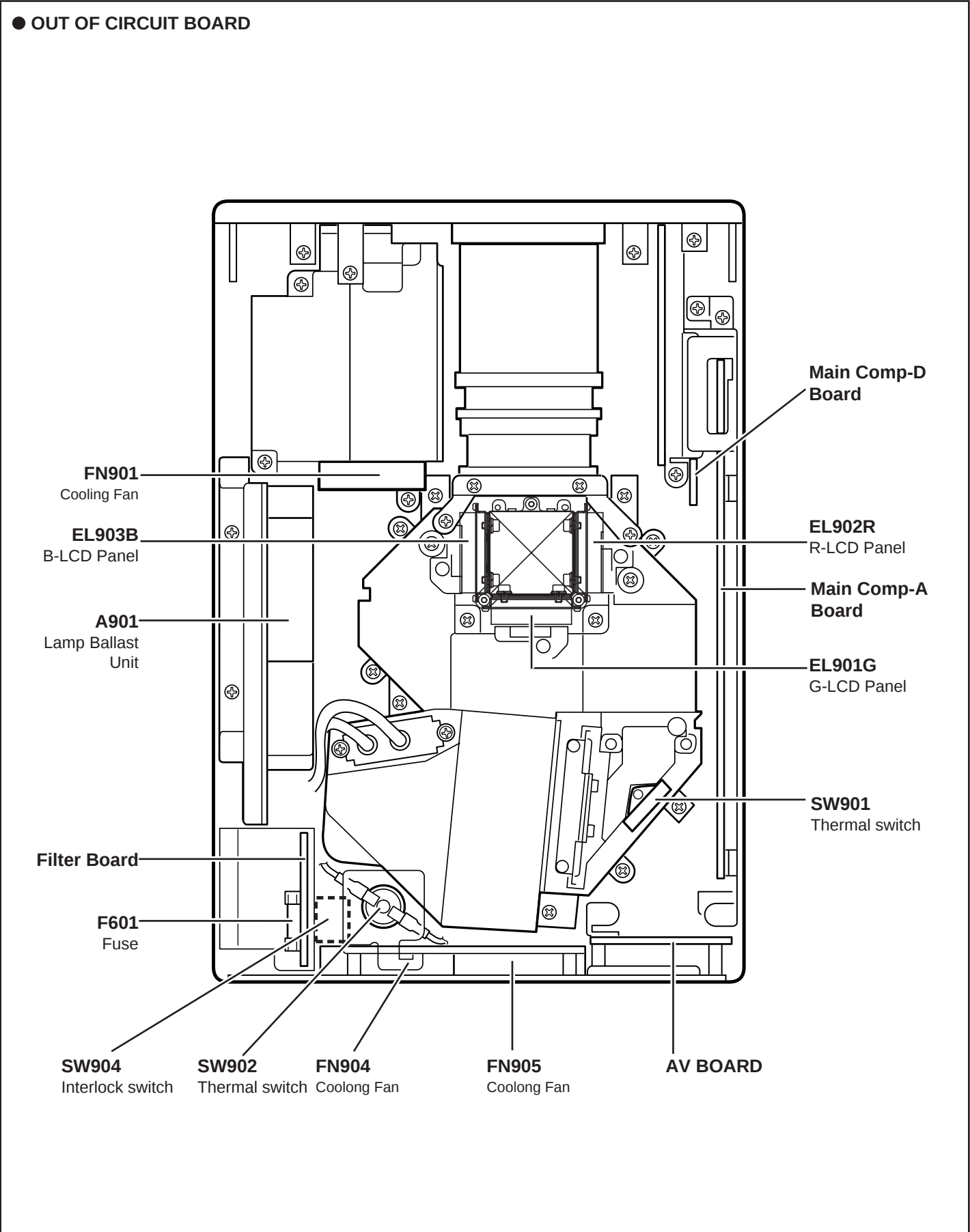
| RESISTOR | CARBON | 4.7K | J | A | 1/4W |                                                                                                                                              |
|----------|--------|------|---|---|------|----------------------------------------------------------------------------------------------------------------------------------------------|
|          |        |      |   |   |      | Rated Wattage                                                                                                                                |
|          |        |      |   |   |      | Performance Symbols:                                                                                                                         |
|          |        |      |   |   |      | A: General B: Non flammable Z: Low noise                                                                                                     |
|          |        |      |   |   |      | Other: Temperature coefficient                                                                                                               |
|          |        |      |   |   |      | T: $\pm 10\text{ppm}/^\circ\text{C}$ U: $\pm 25\text{ppm}/^\circ\text{C}$ C: $\pm 50\text{ppm}/^\circ\text{C}$                               |
|          |        |      |   |   |      | D: $\pm 100\text{ppm}/^\circ\text{C}$ E: $\pm 200\text{ppm}/^\circ\text{C}$ F: $\pm 250\text{ppm}/^\circ\text{C}$                            |
|          |        |      |   |   |      | G: $\pm 350\text{ppm}/^\circ\text{C}$ H: $\pm 1000\text{ppm}/^\circ\text{C}\pm 10\%$ W: $\pm 1200\text{ppm}/^\circ\text{C}\pm 10\%$          |
|          |        |      |   |   |      | Y: $\pm 1400\text{ppm}/^\circ\text{C}\pm 10\%$ J: $\pm 2000\text{ppm}/^\circ\text{C}\pm 10\%$ K: $\pm 2400\text{ppm}/^\circ\text{C}\pm 10\%$ |
|          |        |      |   |   |      | L: $\pm 2700\text{ppm}/^\circ\text{C}\pm 10\%$ M: $\pm 3000\text{ppm}/^\circ\text{C}\pm 10\%$ N: $\pm 3300\text{ppm}/^\circ\text{C}\pm 10\%$ |
|          |        |      |   |   |      | P: $\pm 3600\text{ppm}/^\circ\text{C}\pm 10\%$ Q: $\pm 3900\text{ppm}/^\circ\text{C}\pm 10\%$ R: $\pm 4200\text{ppm}/^\circ\text{C}\pm 10\%$ |
|          |        |      |   |   |      | S: $\pm 4300\text{ppm}/^\circ\text{C}\pm 10\%$ V: $\pm 4500\text{ppm}/^\circ\text{C}\pm 10\%$ X: $\pm 8000\text{ppm}/^\circ\text{C}\pm 10\%$ |
|          |        |      |   |   |      | Tolerance Symbols:                                                                                                                           |
|          |        |      |   |   |      | A: $\pm 0.05\%$ B: $\pm 0.1\%$ C: $\pm 0.25\%$ D: $\pm 0.5\%$                                                                                |
|          |        |      |   |   |      | F: $\pm 1\%$ G: $\pm 2\%$ J: $\pm 5\%$ K: $\pm 10\%$                                                                                         |
|          |        |      |   |   |      | M: $\pm 20\%$ P: $\pm 5-15\%$ Z: 0 ohm                                                                                                       |
|          |        |      |   |   |      | 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  
RESISTOR .....Other

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

● OUT OF CIRCUIT BOARD



## Electrical Parts List

| Ref. No.                                                        | Part No.     | Description            | Ref. No.         | Part No.     | Description             |
|-----------------------------------------------------------------|--------------|------------------------|------------------|--------------|-------------------------|
| <b>OUT OF CIRCUIT BOARDS</b>                                    |              |                        | IC1301           | 409 428 7101 | IC AV9155C              |
| △ LP900                                                         | 610 280 6939 | LAMP ASSY (POA-LMP21J) | IC1302           | 409 428 7606 | IC MPC948FA             |
| L901                                                            | 645 003 3810 | CORE, FERRITE          | IC141            | 409 350 3400 | IC LT1253CS8            |
| L902                                                            | 645 003 3834 | CORE, FERRITE          | IC161            | 409 408 4205 | IC TDA8395T/N3          |
| L903                                                            | 645 003 3834 | CORE, FERRITE          | IC171            | 409 463 9306 | IC EL5244CS             |
| L904                                                            | 645 003 3810 | CORE, FERRITE          | IC181            | 409 383 1602 | IC TDA4665T/V4-T        |
| <b>MISCELLANEOUS</b>                                            |              |                        |                  | 409 435 3806 | IC TDA4665T/V5T         |
| △ A901                                                          | 645 036 4655 | UNIT, BALLAST          | IC1821           | 410 348 7409 | IC TC74LCX125FT(EL)     |
| EL901G                                                          | 645 041 3988 | LCD(P09SG210B(G))      | IC1822           | 410 348 7508 | IC TC7WT241FU(Te12L)    |
|                                                                 | 645 041 3957 | LCD(P09SG220B(G))      | IC202            | 410 353 1805 | IC AD9884AKS-140        |
| EL902R                                                          | 645 041 3995 | LCD(P09SG220B(R))      | IC2200           | 410 308 6404 | IC MB40988PFQ-G-MSBND   |
|                                                                 | 645 041 3964 | LCD(P09SG210B(R))      | IC2211           | 409 429 6400 | IC AD8055ART            |
| EL903B                                                          | 645 041 4008 | LCD(P09SG220B(B))      | IC2221           | 409 429 6400 | IC AD8055ART            |
|                                                                 | 645 041 3971 | LCD(P09SG210B(B))      | IC2231           | 409 429 6400 | IC AD8055ART            |
| △ FN901                                                         | 645 038 1577 | MOTOR, FAN DC 1.4W     | IC226            | 409 416 6406 | IC BA033FP-E2           |
| △ FN902                                                         | 645 038 1591 | MOTOR, FAN DC 2.2W     | IC3001           | 409 211 7301 | IC MC14053BFL           |
| △ FN903                                                         | 645 038 1591 | MOTOR, FAN DC 2.2W     |                  | 409 051 2900 | IC TC4053BF-TP1         |
| △ FN904                                                         | 645 038 1584 | MOTOR, FAN DC 2.04W    | IC3002           | 409 211 7301 | IC MC14053BFL           |
| △ FN905                                                         | 645 038 1584 | MOTOR, FAN DC 2.04W    |                  | 409 051 2900 | IC TC4053BF-TP1         |
| SP901                                                           | 645 030 6150 | SPEAKER, 8             | IC301            | 409 465 0103 | IC PW264                |
| △ SW901                                                         | 645 039 7301 | SWITCH, REED           | IC302            | 409 339 3605 | IC 24LC16BT/SN-T        |
| △ SW902                                                         | 645 026 5457 | SWITCH, THERMAL        | IC331            | 409 461 8202 | IC ER-ICS502MT          |
| △ SW904                                                         | 645 024 8986 | SWITCH, PUSH 2P-2TX2   | IC5201           | 409 407 7900 | IC EL4332CS             |
| <b>610 280 5772 ASSY,PWB,MAIN COMP.MA6A-A<br/>1AA0B10C2240A</b> |              |                        | IC5251           | 409 429 6400 | IC AD8055ART            |
| <b>TRANSISTOR</b>                                               |              |                        | IC5252           | 409 429 6400 | IC AD8055ART            |
| Q111                                                            | 405 134 5905 | TR 2SA1037AK-T146-R    | IC5253           | 409 429 6400 | IC AD8055ART            |
| Q1112                                                           | 405 014 4509 | TR 2SC2412K T146 R     | IC5281           | 409 431 6009 | IC MC74VHC14DT          |
| Q1113                                                           | 405 014 4509 | TR 2SC2412K T146 R     |                  | 410 356 8009 | IC SN74LV14APWR         |
| Q1114                                                           | 405 014 4509 | TR 2SC2412K T146 R     | IC5282           | 409 211 7301 | IC MC14053BFL           |
| Q1116                                                           | 405 014 4509 | TR 2SC2412K T146 R     |                  | 409 051 2900 | IC TC4053BF-TP1         |
| Q1117                                                           | 405 014 4509 | TR 2SC2412K T146 R     | IC5283           | 410 354 6304 | IC SN74LVC126APWR       |
| Q1118                                                           | 405 014 4509 | TR 2SC2412K T146 R     | IC6101           | 409 211 7301 | IC MC14053BFL           |
| Q1133                                                           | 405 134 5905 | TR 2SA1037AK-T146-R    |                  | 409 051 2900 | IC TC4053BF-TP1         |
| Q116                                                            | 405 134 5905 | TR 2SA1037AK-T146-R    | IC7201           | 409 202 1400 | IC MC14538BF-L1         |
| Q1171                                                           | 405 134 5905 | TR 2SA1037AK-T146-R    | IC805            | 410 352 8508 | IC IDT71V016S15PHTR     |
| Q121                                                            | 405 134 5905 | TR 2SA1037AK-T146-R    | IC806            | 410 354 3204 | IC MBM29LV800TA90NB566S |
| Q126                                                            | 405 134 5905 | TR 2SA1037AK-T146-R    |                  | 410 354 3907 | IC MBM29LV800TA90NB566  |
| Q151                                                            | 405 014 4509 | TR 2SC2412K T146 R     | IC806A           | 410 354 3808 | IC MBM29LV800TA-90PFTN  |
| Q161                                                            | 405 014 4509 | TR 2SC2412K T146 R     | IC808            | 409 428 8405 | IC TC7WT125FU-Te12L     |
| Q5201                                                           | 405 134 5905 | TR 2SA1037AK-T146-R    | IC809            | 410 311 5708 | IC MC74HCT244ADT        |
| Q5202                                                           | 405 134 5905 | TR 2SA1037AK-T146-R    |                  | 410 315 5506 | IC HD74HCT244TV         |
| Q5203                                                           | 405 134 5905 | TR 2SA1037AK-T146-R    |                  | 410 356 7507 | IC SN74HCT244PWR        |
| Q5211                                                           | 405 014 4509 | TR 2SC2412K T146 R     | IC825            | 409 416 6406 | IC BA033FP-E2           |
| Q6101                                                           | 405 134 5905 | TR 2SA1037AK-T146-R    | <b>CAPACITOR</b> |              |                         |
| Q6111                                                           | 405 134 5905 | TR 2SA1037AK-T146-R    | C101             | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| Q6112                                                           | 405 134 5905 | TR 2SA1037AK-T146-R    | C102             | 403 175 4505 | ELECT 47U M 6.3V        |
| Q6113                                                           | 405 134 5905 | TR 2SA1037AK-T146-R    | C103             | 403 283 6309 | CERAMIC 1U Z 10V        |
| Q6114                                                           | 405 014 4509 | TR 2SC2412K T146 R     |                  | 403 336 5600 | CERAMIC 1U Z 10V        |
| Q6115                                                           | 405 014 4509 | TR 2SC2412K T146 R     | C104             | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| Q6116                                                           | 405 014 4509 | TR 2SC2412K T146 R     | C105             | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| Q6121                                                           | 405 014 4509 | TR 2SC2412K T146 R     | C106             | 403 149 9208 | CERAMIC 0.01U Z 50V     |
| Q6123                                                           | 405 014 4509 | TR 2SC2412K T146 R     | C108             | 403 149 9208 | CERAMIC 0.01U Z 50V     |
| Q6131                                                           | 405 014 4509 | TR 2SC2412K T146 R     | C1103            | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| Q6146                                                           | 405 014 4509 | TR 2SC2412K T146 R     | C1104            | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| <b>INTEGRATED CIRCUIT</b>                                       |              |                        | C1105            | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| IC101                                                           | 409 211 7301 | IC MC14053BFL          | C1106            | 403 175 4109 | ELECT 22U M 16V         |
|                                                                 | 409 051 2900 | IC TC4053BF-TP1        | C1107            | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| IC1101                                                          | 409 404 3509 | IC CXA2076Q            | C1111            | 403 157 2109 | CERAMIC 13P J 50V       |
| IC121                                                           | 409 436 3706 | IC TDA9178T/N1         | C1112            | 403 157 2000 | CERAMIC 11P J 50V       |
|                                                                 |              |                        | C1113            | 403 157 2000 | CERAMIC 11P J 50V       |
|                                                                 |              |                        | C1114            | 403 157 2109 | CERAMIC 13P J 50V       |
|                                                                 |              |                        | C1121            | 403 149 9208 | CERAMIC 0.01U Z 50V     |
|                                                                 |              |                        | C1131            | 403 266 8207 | NP-ELECT 10U M 16V      |
|                                                                 |              |                        | C1132            | 403 266 8207 | NP-ELECT 10U M 16V      |
|                                                                 |              |                        | C1133            | 403 283 6309 | CERAMIC 1U Z 10V        |
|                                                                 |              |                        |                  | 403 336 5600 | CERAMIC 1U Z 10V        |

## Electrical Parts List

| Ref. No. | Part No.     | Description          | Ref. No. | Part No.     | Description         |
|----------|--------------|----------------------|----------|--------------|---------------------|
| C1134    | 403 162 4709 | ELECT 10U M 16V      |          | 403 325 3303 | CERAMIC 0.1U K 16V  |
| C1135    | 403 343 8809 | CERAMIC 0.47U Z 16V  | C213     | 403 298 9609 | CERAMIC 0.1U K 16V  |
| C1136    | 403 164 0204 | CERAMIC 0.1U Z 25V   |          | 403 325 3303 | CERAMIC 0.1U K 16V  |
| C1137    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C215     | 403 298 9609 | CERAMIC 0.1U K 16V  |
| C1138    | 403 162 4709 | ELECT 10U M 16V      |          | 403 325 3303 | CERAMIC 0.1U K 16V  |
| C1139    | 403 215 2201 | CERAMIC 0.01U K 50V  | C2201    | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| C1141    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C2202    | 403 208 1402 | TA-SOLID 1U M 25V   |
| C1142    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C2203    | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| C1143    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C2204    | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| C1165    | 403 149 9208 | CERAMIC 0.01U Z 50V  | C2206    | 403 322 7809 | ELECT 220U M 6.3V   |
| C1166    | 403 149 9208 | CERAMIC 0.01U Z 50V  | C2207    | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| C1167    | 403 149 9208 | CERAMIC 0.01U Z 50V  | C2211    | 403 153 9102 | CERAMIC 5P C 50V    |
| C1171    | 403 215 2201 | CERAMIC 0.01U K 50V  | C2221    | 403 153 9102 | CERAMIC 5P C 50V    |
| C1172    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C2231    | 403 153 9102 | CERAMIC 5P C 50V    |
| C1173    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C226     | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| C1174    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C227     | 403 175 4109 | ELECT 22U M 16V     |
| C1176    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C228     | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| C1181    | 403 155 2309 | CERAMIC 4700P K 50V  | C3001    | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| C1182    | 403 215 2201 | CERAMIC 0.01U K 50V  | C3002    | 403 283 6309 | CERAMIC 1U Z 10V    |
| C1183    | 403 162 6208 | ELECT 1U M 50V       |          | 403 336 5600 | CERAMIC 1U Z 10V    |
| C1184    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C3003    | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| C1185    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C3004    | 403 283 6309 | CERAMIC 1U Z 10V    |
| C1186    | 403 224 7006 | CERAMIC 0.047U Z 50V |          | 403 336 5600 | CERAMIC 1U Z 10V    |
| C1191    | 403 157 6602 | CERAMIC 470P K 50V   | C301     | 403 162 4709 | ELECT 10U M 16V     |
| C1192    | 403 343 8809 | CERAMIC 0.47U Z 16V  | C302     | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| C121     | 403 175 4109 | ELECT 22U M 16V      | C304     | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| C122     | 403 164 0204 | CERAMIC 0.1U Z 25V   | C311     | 403 280 0508 | ELECT 470U M 4V     |
| C126     | 403 164 0204 | CERAMIC 0.1U Z 25V   | C312     | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| C1301    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C313     | 403 280 0508 | ELECT 470U M 4V     |
| C1302    | 403 280 0508 | ELECT 470U M 4V      | C314     | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| C1303    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C331     | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C1304    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5201    | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| C1305    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5211    | 403 157 2505 | CERAMIC 27P J 50V   |
| C1306    | 403 155 4204 | CERAMIC 15P J 50V    | C5212    | 403 283 6309 | CERAMIC 1U Z 10V    |
| C1311    | 403 164 0204 | CERAMIC 0.1U Z 25V   |          | 403 336 5600 | CERAMIC 1U Z 10V    |
| C1312    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5213    | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C1313    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5214    | 403 283 6309 | CERAMIC 1U Z 10V    |
| C1314    | 403 164 0204 | CERAMIC 0.1U Z 25V   |          | 403 336 5600 | CERAMIC 1U Z 10V    |
| C1315    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5216    | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C1316    | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5217    | 403 283 6309 | CERAMIC 1U Z 10V    |
| C1317    | 403 164 0204 | CERAMIC 0.1U Z 25V   |          | 403 336 5600 | CERAMIC 1U Z 10V    |
| C141     | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5221    | 403 157 2505 | CERAMIC 27P J 50V   |
| C143     | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5222    | 403 304 2105 | ELECT 47U M 6.3V    |
| C146     | 403 155 1609 | CERAMIC 33P J 50V    | C5223    | 403 304 2105 | ELECT 47U M 6.3V    |
| C152     | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5224    | 403 304 2105 | ELECT 47U M 6.3V    |
| C153     | 403 224 7006 | CERAMIC 0.047U Z 50V | C5231    | 403 157 2505 | CERAMIC 27P J 50V   |
| C161     | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5251    | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| C162     | 403 162 4709 | ELECT 10U M 16V      | C5252    | 403 322 7809 | ELECT 220U M 6.3V   |
| C163     | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5253    | 403 157 1904 | CERAMIC 10P D 50V   |
| C164     | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5255    | 403 155 2200 | CERAMIC 3300P K 50V |
| C166     | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5256    | 403 157 2901 | CERAMIC 47P J 50V   |
| C167     | 403 145 9905 | CERAMIC 22P J 50V    | C5257    | 403 322 7809 | ELECT 220U M 6.3V   |
| C171     | 403 162 4709 | ELECT 10U M 16V      | C5258    | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| C172     | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5263    | 403 157 1904 | CERAMIC 10P D 50V   |
| C176     | 403 162 4709 | ELECT 10U M 16V      | C5265    | 403 155 2200 | CERAMIC 3300P K 50V |
| C177     | 403 162 4709 | ELECT 10U M 16V      | C5266    | 403 157 2901 | CERAMIC 47P J 50V   |
| C181     | 403 162 4709 | ELECT 10U M 16V      | C5273    | 403 157 1904 | CERAMIC 10P D 50V   |
| C182     | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5275    | 403 155 2200 | CERAMIC 3300P K 50V |
| C183     | 403 162 4709 | ELECT 10U M 16V      | C5276    | 403 157 2901 | CERAMIC 47P J 50V   |
| C184     | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5284    | 403 149 9208 | CERAMIC 0.01U Z 50V |
| C186     | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5286    | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| C187     | 403 164 0204 | CERAMIC 0.1U Z 25V   | C5287    | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| C202     | 403 162 4709 | ELECT 10U M 16V      | C5288    | 403 157 3809 | CERAMIC 120P J 50V  |
| C203     | 403 164 0204 | CERAMIC 0.1U Z 25V   | C6101    | 403 162 4709 | ELECT 10U M 16V     |
| C204     | 403 164 0204 | CERAMIC 0.1U Z 25V   | C6102    | 403 162 4709 | ELECT 10U M 16V     |
| C211     | 403 215 2201 | CERAMIC 0.01U K 50V  | C6103    | 403 162 4709 | ELECT 10U M 16V     |
| C212     | 403 298 9609 | CERAMIC 0.1U K 16V   | C6121    | 403 113 3805 | CERAMIC 1000P K 50V |

## Electrical Parts List

| Ref. No.        | Part No.     | Description             | Ref. No. | Part No.     | Description             |
|-----------------|--------------|-------------------------|----------|--------------|-------------------------|
| C6122           | 403 325 4706 | CERAMIC 0.047U K 25V    | R1186    | 401 105 4304 | MT-GLAZE 330K JA 1/16W  |
| C6136           | 403 162 6208 | ELECT 1U M 50V          | R1187    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| C7201           | 403 348 5803 | CERAMIC 0.47U K 10V     | R1188    | 401 105 5905 | MT-GLAZE 560 JA 1/16W   |
| C7203           | 403 162 4709 | ELECT 10U M 16V         | R1191    | 401 105 1600 | MT-GLAZE 15K JA 1/16W   |
| C7204           | 403 149 9208 | CERAMIC 0.01U Z 50V     | R121     | 401 258 7504 | MT-GLAZE 12 JA 1/3W     |
| C7207           | 403 162 6000 | ELECT 0.47U M 50V       | R122     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| C831            | 403 175 3300 | ELECT 47U M 16V         | R123     | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| C832            | 403 164 0204 | CERAMIC 0.1U Z 25V      | R125     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| C833            | 403 164 0204 | CERAMIC 0.1U Z 25V      | R127     | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| C834            | 403 322 7809 | ELECT 220U M 6.3V       | R128     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| C835            | 403 164 0204 | CERAMIC 0.1U Z 25V      | R129     | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| C836            | 403 164 0204 | CERAMIC 0.1U Z 25V      | R1300TM  | 401 027 5502 | CARBON 6.8K JA 1/6W     |
| C837            | 403 164 0204 | CERAMIC 0.1U Z 25V      | R1301    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C846            | 403 175 0606 | ELECT 100U M 6.3V       | R1302    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C847            | 403 149 9208 | CERAMIC 0.01U Z 50V     | R1304    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| C848            | 403 149 9208 | CERAMIC 0.01U Z 50V     | R1307    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| C849            | 403 175 0606 | ELECT 100U M 6.3V       | R1309    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| <b>RESISTOR</b> |              |                         | R131     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| RB856           | 645 026 8038 | R-NETWORK 22KX4 1/16W   | R1312    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| RB883           | 645 026 8038 | R-NETWORK 22KX4 1/16W   | R1314    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R101            | 401 189 8304 | MT-GLAZE 180 JA 1/3W    | R1315    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R102            | 401 189 8304 | MT-GLAZE 180 JA 1/3W    | R1316    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R103            | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R1317    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R104            | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R1318    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R105            | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R132     | 401 105 0702 | MT-GLAZE 100K JA 1/16W  |
| R106            | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R1326    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R108            | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R133     | 401 105 0702 | MT-GLAZE 100K JA 1/16W  |
| R109            | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R134     | 401 105 0702 | MT-GLAZE 100K JA 1/16W  |
| R111            | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W  | R135     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1111           | 401 105 5905 | MT-GLAZE 560 JA 1/16W   | R136     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1112           | 401 105 8104 | MT-GLAZE 56K JA 1/16W   | R138     | 401 105 1402 | MT-GLAZE 150 JA 1/16W   |
| R1113           | 401 105 8104 | MT-GLAZE 56K JA 1/16W   | R139     | 401 105 1402 | MT-GLAZE 150 JA 1/16W   |
| R1114           | 401 105 8104 | MT-GLAZE 56K JA 1/16W   | R142     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R1115           | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W  | R143     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R112            | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R144     | 401 105 4106 | MT-GLAZE 3.3K JA 1/16W  |
| R1121           | 401 105 8104 | MT-GLAZE 56K JA 1/16W   | R146     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1122           | 401 105 0702 | MT-GLAZE 100K JA 1/16W  | R148     | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W  |
| R1123           | 401 105 0702 | MT-GLAZE 100K JA 1/16W  | R151     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R1124           | 401 105 8104 | MT-GLAZE 56K JA 1/16W   | R152     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R1127           | 401 105 0702 | MT-GLAZE 100K JA 1/16W  | R153     | 401 105 5400 | MT-GLAZE 47K JA 1/16W   |
| R1128           | 401 105 8104 | MT-GLAZE 56K JA 1/16W   | R154     | 401 105 6001 | MT-GLAZE 5.6K JA 1/16W  |
| R1129           | 401 105 8104 | MT-GLAZE 56K JA 1/16W   | R156     | 401 230 2503 | MT-GLAZE 1K FA 1/16W    |
| R1139           | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R157     | 401 202 4009 | MT-GLAZE 10K FA 1/16W   |
| R1141           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R158     | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R1142           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R161     | 401 105 1204 | MT-GLAZE 120K JA 1/16W  |
| R116            | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W  | R162     | 401 105 3000 | MT-GLAZE 220K JA 1/16W  |
| R1161           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R163     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R1162           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R164     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R1163           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R166     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R1165           | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R167     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R1166           | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R169     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R1167           | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R171     | 401 230 2503 | MT-GLAZE 1K FA 1/16W    |
| R1168           | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W  | R172     | 401 230 2503 | MT-GLAZE 1K FA 1/16W    |
| R1169           | 401 105 2003 | MT-GLAZE 1.8K JA 1/16W  | R173     | 401 257 7000 | MT-GLAZE 820 FA 1/16W   |
| R117            | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R174     | 401 230 2503 | MT-GLAZE 1K FA 1/16W    |
| R1171           | 401 105 5202 | MT-GLAZE 470 JA 1/16W   | R176     | 401 105 5400 | MT-GLAZE 47K JA 1/16W   |
| R1172           | 401 105 3307 | MT-GLAZE 2.7K JA 1/16W  | R177     | 401 105 2904 | MT-GLAZE 22K JA 1/16W   |
| R1173           | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R178     | 401 105 8104 | MT-GLAZE 56K JA 1/16W   |
| R1174           | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R179     | 401 105 2904 | MT-GLAZE 22K JA 1/16W   |
| R1176           | 401 105 4007 | MT-GLAZE 330 JA 1/16W   | R181     | 401 240 7307 | MT-GLAZE 8.2 JA 1/3W    |
| R1177           | 401 105 5400 | MT-GLAZE 47K JA 1/16W   | R182     | 401 240 7307 | MT-GLAZE 8.2 JA 1/3W    |
| R1178           | 401 105 4106 | MT-GLAZE 3.3K JA 1/16W  | R1821    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R1179           | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | R1822    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R1181           | 401 105 4502 | MT-GLAZE 390 JA 1/16W   | R1823    | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W  |
| R1182           | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R1824    | 401 105 1006 | MT-GLAZE 1.2K JA 1/16W  |
| R1183           | 401 105 6001 | MT-GLAZE 5.6K JA 1/16W  | R1825    | 401 105 5905 | MT-GLAZE 560 JA 1/16W   |
|                 |              |                         | R1826    | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W  |

## Electrical Parts List

| Ref. No. | Part No.     | Description             | Ref. No. | Part No.     | Description             |
|----------|--------------|-------------------------|----------|--------------|-------------------------|
| R1827    | 401 105 2904 | MT-GLAZE 22K JA 1/16W   | R5203    | 401 105 0306 | MT-GLAZE 10 JA 1/16W    |
| R1828    | 401 105 8203 | MT-GLAZE 68K JA 1/16W   | R5204    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R1829    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R5206    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R183     | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | R5207    | 401 105 0306 | MT-GLAZE 10 JA 1/16W    |
| R211     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R5211    | 401 262 8504 | MT-GLAZE 62 FA 1/16W    |
| R212     | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W  | R5212    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R2201    | 401 234 8600 | MT-GLAZE 8.2K FA 1/16W  | R5213    | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W  |
| R2202    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R5214    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R2203    | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W  | R5215    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2207    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R5217    | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W  |
| R2212    | 401 105 4106 | MT-GLAZE 3.3K JA 1/16W  | R5218    | 401 105 2904 | MT-GLAZE 22K JA 1/16W   |
| R2213    | 401 218 4505 | MT-GLAZE 2.2K FA 1/16W  | R5221    | 401 262 8504 | MT-GLAZE 62 FA 1/16W    |
| R222     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R5222    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R2222    | 401 105 4106 | MT-GLAZE 3.3K JA 1/16W  | R5223    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R2223    | 401 218 4505 | MT-GLAZE 2.2K FA 1/16W  | R5224    | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W  |
| R223     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R5225    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2232    | 401 105 4106 | MT-GLAZE 3.3K JA 1/16W  | R5231    | 401 262 8504 | MT-GLAZE 62 FA 1/16W    |
| R2233    | 401 218 4505 | MT-GLAZE 2.2K FA 1/16W  | R5232    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R2236    | 401 113 4402 | MT-GLAZE 75 JA 1/16W    | R5233    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R2237    | 401 113 4402 | MT-GLAZE 75 JA 1/16W    | R5234    | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W  |
| R2238    | 401 113 4402 | MT-GLAZE 75 JA 1/16W    | R5235    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3001    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R5251    | 645 033 1725 | INDUCTOR, 80 OHM        |
| R3002    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R5252    | 401 113 4709 | MT-GLAZE 130 JA 1/16W   |
| R3004    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | R5253    | 401 105 0900 | MT-GLAZE 120 JA 1/16W   |
| R3005    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R5255    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R3006    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R5256    | 401 230 2503 | MT-GLAZE 1K FA 1/16W    |
| R3007    | 401 113 6307 | MT-GLAZE 4.3K JA 1/16W  | R5257    | 401 247 0202 | MT-GLAZE 3.9K FA 1/16W  |
| R3009    | 401 105 6605 | MT-GLAZE 6.8K JA 1/16W  | R5259    | 401 105 3901 | MT-GLAZE 33 JA 1/16W    |
| R301     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R5261    | 645 033 1725 | INDUCTOR, 80 OHM        |
| R3011TM  | 401 024 9305 | CARBON 1.2K JA 1/6W     | R5262    | 401 113 4709 | MT-GLAZE 130 JA 1/16W   |
| R302     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R5263    | 401 105 0900 | MT-GLAZE 120 JA 1/16W   |
| R305     | 401 105 4007 | MT-GLAZE 330 JA 1/16W   | R5265    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R3056    | 401 105 8005 | MT-GLAZE 1M JA 1/16W    | R5266    | 401 230 2503 | MT-GLAZE 1K FA 1/16W    |
| R306     | 401 105 6506 | MT-GLAZE 680 JA 1/16W   | R5267    | 401 247 0202 | MT-GLAZE 3.9K FA 1/16W  |
| R310     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R5269    | 401 105 3901 | MT-GLAZE 33 JA 1/16W    |
| R311     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R5271    | 645 033 1725 | INDUCTOR, 80 OHM        |
| R313     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R5272    | 401 113 4709 | MT-GLAZE 130 JA 1/16W   |
| R316     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R5273    | 401 105 0900 | MT-GLAZE 120 JA 1/16W   |
| R317     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R5275    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R322     | 401 105 2904 | MT-GLAZE 22K JA 1/16W   | R5276    | 401 230 2503 | MT-GLAZE 1K FA 1/16W    |
| R326     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R5277    | 401 247 0202 | MT-GLAZE 3.9K FA 1/16W  |
| R329     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R5279    | 401 105 3901 | MT-GLAZE 33 JA 1/16W    |
| R332     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R5282    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R333     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R5283    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R336     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R5284    | 401 105 0306 | MT-GLAZE 10 JA 1/16W    |
| R342     | 401 105 2904 | MT-GLAZE 22K JA 1/16W   | R5285    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R343     | 401 105 2904 | MT-GLAZE 22K JA 1/16W   | R5286    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R344     | 401 105 2904 | MT-GLAZE 22K JA 1/16W   | R5287    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R346     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R5288    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R347     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R6101    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R352     | 401 105 2904 | MT-GLAZE 22K JA 1/16W   | R6102    | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W  |
| R354     | 401 105 2904 | MT-GLAZE 22K JA 1/16W   | R6103    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R356     | 401 105 2904 | MT-GLAZE 22K JA 1/16W   | R6104    | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W  |
| R358     | 401 105 2904 | MT-GLAZE 22K JA 1/16W   | R6105    | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W  |
| R361     | 401 105 2904 | MT-GLAZE 22K JA 1/16W   | R6106    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R362     | 401 105 2904 | MT-GLAZE 22K JA 1/16W   | R6107    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R372     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R6108    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R374     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R6109    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R375     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R6111    | 401 105 5905 | MT-GLAZE 560 JA 1/16W   |
| R381     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R6112    | 401 105 5905 | MT-GLAZE 560 JA 1/16W   |
| R383     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R6113    | 401 105 5905 | MT-GLAZE 560 JA 1/16W   |
| R385     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R6114    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R387     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R6115    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R392     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R6116    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R394     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R6117    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R5201    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | R6118    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R5202    | 401 105 0306 | MT-GLAZE 10 JA 1/16W    | R6119    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |

## Electrical Parts List

| Ref. No.     | Part No.     | Description             | Ref. No.                                      | Part No.     | Description              |
|--------------|--------------|-------------------------|-----------------------------------------------|--------------|--------------------------|
| R6120        | 401 105 4007 | MT-GLAZE 330 JA 1/16W   | D826                                          | 407 149 0807 | DIODE 1SS355-TE-17       |
| R6121        | 401 158 4108 | MT-GLAZE 4.7 JA 1/16W   | D851                                          | 407 149 0807 | DIODE 1SS355-TE-17       |
| R6122        | 401 158 4108 | MT-GLAZE 4.7 JA 1/16W   | D852                                          | 407 149 0807 | DIODE 1SS355-TE-17       |
| R6123        | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W  | D853                                          | 407 149 0807 | DIODE 1SS355-TE-17       |
| R6124        | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | D854                                          | 407 149 0807 | DIODE 1SS355-TE-17       |
| R6125        | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | D855                                          | 407 149 0807 | DIODE 1SS355-TE-17       |
| R6126        | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | D856                                          | 407 149 0807 | DIODE 1SS355-TE-17       |
| R6127        | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | D857                                          | 407 149 0807 | DIODE 1SS355-TE-17       |
| R6128        | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | D858                                          | 407 149 0807 | DIODE 1SS355-TE-17       |
| R6129        | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | <b>MISCELLANEOUS</b>                          |              |                          |
| R6130        | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | X1111                                         | 645 036 0589 | OSC, CRYSTAL 4.433619MHZ |
| R6136        | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | X1112                                         | 645 036 0596 | OSC, CRYSTAL 3.579545MHZ |
| R6137        | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | X1113                                         | 645 036 0602 | OSC, CRYSTAL 3.575611MHZ |
| R6138        | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | X1114                                         | 645 037 5439 | OSC, CRYSTAL 3.582056MHZ |
| R6146        | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W  | X1181                                         | 645 024 8535 | OSC, CERAMIC 500.0KHZ    |
| R6148        | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | X1301                                         | 645 036 3788 | OSC, CRISTAL, 16.000MHZ  |
| R6149        | 401 105 0306 | MT-GLAZE 10 JA 1/16W    | X331                                          | 645 037 9352 | OSC, CRYSTAL 24.000MHZ   |
| R7201        | 401 105 0702 | MT-GLAZE 100K JA 1/16W  | <b>610 280 5789 ASSY,PWB,MAIN COMP.MA6A-B</b> |              |                          |
| R7202        | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | <b>1AA0B10C2240B</b>                          |              |                          |
| R7203        | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | <b>TRANSISTOR</b>                             |              |                          |
| R7205        | 401 038 7700 | MT-GLAZE 5.6K JA 1/10W  | Q1901                                         | 405 014 4509 | TR 2SC2412K T146 R       |
| R7208        | 401 105 3000 | MT-GLAZE 220K JA 1/16W  | Q1941                                         | 405 014 4509 | TR 2SC2412K T146 R       |
| R7209        | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | Q2851                                         | 405 014 4509 | TR 2SC2412K T146 R       |
| R7219        | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | Q2852                                         | 405 014 4509 | TR 2SC2412K T146 R       |
| R7221        | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | Q2853                                         | 405 014 4509 | TR 2SC2412K T146 R       |
| R836         | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | Q2854                                         | 405 134 5905 | TR 2SA1037AK-T146-R      |
| R837         | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | Q2856                                         | 405 014 4509 | TR 2SC2412K T146 R       |
| R838         | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | Q2876                                         | 405 014 4509 | TR 2SC2412K T146 R       |
| R839         | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | Q2895                                         | 405 014 4509 | TR 2SC2412K T146 R       |
| R872         | 401 105 6506 | MT-GLAZE 680 JA 1/16W   | Q3501                                         | 405 002 8304 | TR 2SA1203-Y-TE12L       |
| R876         | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | Q3502                                         | 405 014 4509 | TR 2SC2412K T146 R       |
| R877         | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | Q3503                                         | 405 139 7706 | TR IMZ1A-T108            |
| R878         | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | Q3504                                         | 405 139 7706 | TR IMZ1A-T108            |
| R879         | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | Q3533                                         | 405 139 7706 | TR IMZ1A-T108            |
| R882         | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | Q3534                                         | 405 139 7706 | TR IMZ1A-T108            |
| R883         | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | Q3553                                         | 405 139 7706 | TR IMZ1A-T108            |
| R884         | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | Q3554                                         | 405 139 7706 | TR IMZ1A-T108            |
| R891         | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | Q3571                                         | 405 014 4509 | TR 2SC2412K T146 R       |
| R892         | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | Q3581                                         | 405 014 4509 | TR 2SC2412K T146 R       |
| R893         | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | <b>INTEGRATED CIRCUIT</b>                     |              |                          |
| R894         | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | IC1901                                        | 410 364 2006 | IC M30201M4-114FP        |
| R897         | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | IC1902                                        | 410 370 7002 | IC 24LC02BT/SN-Q0206     |
| R898         | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | IC1903                                        | 409 152 5404 | IC TC7S08F-TE85L         |
| <b>COIL</b>  |              |                         | IC1904                                        | 409 404 6302 | IC M62320FP              |
| L1301        | 645 020 1776 | INDUCTOR,3.3U M         | IC1905                                        | 409 404 6302 | IC M62320FP              |
| L201         | 645 020 1776 | INDUCTOR,3.3U M         | IC1906                                        | 409 344 1900 | IC MN1382-Q-TX           |
| L2201        | 645 020 1776 | INDUCTOR,3.3U M         | IC3351                                        | 409 419 3709 | IC MC10H351ML1           |
| <b>DIODE</b> |              |                         | IC3501                                        | 409 389 4805 | IC LC4105V-TLM           |
| D101         | 407 206 6308 | ZD UDZS-TE-175.1B       | IC3521                                        | 409 389 4805 | IC LC4105V-TLM           |
| D102         | 407 149 0807 | DIODE 1SS355-TE-17      | IC3541                                        | 409 389 4805 | IC LC4105V-TLM           |
| D1161        | 407 149 0807 | DIODE 1SS355-TE-17      | IC3561                                        | 409 343 0201 | IC LT1206CS8             |
| D1168        | 407 149 0807 | DIODE 1SS355-TE-17      | IC3571                                        | 409 211 7301 | IC MC14053BFL            |
| D151         | 407 149 0807 | DIODE 1SS355-TE-17      |                                               | 409 051 2900 | IC TC4053BF-TP1          |
| D152         | 407 149 0807 | DIODE 1SS355-TE-17      | IC501                                         | 409 419 2702 | IC CXA2112R              |
| D153         | 407 149 0807 | DIODE 1SS355-TE-17      | IC531                                         | 409 419 2702 | IC CXA2112R              |
| D201         | 407 149 0807 | DIODE 1SS355-TE-17      | IC561                                         | 409 419 2702 | IC CXA2112R              |
| D2201        | 407 149 0807 | DIODE 1SS355-TE-17      | IC801A                                        | 409 461 8400 | IC M30201F6FP            |
| D3001        | 407 149 0807 | DIODE 1SS355-TE-17      | <b>CAPACITOR</b>                              |              |                          |
| D5211        | 407 149 0807 | DIODE 1SS355-TE-17      | C1901                                         | 403 155 1609 | CERAMIC 33P J 50V        |
| D5221        | 407 149 0807 | DIODE 1SS355-TE-17      | C1902                                         | 403 155 1609 | CERAMIC 33P J 50V        |
| D5231        | 407 149 0807 | DIODE 1SS355-TE-17      | C1903                                         | 403 322 7809 | ELECT 220U M 6.3V        |
| D6121        | 407 149 0807 | DIODE 1SS355-TE-17      | C1904                                         | 403 164 0204 | CERAMIC 0.1U Z 25V       |
| D6122        | 407 149 0807 | DIODE 1SS355-TE-17      |                                               |              |                          |
| D7201        | 407 149 0807 | DIODE 1SS355-TE-17      |                                               |              |                          |
| D7202        | 407 149 0807 | DIODE 1SS355-TE-17      |                                               |              |                          |
| D7203        | 407 149 0807 | DIODE 1SS355-TE-17      |                                               |              |                          |

## Electrical Parts List

| Ref. No. | Part No.     | Description         | Ref. No.        | Part No.     | Description          |
|----------|--------------|---------------------|-----------------|--------------|----------------------|
| C1906    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C3571           | 403 229 3508 | ELECT 100U M 16V     |
| C1911    | 403 164 0204 | CERAMIC 0.1U Z 25V  |                 | 403 335 0408 | ELECT 100U M 16V     |
| C1912    | 403 322 7809 | ELECT 220U M 6.3V   | C3580           | 403 341 8801 | ELECT 10U M 25V      |
| C1921    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C3581           | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C1922    | 403 175 3201 | ELECT 33U M 6.3V    | C3583           | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C1923    | 403 215 2201 | CERAMIC 0.01U K 50V | C3584           | 403 341 8801 | ELECT 10U M 25V      |
| C1925    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C3586           | 403 341 8801 | ELECT 10U M 25V      |
| C1926    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C3587           | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C1941    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C3591           | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C1971    | 403 229 3508 | ELECT 100U M 16V    | C3592           | 403 164 0204 | CERAMIC 0.1U Z 25V   |
|          | 403 335 0408 | ELECT 100U M 16V    | C3593           | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C1972    | 403 229 3508 | ELECT 100U M 16V    | C3594           | 403 164 0204 | CERAMIC 0.1U Z 25V   |
|          | 403 335 0408 | ELECT 100U M 16V    | C3596           | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C1973    | 403 229 3508 | ELECT 100U M 16V    | C3597           | 403 164 0204 | CERAMIC 0.1U Z 25V   |
|          | 403 335 0408 | ELECT 100U M 16V    | C501            | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C1974    | 403 229 3508 | ELECT 100U M 16V    | C502            | 403 229 3508 | ELECT 100U M 16V     |
|          | 403 335 0408 | ELECT 100U M 16V    |                 | 403 335 0408 | ELECT 100U M 16V     |
| C1976    | 403 229 3508 | ELECT 100U M 16V    | C503            | 403 149 9208 | CERAMIC 0.01U Z 50V  |
|          | 403 335 0408 | ELECT 100U M 16V    | C504            | 403 149 9208 | CERAMIC 0.01U Z 50V  |
| C1977    | 403 229 3508 | ELECT 100U M 16V    | C505            | 403 229 3508 | ELECT 100U M 16V     |
|          | 403 335 0408 | ELECT 100U M 16V    |                 | 403 335 0408 | ELECT 100U M 16V     |
| C2851    | 403 068 0409 | CERAMIC 0.1U Z 25V  | C506            | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C2852    | 403 068 0409 | CERAMIC 0.1U Z 25V  | C507            | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C2881    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C509            | 403 155 1609 | CERAMIC 33P J 50V    |
| C2882    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C510            | 403 145 9905 | CERAMIC 22P J 50V    |
| C2883    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C512            | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C3351    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C513            | 403 317 4509 | ELECT 100U M 6.3V    |
| C3352    | 403 322 7809 | ELECT 220U M 6.3V   |                 | 403 342 4307 | ELECT 100U M 6.3V    |
| C3357    | 403 157 3106 | CERAMIC 56P J 50V   | C515TM          | 403 069 0507 | CERAMIC 1000P K 50V  |
| C3501    | 403 280 1604 | ELECT 220U M 16V    | C531            | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C3502    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C532            | 403 229 3508 | ELECT 100U M 16V     |
| C3503    | 403 322 7809 | ELECT 220U M 6.3V   |                 | 403 335 0408 | ELECT 100U M 16V     |
| C3504    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C533            | 403 149 9208 | CERAMIC 0.01U Z 50V  |
| C3506    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C534            | 403 149 9208 | CERAMIC 0.01U Z 50V  |
| C3507    | 403 341 8801 | ELECT 10U M 25V     | C535            | 403 229 3508 | ELECT 100U M 16V     |
| C3513    | 403 157 3106 | CERAMIC 56P J 50V   |                 | 403 335 0408 | ELECT 100U M 16V     |
| C3514    | 403 157 3106 | CERAMIC 56P J 50V   | C536            | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C3515    | 403 157 3106 | CERAMIC 56P J 50V   | C537            | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C3516    | 403 157 3106 | CERAMIC 56P J 50V   | C539            | 403 155 1609 | CERAMIC 33P J 50V    |
| C3517    | 403 157 3106 | CERAMIC 56P J 50V   | C540            | 403 145 9905 | CERAMIC 22P J 50V    |
| C3521    | 403 280 1604 | ELECT 220U M 16V    | C542            | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C3522    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C543            | 403 317 4509 | ELECT 100U M 6.3V    |
| C3523    | 403 322 7809 | ELECT 220U M 6.3V   |                 | 403 342 4307 | ELECT 100U M 6.3V    |
| C3524    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C545TM          | 403 069 0507 | CERAMIC 1000P K 50V  |
| C3526    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C561            | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C3534    | 403 157 3106 | CERAMIC 56P J 50V   | C562            | 403 229 3508 | ELECT 100U M 16V     |
| C3535    | 403 157 3106 | CERAMIC 56P J 50V   |                 | 403 335 0408 | ELECT 100U M 16V     |
| C3537    | 403 157 3106 | CERAMIC 56P J 50V   | C563            | 403 149 9208 | CERAMIC 0.01U Z 50V  |
| C3541    | 403 280 1604 | ELECT 220U M 16V    | C564            | 403 149 9208 | CERAMIC 0.01U Z 50V  |
| C3542    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C565            | 403 229 3508 | ELECT 100U M 16V     |
| C3543    | 403 322 7809 | ELECT 220U M 6.3V   |                 | 403 335 0408 | ELECT 100U M 16V     |
| C3544    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C566            | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C3546    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C567            | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C3554    | 403 157 3106 | CERAMIC 56P J 50V   | C569            | 403 155 1609 | CERAMIC 33P J 50V    |
| C3555    | 403 157 3106 | CERAMIC 56P J 50V   | C570            | 403 145 9905 | CERAMIC 22P J 50V    |
| C3556    | 403 157 3106 | CERAMIC 56P J 50V   | C572            | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C3561    | 403 164 0204 | CERAMIC 0.1U Z 25V  | C573            | 403 317 4509 | ELECT 100U M 6.3V    |
| C3562    | 403 229 3508 | ELECT 100U M 16V    |                 | 403 342 4307 | ELECT 100U M 6.3V    |
|          | 403 335 0408 | ELECT 100U M 16V    | C575TM          | 403 069 0507 | CERAMIC 1000P K 50V  |
| C3563    | 403 149 9208 | CERAMIC 0.01U Z 50V | C9401           | 403 175 3300 | ELECT 47U M 16V      |
| C3564    | 403 157 3601 | CERAMIC 100P J 50V  | C9402           | 403 164 0204 | CERAMIC 0.1U Z 25V   |
| C3565    | 403 229 3508 | ELECT 100U M 16V    |                 |              |                      |
|          | 403 335 0408 | ELECT 100U M 16V    | <b>RESISTOR</b> |              |                      |
| C3566    | 403 164 0204 | CERAMIC 0.1U Z 25V  | RB3501          | 645 028 5981 | R-NETWORK 10X4 1/16W |
| C3567    | 403 164 0204 | CERAMIC 0.1U Z 25V  |                 | 645 028 5998 | R-NETWORK 10X4 1/16W |
| C3568    | 403 164 0204 | CERAMIC 0.1U Z 25V  | RB3502          | 645 028 5981 | R-NETWORK 10X4 1/16W |
| C3569    | 403 215 1006 | CERAMIC 470P J 50V  |                 | 645 028 5998 | R-NETWORK 10X4 1/16W |

## Electrical Parts List

| Ref. No. | Part No.     | Description             | Ref. No. | Part No.     | Description             |
|----------|--------------|-------------------------|----------|--------------|-------------------------|
| RB3521   | 645 028 5981 | R-NETWORK 10X4 1/16W    | R2852    | 401 105 4502 | MT-GLAZE 390 JA 1/16W   |
|          | 645 028 5998 | R-NETWORK 10X4 1/16W    | R2853    | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W  |
| RB3522   | 645 028 5981 | R-NETWORK 10X4 1/16W    | R2855    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
|          | 645 028 5998 | R-NETWORK 10X4 1/16W    | R2857    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| RB3541   | 645 028 5981 | R-NETWORK 10X4 1/16W    | R2859    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
|          | 645 028 5998 | R-NETWORK 10X4 1/16W    | R2860    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| RB3542   | 645 028 5981 | R-NETWORK 10X4 1/16W    | R2861    | 401 105 2003 | MT-GLAZE 1.8K JA 1/16W  |
|          | 645 028 5998 | R-NETWORK 10X4 1/16W    | R2862    | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W  |
| RB501    | 645 024 7477 | R-NETWORK 0X4 1/16W     | R2865    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
|          | 645 027 1519 | R-NETWORK 0X4 1/16W     | R2866    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| RB502    | 645 024 7477 | R-NETWORK 0X4 1/16W     | R2868    | 401 105 6001 | MT-GLAZE 5.6K JA 1/16W  |
|          | 645 027 1519 | R-NETWORK 0X4 1/16W     | R2870    | 401 105 2904 | MT-GLAZE 22K JA 1/16W   |
| RB531    | 645 024 7477 | R-NETWORK 0X4 1/16W     | R2871    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
|          | 645 027 1519 | R-NETWORK 0X4 1/16W     | R2872    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| RB532    | 645 024 7477 | R-NETWORK 0X4 1/16W     | R2873    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
|          | 645 027 1519 | R-NETWORK 0X4 1/16W     | R2874    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| RB561    | 645 024 7477 | R-NETWORK 0X4 1/16W     | R2875    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
|          | 645 027 1519 | R-NETWORK 0X4 1/16W     | R2876    | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W  |
| RB562    | 645 024 7477 | R-NETWORK 0X4 1/16W     | R2877    | 401 105 3406 | MT-GLAZE 27K JA 1/16W   |
|          | 645 027 1519 | R-NETWORK 0X4 1/16W     | R2878    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R1902    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R2879    | 401 105 5202 | MT-GLAZE 470 JA 1/16W   |
| R1903    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R2880    | 401 105 5202 | MT-GLAZE 470 JA 1/16W   |
| R1906    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R2881    | 401 105 5202 | MT-GLAZE 470 JA 1/16W   |
| R1907    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R2882    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R1909    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R2883    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R1913    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R2884    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R1914    | 401 105 6605 | MT-GLAZE 6.8K JA 1/16W  | R2885    | 401 105 5202 | MT-GLAZE 470 JA 1/16W   |
| R1916TM  | 407 149 0807 | DIODE 1SS355-TE-17      | R2886    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1917    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R2887    | 401 105 5202 | MT-GLAZE 470 JA 1/16W   |
| R1924    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R2891    | 401 105 5400 | MT-GLAZE 47K JA 1/16W   |
| R1926    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R2892    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1927    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R2893    | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W  |
| R1928    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R2894    | 401 105 3406 | MT-GLAZE 27K JA 1/16W   |
| R1930    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R2895    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1932    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R3346    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1933    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R3347    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1936    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R3348    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1937    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R3349    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1938    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R3351    | 401 105 4007 | MT-GLAZE 330 JA 1/16W   |
| R1939    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R3352    | 401 105 4007 | MT-GLAZE 330 JA 1/16W   |
| R1941    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R3353    | 401 105 4007 | MT-GLAZE 330 JA 1/16W   |
| R1942    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R3354    | 401 105 4007 | MT-GLAZE 330 JA 1/16W   |
| R1943    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R3356    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1944    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R3357    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1945    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R3358    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1946    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R3362    | 401 105 4007 | MT-GLAZE 330 JA 1/16W   |
| R1948    | 401 105 2607 | MT-GLAZE 22 JA 1/16W    | R3363    | 401 105 4007 | MT-GLAZE 330 JA 1/16W   |
| R1949    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R3501    | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W  |
| R1951    | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W  | R3502    | 401 105 3307 | MT-GLAZE 2.7K JA 1/16W  |
| R1952    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R3503    | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W  |
| R1953    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | R3504    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R1954    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R3505    | 401 158 4108 | MT-GLAZE 4.7 JA 1/16W   |
| R1955    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R3506    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R1956    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R3507    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1957    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R3508    | 401 158 4108 | MT-GLAZE 4.7 JA 1/16W   |
| R1961    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R3509    | 401 158 4108 | MT-GLAZE 4.7 JA 1/16W   |
| R1964    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R3511    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R1966    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R3512    | 401 158 4108 | MT-GLAZE 4.7 JA 1/16W   |
| R1967    | 401 105 5202 | MT-GLAZE 470 JA 1/16W   | R3513    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R1969    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R3514    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| △ R1971  | 402 080 7106 | FUSIBLE RES 2.2 JH 1/4W | R3515    | 401 105 4007 | MT-GLAZE 330 JA 1/16W   |
| △ R1972  | 402 080 7106 | FUSIBLE RES 2.2 JH 1/4W | R3516    | 401 105 4007 | MT-GLAZE 330 JA 1/16W   |
| △ R1973  | 402 083 2207 | FUSIBLE RES 4.7 JH 1/4W | R3521    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| △ R1974  | 402 083 2207 | FUSIBLE RES 4.7 JH 1/4W | R3522    | 401 158 4108 | MT-GLAZE 4.7 JA 1/16W   |
| R1976    | 401 105 6001 | MT-GLAZE 5.6K JA 1/16W  | R3523    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R1978    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | R3524    | 401 158 4108 | MT-GLAZE 4.7 JA 1/16W   |
| R2851    | 401 105 4502 | MT-GLAZE 390 JA 1/16W   | R3525    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |

## Electrical Parts List

| Ref. No. | Part No.     | Description             | Ref. No.                 | Part No.     | Description             |
|----------|--------------|-------------------------|--------------------------|--------------|-------------------------|
| R3526    | 401 158 4108 | MT-GLAZE 4.7 JA 1/16W   | R535                     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R3527    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R538                     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3528    | 401 158 4108 | MT-GLAZE 4.7 JA 1/16W   | R539                     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3529    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R540                     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3531    | 401 105 4007 | MT-GLAZE 330 JA 1/16W   | R541                     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R3532    | 401 105 4007 | MT-GLAZE 330 JA 1/16W   | R542                     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R3541    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R544                     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R3542    | 401 158 4108 | MT-GLAZE 4.7 JA 1/16W   | R545                     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R3543    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R546                     | 401 105 6605 | MT-GLAZE 6.8K JA 1/16W  |
| R3544    | 401 158 4108 | MT-GLAZE 4.7 JA 1/16W   | R547                     | 401 105 5905 | MT-GLAZE 560 JA 1/16W   |
| R3545    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R561                     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3546    | 401 158 4108 | MT-GLAZE 4.7 JA 1/16W   | R562                     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3547    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R563                     | 401 105 3406 | MT-GLAZE 27K JA 1/16W   |
| R3548    | 401 158 4108 | MT-GLAZE 4.7 JA 1/16W   | R564                     | 401 105 1105 | MT-GLAZE 12K JA 1/16W   |
| R3549    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R565                     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R3551    | 401 105 4007 | MT-GLAZE 330 JA 1/16W   | R568                     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3552    | 401 105 4007 | MT-GLAZE 330 JA 1/16W   | R569                     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3554    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R570                     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3561    | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W  | R571                     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R3562    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | R572                     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R3563    | 401 105 4205 | MT-GLAZE 33K JA 1/16W   | R573                     | 401 105 5905 | MT-GLAZE 560 JA 1/16W   |
| R3564    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R574                     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R3565    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | R575                     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R3566    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R576                     | 401 105 6605 | MT-GLAZE 6.8K JA 1/16W  |
| R3567    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R9408                    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3568    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R9428                    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3569    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R9448                    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3571    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | <b>VARIABLE RESISTOR</b> |              |                         |
| R3572    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | VR3502                   | 645 025 7414 | VR, SEMI, 1K S          |
| R3575    | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W  | VR3503                   | 645 025 7414 | VR, SEMI, 1K S          |
| R3576    | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W  | VR3504                   | 645 025 7414 | VR, SEMI, 1K S          |
| R3578    | 401 148 6006 | MT-GLAZE 2.2 JA 1/16W   | VR3571                   | 645 025 7421 | VR, SEMI, 10K S         |
| R3579    | 401 148 6006 | MT-GLAZE 2.2 JA 1/16W   | VR501                    | 645 025 7421 | VR, SEMI, 10K S         |
| R3581    | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W  | VR531                    | 645 025 7421 | VR, SEMI, 10K S         |
| R3582    | 401 105 4502 | MT-GLAZE 390 JA 1/16W   | VR561                    | 645 025 7421 | VR, SEMI, 10K S         |
| R3583    | 401 105 5400 | MT-GLAZE 47K JA 1/16W   | <b>COIL</b>              |              |                         |
| R3584    | 401 148 6006 | MT-GLAZE 2.2 JA 1/16W   | L3501                    | 645 020 1776 | INDUCTOR, 3.3U M        |
| R3585    | 401 148 6006 | MT-GLAZE 2.2 JA 1/16W   | L3502                    | 401 035 4306 | MT-GLAZE 10 JA 1/8W     |
| R3588    | 401 105 4205 | MT-GLAZE 33K JA 1/16W   | L3521                    | 645 020 1776 | INDUCTOR, 3.3U M        |
| R3589    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | L3541                    | 645 020 1776 | INDUCTOR, 3.3U M        |
| R3591    | 401 105 5400 | MT-GLAZE 47K JA 1/16W   | L3561                    | 645 020 1776 | INDUCTOR, 3.3U M        |
| R3592    | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W  | L3571                    | 401 036 8907 | MT-GLAZE 5.6 JA 1/8W    |
| R3593    | 401 105 4502 | MT-GLAZE 390 JA 1/16W   | L501                     | 645 020 1776 | INDUCTOR, 3.3U M        |
| R3594    | 401 105 5400 | MT-GLAZE 47K JA 1/16W   | L531                     | 645 020 1776 | INDUCTOR, 3.3U M        |
| R3595    | 401 148 6006 | MT-GLAZE 2.2 JA 1/16W   | L561                     | 645 020 1776 | INDUCTOR, 3.3U M        |
| R3596    | 401 148 6006 | MT-GLAZE 2.2 JA 1/16W   | <b>DIODE</b>             |              |                         |
| R3597    | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W  | D1501                    | 407 149 0807 | DIODE 1SS355-TE-17      |
| R3598    | 401 105 4502 | MT-GLAZE 390 JA 1/16W   | D1502                    | 407 149 0807 | DIODE 1SS355-TE-17      |
| R501     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | D1503                    | 407 149 0807 | DIODE 1SS355-TE-17      |
| R502     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | D1504                    | 407 149 0807 | DIODE 1SS355-TE-17      |
| R503     | 401 105 3406 | MT-GLAZE 27K JA 1/16W   | D1505                    | 407 149 0807 | DIODE 1SS355-TE-17      |
| R504     | 401 105 1105 | MT-GLAZE 12K JA 1/16W   | D1507                    | 407 149 0807 | DIODE 1SS355-TE-17      |
| R505     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | D1508                    | 407 149 0807 | DIODE 1SS355-TE-17      |
| R508     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | D1509                    | 407 149 0807 | DIODE 1SS355-TE-17      |
| R509     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | D2851                    | 407 054 4105 | ZENER DIODE RD12M-T2BB1 |
| R510     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |                          | 407 054 4204 | ZENER DIODE RD12M-T2BB2 |
| R511     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |                          | 407 199 6200 | ZD 02CZ12X(TE85R)       |
| R512     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |                          | 407 175 2806 | ZD 02CZ12Y(TE85R)       |
| R513     | 401 105 5905 | MT-GLAZE 560 JA 1/16W   |                          | 407 175 2905 | ZD 02CZ12Z(TE85R)       |
| R514     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | D2852                    | 407 054 4105 | ZENER DIODE RD12M-T2BB1 |
| R515     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |                          | 407 054 4204 | ZENER DIODE RD12M-T2BB2 |
| R516     | 401 105 6605 | MT-GLAZE 6.8K JA 1/16W  |                          | 407 199 6200 | ZD 02CZ12X(TE85R)       |
| R517     | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W  |                          | 407 175 2806 | ZD 02CZ12Y(TE85R)       |
| R531     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |                          | 407 175 2905 | ZD 02CZ12Z(TE85R)       |
| R532     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | D2853                    | 407 054 4105 | ZENER DIODE RD12M-T2BB1 |
| R533     | 401 105 3406 | MT-GLAZE 27K JA 1/16W   |                          |              |                         |
| R534     | 401 105 1105 | MT-GLAZE 12K JA 1/16W   |                          |              |                         |

## Electrical Parts List

| Ref. No.                                      | Part No.     | Description               | Ref. No.         | Part No.     | Description         |
|-----------------------------------------------|--------------|---------------------------|------------------|--------------|---------------------|
| D2854                                         | 407 054 4204 | ZENER DIODE RD12M-T2BB2   | IC3391           | 410 351 5805 | IC EPM7032AELC44-10 |
|                                               | 407 199 6200 | ZD 02CZ12X(TE85R)         | IC401            | 409 419 2603 | IC CXA2111R         |
|                                               | 407 175 2806 | ZD 02CZ12Y(TE85R)         | IC431            | 409 326 3007 | IC M62358FP         |
|                                               | 407 175 2905 | ZD 02CZ12Z(TE85R)         | IC451            | 409 241 9405 | IC L88MS05T-TL      |
|                                               | 407 054 4105 | ZENER DIODE RD12M-T2BB1   | IC471            | 409 460 8302 | IC CXD3503R         |
|                                               | 407 054 4204 | ZENER DIODE RD12M-T2BB2   | IC472            | 409 241 9405 | IC L88MS05T-TL      |
|                                               | 407 199 6200 | ZD 02CZ12X(TE85R)         | <b>CAPACITOR</b> |              |                     |
|                                               | 407 175 2806 | ZD 02CZ12Y(TE85R)         | C2601            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
|                                               | 407 175 2905 | ZD 02CZ12Z(TE85R)         | C2602            | 403 280 0508 | ELECT 470U M 4V     |
|                                               | 407 203 7704 | LED SML-210DT T86 L       | C2603            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| D2861                                         | 407 203 7803 | LED SML-210LT T86 M       | C2611            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| D2863                                         | 407 203 7902 | LED SML-210MT T86 M       | C2612            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| D2864                                         | 407 203 7803 | LED SML-210LT T86 M       | C2613            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| D2865                                         | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 | C2614            | 403 280 0508 | ELECT 470U M 4V     |
| D2881                                         | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 | C2615            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| D2882                                         | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 | C2616            | 403 280 0508 | ELECT 470U M 4V     |
| D2883                                         | 407 149 0807 | DIODE 1SS355-TE-17        | C2631            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| D3501                                         | 407 149 0807 | DIODE 1SS355-TE-17        | C2632            | 403 280 0508 | ELECT 470U M 4V     |
| D3502                                         | 407 149 0807 | DIODE 1SS355-TE-17        | C2633            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| D3503                                         | 407 149 0807 | DIODE 1SS355-TE-17        | C2641            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| D3504                                         | 407 149 0807 | DIODE 1SS355-TE-17        | C2642            | 403 280 1604 | ELECT 220U M 16V    |
| D3531                                         | 407 149 0807 | DIODE 1SS355-TE-17        | C2643            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| D3532                                         | 407 149 0807 | DIODE 1SS355-TE-17        | C2646            | 403 322 7809 | ELECT 220U M 6.3V   |
| D3533                                         | 407 149 0807 | DIODE 1SS355-TE-17        | C2647            | 403 283 6309 | CERAMIC 1U Z 10V    |
| D3534                                         | 407 149 0807 | DIODE 1SS355-TE-17        |                  | 403 336 5600 | CERAMIC 1U Z 10V    |
| D3551                                         | 407 149 0807 | DIODE 1SS355-TE-17        | C2648            | 403 322 7809 | ELECT 220U M 6.3V   |
| D3552                                         | 407 149 0807 | DIODE 1SS355-TE-17        | C2649            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| D3553                                         | 407 149 0807 | DIODE 1SS355-TE-17        | C2801            | 403 283 6309 | CERAMIC 1U Z 10V    |
| D3554                                         | 407 149 0807 | DIODE 1SS355-TE-17        |                  | 403 336 5600 | CERAMIC 1U Z 10V    |
| D3576                                         | 407 149 0807 | DIODE 1SS355-TE-17        | C2802            | 403 157 2901 | CERAMIC 47P J 50V   |
| D511                                          | 407 149 0807 | DIODE 1SS355-TE-17        | C3301            | 403 322 7809 | ELECT 220U M 6.3V   |
| <b>MISCELLANEOUS</b>                          |              |                           | C3302            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| X1901                                         | 645 029 5966 | OSC,CRYSTAL 8.000MHZ      | C3303            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| <b>610 280 5796 ASSY,PWB,MAIN COMP.MA6A-C</b> |              |                           | C3304            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| <b>1AA0B10C2240C</b>                          |              |                           | C3305            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| <b>TRANSISTOR</b>                             |              |                           | C3306            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| Q451                                          | 405 014 4509 | TR 2SC2412K T146 R        | C3307            | 403 322 7809 | ELECT 220U M 6.3V   |
| <b>INTEGRATED CIRCUIT</b>                     |              |                           | C3308            | 403 322 7809 | ELECT 220U M 6.3V   |
| IC2601                                        | 409 416 6406 | IC BA033FP-E2             | C3309            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| IC2611                                        | 409 416 6406 | IC BA033FP-E2             | C3321            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| IC2612                                        | 409 461 7700 | IC PQ2TZ15                | C3331            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| IC2631                                        | 409 416 6406 | IC BA033FP-E2             | C3341            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| IC2641                                        | 409 124 5708 | IC L78M09T-TR             | C3371            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| IC2642                                        | 409 241 9405 | IC L88MS05T-TL            | C3381            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| IC3301                                        | 409 440 2900 | IC LC24106A-PC7           | C3391            | 403 322 7809 | ELECT 220U M 6.3V   |
| IC3302                                        | 410 325 4704 | IC HD74LVC244AT           | C3392            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| IC3303                                        | 409 416 6406 | IC BA033FP-E2             | C3393            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| IC3321                                        | 410 311 5708 | IC MC74HCT244ADT          | C3394            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
|                                               | 410 315 5506 | IC HD74HCT244TV           | C3396            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
|                                               | 410 356 7507 | IC SN74HCT244PWR          | C3397            | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| IC3331                                        | 410 315 5308 | IC MC74ACT244DT           | C401             | 403 164 0204 | CERAMIC 0.1U Z 25V  |
|                                               | 410 331 2008 | IC HD74ACT244TELL         | C402             | 403 149 9208 | CERAMIC 0.01U Z 50V |
|                                               | 410 358 7406 | IC SN74ACT244PWR          | C403             | 403 149 9208 | CERAMIC 0.01U Z 50V |
| IC3341                                        | 410 311 5708 | IC MC74HCT244ADT          | C404             | 403 149 9208 | CERAMIC 0.01U Z 50V |
|                                               | 410 315 5506 | IC HD74HCT244TV           | C405             | 403 322 7809 | ELECT 220U M 6.3V   |
|                                               | 410 356 7507 | IC SN74HCT244PWR          | C406             | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| IC3371                                        | 410 315 5308 | IC MC74ACT244DT           | C407             | 403 322 7809 | ELECT 220U M 6.3V   |
|                                               | 410 331 2008 | IC HD74ACT244TELL         | C408             | 403 164 0204 | CERAMIC 0.1U Z 25V  |
|                                               | 410 358 7406 | IC SN74ACT244PWR          | C409             | 403 164 0204 | CERAMIC 0.1U Z 25V  |
| IC3381                                        | 409 422 5400 | IC MC74AC04DT             | C411             | 403 149 9208 | CERAMIC 0.01U Z 50V |
|                                               | 409 423 7205 | IC TC74AC04FT             | C412             | 403 149 9208 | CERAMIC 0.01U Z 50V |
|                                               | 410 357 4208 | IC SN74LV04APWR           | C413             | 403 149 9208 | CERAMIC 0.01U Z 50V |
|                                               |              |                           | C414             | 403 149 9208 | CERAMIC 0.01U Z 50V |
|                                               |              |                           | C415             | 403 149 9208 | CERAMIC 0.01U Z 50V |
|                                               |              |                           | C416             | 403 149 9208 | CERAMIC 0.01U Z 50V |
|                                               |              |                           | C431             | 403 229 3508 | ELECT 100U M 16V    |

Electrical Parts List

| Ref. No.        | Part No.     | Description             | Ref. No. | Part No.     | Description             |
|-----------------|--------------|-------------------------|----------|--------------|-------------------------|
|                 | 403 335 0408 | ELECT 100U M 16V        | R3324    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C432            | 403 149 9208 | CERAMIC 0.01U Z 50V     | R3325    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C433            | 403 164 0204 | CERAMIC 0.1U Z 25V      | R3326    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C434            | 403 322 7809 | ELECT 220U M 6.3V       | R3327    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C435            | 403 298 9609 | CERAMIC 0.1U K 16V      | R3328    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
|                 | 403 325 3303 | CERAMIC 0.1U K 16V      | R3329    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C436            | 403 298 9609 | CERAMIC 0.1U K 16V      | R3330    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
|                 | 403 325 3303 | CERAMIC 0.1U K 16V      | R3331    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C437            | 403 298 9609 | CERAMIC 0.1U K 16V      | R3333    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
|                 | 403 325 3303 | CERAMIC 0.1U K 16V      | R3335    | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W  |
| C451            | 403 322 7809 | ELECT 220U M 6.3V       | R3336    | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W  |
| C452            | 403 322 7809 | ELECT 220U M 6.3V       | R3339    | 401 105 2706 | MT-GLAZE 220 JA 1/16W   |
| C453            | 403 283 6309 | CERAMIC 1U Z 10V        | R3371    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
|                 | 403 336 5600 | CERAMIC 1U Z 10V        | R3372    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C454            | 403 164 0204 | CERAMIC 0.1U Z 25V      | R3381    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C470            | 403 322 7809 | ELECT 220U M 6.3V       | R3382    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C471TM          | 403 038 6301 | ELECT 220U M 6.3V       | R3383    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C472            | 403 164 0204 | CERAMIC 0.1U Z 25V      | R3385    | 401 105 6506 | MT-GLAZE 680 JA 1/16W   |
| C473            | 403 162 4709 | ELECT 10U M 16V         | R3386    | 401 105 6506 | MT-GLAZE 680 JA 1/16W   |
| C474            | 403 164 0204 | CERAMIC 0.1U Z 25V      | R3387    | 401 105 6506 | MT-GLAZE 680 JA 1/16W   |
| C475            | 403 283 6309 | CERAMIC 1U Z 10V        | R3391    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
|                 | 403 336 5600 | CERAMIC 1U Z 10V        | R3393    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C477            | 403 215 0900 | CERAMIC 390P J 50V      | R3394    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| C479            | 403 215 0900 | CERAMIC 390P J 50V      | R3395    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| C480            | 403 341 3905 | POS-SOLID 100U M 6.3V   | R3396    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| C482            | 403 215 0900 | CERAMIC 390P J 50V      | R3397    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| C483            | 403 164 0204 | CERAMIC 0.1U Z 25V      | R3398    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| C484            | 403 164 0204 | CERAMIC 0.1U Z 25V      | R3399    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| <b>RESISTOR</b> |              |                         | R401     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R2601           | 401 102 7506 | MT-GLAZE 22 JA 1W       | R402     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R2602           | 401 198 7909 | MT-GLAZE 47 JA 1W       | R403     | 401 217 3202 | MT-GLAZE 51K FA 1/16W   |
| R2611           | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R404     | 401 212 1708 | MT-GLAZE 24K FA 1/16W   |
| R2612           | 401 102 7506 | MT-GLAZE 22 JA 1W       | R405     | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R2614           | 401 102 7506 | MT-GLAZE 22 JA 1W       | R406     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2632           | 401 198 7909 | MT-GLAZE 47 JA 1W       | R407     | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| R2642           | 401 102 7506 | MT-GLAZE 22 JA 1W       | R409     | 401 105 0702 | MT-GLAZE 100K JA 1/16W  |
| R2643           | 401 198 7909 | MT-GLAZE 47 JA 1W       | R411     | 401 105 4700 | MT-GLAZE 39K JA 1/16W   |
| R2644           | 401 162 6501 | MT-GLAZE 82 JA 1W       | R412     | 401 105 8104 | MT-GLAZE 56K JA 1/16W   |
| R2645           | 401 162 6501 | MT-GLAZE 82 JA 1W       | R419     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2646           | 401 162 6501 | MT-GLAZE 82 JA 1W       | R421     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2648           | 401 102 7506 | MT-GLAZE 22 JA 1W       | R422     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R2649           | 401 162 6501 | MT-GLAZE 82 JA 1W       | R430     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R2801           | 401 105 4007 | MT-GLAZE 330 JA 1/16W   | R431     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R2802           | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R432     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R3301           | 401 105 4007 | MT-GLAZE 330 JA 1/16W   | R433     | 401 105 3307 | MT-GLAZE 2.7K JA 1/16W  |
| R3302           | 401 105 4007 | MT-GLAZE 330 JA 1/16W   | R434     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3303           | 401 105 4007 | MT-GLAZE 330 JA 1/16W   | R435     | 401 105 8203 | MT-GLAZE 68K JA 1/16W   |
| R3304           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R436     | 401 105 8203 | MT-GLAZE 68K JA 1/16W   |
| R3305           | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R437     | 401 105 8203 | MT-GLAZE 68K JA 1/16W   |
| R3306           | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R438     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R3307           | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R439     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R3308           | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R441     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R3309           | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R442     | 401 105 3406 | MT-GLAZE 27K JA 1/16W   |
| R3310           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R443     | 401 105 3406 | MT-GLAZE 27K JA 1/16W   |
| R3311           | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R444     | 401 105 3406 | MT-GLAZE 27K JA 1/16W   |
| R3313           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R445     | 401 105 1105 | MT-GLAZE 12K JA 1/16W   |
| R3314           | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | R446     | 401 105 1105 | MT-GLAZE 12K JA 1/16W   |
| R3315           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R447     | 401 105 1105 | MT-GLAZE 12K JA 1/16W   |
| R3316           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R448     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R3317           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R449     | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| R3318           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R451     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3319           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R452     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R3320           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R453     | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| R3321           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R454     | 401 105 5301 | MT-GLAZE 4.7K JA 1/16W  |
| R3322           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R470     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R3323           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | R471     | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
|                 |              |                         | R473     | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |

## Electrical Parts List

| Ref. No.                                                        | Part No.     | Description             | Ref. No.         | Part No.     | Description             |
|-----------------------------------------------------------------|--------------|-------------------------|------------------|--------------|-------------------------|
| R474                                                            | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | IC6131           | 409 441 8406 | IC LA7217M-T-TRM        |
| R476                                                            | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | IC6151           | 409 211 7301 | IC MC14053BFL           |
| R477                                                            | 401 105 4502 | MT-GLAZE 390 JA 1/16W   |                  | 409 051 2900 | IC TC4053BF-TP1         |
| R478                                                            | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | <b>CAPACITOR</b> |              |                         |
| R479                                                            | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | C1151            | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| R481                                                            | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W  | C1152            | 403 215 1006 | CERAMIC 470P J 50V      |
| R482                                                            | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | C1156            | 403 155 2200 | CERAMIC 3300P K 50V     |
| R483                                                            | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | C191             | 403 162 4709 | ELECT 10U M 16V         |
| R484                                                            | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | C192             | 403 149 9208 | CERAMIC 0.01U Z 50V     |
| R486                                                            | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | C193             | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| R491                                                            | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | C195             | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| R492                                                            | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | C196             | 403 175 4505 | ELECT 47U M 6.3V        |
| R493                                                            | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | C2101            | 403 175 4505 | ELECT 47U M 6.3V        |
| R494                                                            | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | C2102            | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| <b>COIL</b>                                                     |              |                         | C2103            | 403 175 4505 | ELECT 47U M 6.3V        |
| L431                                                            | 645 026 1008 | INDUCTOR,3.3U M         | C2104            | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| L471                                                            | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W  | C2106            | 403 175 4505 | ELECT 47U M 6.3V        |
| L472                                                            | 401 035 4603 | MT-GLAZE 100 JA 1/8W    | C2107            | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| L473                                                            | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W  | C2108            | 403 175 4505 | ELECT 47U M 6.3V        |
| L474                                                            | 401 035 4603 | MT-GLAZE 100 JA 1/8W    | C2109            | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| L475                                                            | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W  | C2111            | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| L476                                                            | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W  | C2112            | 403 157 3809 | CERAMIC 120P J 50V      |
| L477                                                            | 401 035 4603 | MT-GLAZE 100 JA 1/8W    | C2123            | 403 215 2201 | CERAMIC 0.01U K 50V     |
| L478                                                            | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W  | C2124            | 403 215 2201 | CERAMIC 0.01U K 50V     |
| L479                                                            | 401 035 4108 | MT-GLAZE 0.000 ZA 1/8W  | C2131            | 403 157 3106 | CERAMIC 56P J 50V       |
| <b>DIODE</b>                                                    |              |                         | C2132            | 403 155 1609 | CERAMIC 33P J 50V       |
| D2801                                                           | 407 175 3803 | ZD 02CZ6.2Y(TE85R)      | C2133            | 403 164 0204 | CERAMIC 0.1U Z 25V      |
|                                                                 | 407 175 3902 | ZD 02CZ6.2Z(TE85R)      | C2141            | 403 215 2201 | CERAMIC 0.01U K 50V     |
| D2802                                                           | 407 175 3803 | ZD 02CZ6.2Y(TE85R)      | C2142            | 403 215 2201 | CERAMIC 0.01U K 50V     |
|                                                                 | 407 175 3902 | ZD 02CZ6.2Z(TE85R)      | C2143            | 403 215 2201 | CERAMIC 0.01U K 50V     |
| D3301                                                           | 407 149 0807 | DIODE 1SS355-TE-17      | C2144            | 403 215 2201 | CERAMIC 0.01U K 50V     |
| D3302                                                           | 407 149 0807 | DIODE 1SS355-TE-17      | C2146            | 403 215 2201 | CERAMIC 0.01U K 50V     |
| D3303                                                           | 407 149 0807 | DIODE 1SS355-TE-17      | C2147            | 403 155 1500 | CERAMIC 180P J 50V      |
| D3304                                                           | 407 149 0807 | DIODE 1SS355-TE-17      | C2148            | 403 215 2201 | CERAMIC 0.01U K 50V     |
| D3305                                                           | 407 149 0807 | DIODE 1SS355-TE-17      | C2149            | 403 175 4505 | ELECT 47U M 6.3V        |
| D3306                                                           | 407 149 0807 | DIODE 1SS355-TE-17      | C2151            | 403 175 4109 | ELECT 22U M 16V         |
| D3307                                                           | 407 149 0807 | DIODE 1SS355-TE-17      | C2152            | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| D3308                                                           | 407 149 0807 | DIODE 1SS355-TE-17      | C2166            | 403 162 4709 | ELECT 10U M 16V         |
| D3309                                                           | 407 149 0807 | DIODE 1SS355-TE-17      | C2176            | 403 162 4709 | ELECT 10U M 16V         |
| D3311                                                           | 407 149 0807 | DIODE 1SS355-TE-17      | C2181            | 403 145 9905 | CERAMIC 22P J 50V       |
| <b>610 280 5802 ASSY,PWB,MAIN COMP.MA6A-D<br/>1AA0B10C2240D</b> |              |                         | C6130TM          | 403 232 9702 | ELECT 220U M 6.3V       |
| <b>TRANSISTOR</b>                                               |              |                         | C6132            | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| Q191                                                            | 405 014 4509 | TR 2SC2412K T146 R      | C6133            | 403 237 8700 | CERAMIC 0.056U Z 50V    |
| Q2121                                                           | 405 014 4509 | TR 2SC2412K T146 R      | C6134            | 403 224 6603 | CERAMIC 0.022U Z 50V    |
| Q2122                                                           | 405 014 4509 | TR 2SC2412K T146 R      | C6137            | 403 162 6208 | ELECT 1U M 50V          |
| Q2123                                                           | 405 134 5905 | TR 2SA1037AK-T146-R     | C6138            | 403 157 6909 | CERAMIC 820P K 50V      |
| Q2124                                                           | 405 014 4509 | TR 2SC2412K T146 R      | C6139            | 403 215 2201 | CERAMIC 0.01U K 50V     |
| Q2161                                                           | 405 014 4509 | TR 2SC2412K T146 R      | C6151            | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| Q2171                                                           | 405 134 5905 | TR 2SA1037AK-T146-R     | C6154            | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| Q6141                                                           | 405 014 4509 | TR 2SC2412K T146 R      | C6196            | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| Q6171                                                           | 405 134 5905 | TR 2SA1037AK-T146-R     | <b>RESISTOR</b>  |              |                         |
| Q6176                                                           | 405 014 4509 | TR 2SC2412K T146 R      | R1151            | 401 212 0008 | MT-GLAZE 15K FA 1/16W   |
| Q6181                                                           | 405 014 4509 | TR 2SC2412K T146 R      | R1152            | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| Q6186                                                           | 405 134 5905 | TR 2SA1037AK-T146-R     | R1153            | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| Q6196                                                           | 405 014 4509 | TR 2SC2412K T146 R      | R1156            | 401 105 8104 | MT-GLAZE 56K JA 1/16W   |
| <b>INTEGRATED CIRCUIT</b>                                       |              |                         | R187             | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| IC1151                                                          | 409 158 5804 | IC TC74HC123AF-TP1      | R188             | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W  |
| IC191                                                           | 409 083 8000 | IC LA6082M-TP-T1        | R189             | 401 105 3307 | MT-GLAZE 2.7K JA 1/16W  |
| IC2101                                                          | 409 418 9504 | IC TC9090AF             | R191             | 401 105 0702 | MT-GLAZE 100K JA 1/16W  |
| IC2202                                                          | 409 350 3400 | IC LT1253CS8            | R193             | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
|                                                                 |              |                         | R194             | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
|                                                                 |              |                         | R195             | 401 113 6901 | MT-GLAZE 13K JA 1/16W   |
|                                                                 |              |                         | R196             | 401 105 5400 | MT-GLAZE 47K JA 1/16W   |
|                                                                 |              |                         | R198             | 401 105 0702 | MT-GLAZE 100K JA 1/16W  |
|                                                                 |              |                         | R199             | 401 105 4700 | MT-GLAZE 39K JA 1/16W   |
|                                                                 |              |                         | R2111            | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |

# Electrical Parts List

| Ref. No. | Part No.     | Description             | Ref. No.                                | Part No.     | Description              |
|----------|--------------|-------------------------|-----------------------------------------|--------------|--------------------------|
| R2112    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | L2121                                   | 645 004 2409 | INDUCTOR, 33U J          |
| R2116    | 401 105 1402 | MT-GLAZE 150 JA 1/16W   | L2122                                   | 645 004 2430 | INDUCTOR, 56U J          |
| R2117    | 401 105 1402 | MT-GLAZE 150 JA 1/16W   | L2161                                   | 645 025 6066 | FILTER, LP 7MHZ          |
| R2121    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | L2171                                   | 645 025 6066 | FILTER, LP 7MHZ          |
| R2122    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | <b>DIODE</b>                            |              |                          |
| R2123    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | D1151                                   | 407 149 0807 | DIODE 1SS355-TE-17       |
| R2124    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | D1152                                   | 407 149 0807 | DIODE 1SS355-TE-17       |
| R2126    | 401 105 1105 | MT-GLAZE 12K JA 1/16W   | D191                                    | 407 149 0807 | DIODE 1SS355-TE-17       |
| R2127    | 401 105 4106 | MT-GLAZE 3.3K JA 1/16W  | <b>MISCELLANEOUS</b>                    |              |                          |
| R2128    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | TP2101                                  | 645 036 5010 | TERMINAL                 |
| R2129    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | TP6131                                  | 645 036 5010 | TERMINAL                 |
| R2131    | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W  | K2201                                   | 645 037 6030 | SOCKET, PWB-PWB 40P      |
| R2133    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | X6131                                   | 645 035 8838 | OSC, CERAMIC 500.0KHZ    |
| R2134    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | <b>610 280 5819 ASSY,PWB,POWER MA6A</b> |              |                          |
| R2141    | 401 105 7404 | MT-GLAZE 8.2K JA 1/16W  | <b>1AA0B10C22500A</b>                   |              |                          |
| R2142    | 401 105 1105 | MT-GLAZE 12K JA 1/16W   | <b>TRANSISTOR</b>                       |              |                          |
| R2143    | 401 105 7305 | MT-GLAZE 820 JA 1/16W   | Q641                                    | 405 002 0308 | TR 2SA1037K T146 R       |
| R2144    | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W  | Q661                                    | 405 014 4509 | TR 2SC2412K T146 R       |
| R2146    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | Q662                                    | 405 014 4509 | TR 2SC2412K T146 R       |
| R2147    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | Q663                                    | 405 014 4509 | TR 2SC2412K T146 R       |
| R2161    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | Q67A                                    | 405 014 4509 | TR 2SC2412K T146 R       |
| R2162    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | Q671                                    | 405 138 1309 | TR 2SB1565-E             |
| R2163    | 401 230 2503 | MT-GLAZE 1K FA 1/16W    |                                         | 405 138 1408 | TR 2SB1565-F             |
| R2164    | 401 218 4406 | MT-GLAZE 1.2K FA 1/16W  | Q672                                    | 405 014 4509 | TR 2SC2412K T146 R       |
| R2166    | 401 219 1602 | MT-GLAZE 100K FA 1/16W  | Q68A                                    | 405 014 4509 | TR 2SC2412K T146 R       |
| R2167    | 401 212 0008 | MT-GLAZE 15K FA 1/16W   | Q681                                    | 405 156 0209 | TR 2SK2376               |
| R2168    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | Q686                                    | 405 002 0308 | TR 2SA1037K T146 R       |
| R2171    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | Q69A                                    | 405 014 4509 | TR 2SC2412K T146 R       |
| R2172    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | Q691                                    | 405 014 4509 | TR 2SC2412K T146 R       |
| R2173    | 401 230 2503 | MT-GLAZE 1K FA 1/16W    | <b>INTEGRATED CIRCUIT</b>               |              |                          |
| R2174    | 401 230 2503 | MT-GLAZE 1K FA 1/16W    | IC001                                   | 409 073 1509 | IC AN5265                |
| R2176    | 401 219 1602 | MT-GLAZE 100K FA 1/16W  | IC5501                                  | 409 114 4803 | IC LB1641                |
| R2177    | 401 235 7008 | MT-GLAZE 39K FA 1/16W   | IC5551                                  | 409 114 4803 | IC LB1641                |
| R2178    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | IC631                                   | 409 421 4701 | IC STR-Z2156             |
| R2181    | 401 218 4505 | MT-GLAZE 2.2K FA 1/16W  | IC656                                   | 409 344 6509 | IC UPC1093T-E1           |
| R2182    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | IC66A                                   | 409 461 7809 | IC PQ20WZ11              |
| R2183    | 401 230 2503 | MT-GLAZE 1K FA 1/16W    | IC67A                                   | 409 461 7809 | IC PQ20WZ11              |
| R2186    | 401 218 4505 | MT-GLAZE 2.2K FA 1/16W  | IC68A                                   | 409 461 7809 | IC PQ20WZ11              |
| R2187    | 401 234 8600 | MT-GLAZE 8.2K FA 1/16W  | IC69A                                   | 409 461 7809 | IC PQ20WZ11              |
| R2260    | 401 276 4301 | MT-GLAZE 4.7 JA 1/3W    | <b>CAPACITOR</b>                        |              |                          |
| R6131    | 401 105 3109 | MT-GLAZE 27 JA 1/16W    | C001                                    | 403 148 0305 | ELECT 470U M 16V         |
| R6132    | 401 105 1709 | MT-GLAZE 150K JA 1/16W  | C002                                    | 403 049 0008 | ELECT 1U M 50V           |
| R6133    | 401 105 7404 | MT-GLAZE 8.2K JA 1/16W  | C003                                    | 403 049 0008 | ELECT 1U M 50V           |
| R6134    | 401 105 5905 | MT-GLAZE 560 JA 1/16W   | C004                                    | 403 044 9501 | ELECT 100U M 25V         |
| R6141    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | C005                                    | 403 041 8804 | ELECT 10U M 16V          |
| R6142    | 401 105 6001 | MT-GLAZE 5.6K JA 1/16W  | C006                                    | 403 044 9501 | ELECT 100U M 25V         |
| R6143    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | C007                                    | 403 070 2606 | CERAMIC 0.1U Z 50V       |
| R6151    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | C008                                    | 403 044 9501 | ELECT 100U M 25V         |
| R6153    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | C5501                                   | 403 148 0305 | ELECT 470U M 16V         |
| R6154    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | C5502                                   | 403 069 9500 | CERAMIC 0.01U Z 50V      |
| R6155    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | C5503                                   | 403 069 9500 | CERAMIC 0.01U Z 50V      |
| R6161    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | C5551                                   | 403 148 0305 | ELECT 470U M 16V         |
| R6163    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | C5552                                   | 403 069 9500 | CERAMIC 0.01U Z 50V      |
| R6171    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | C5553                                   | 403 069 9500 | CERAMIC 0.01U Z 50V      |
| R6172    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | C63A                                    | 403 323 8706 | MT-POLYEST 0.047U K 450V |
| R6176    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | C630                                    | 403 156 9000 | ELECT 2.2U M 50V         |
| R6181    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | C631                                    | 403 237 7901 | MT-COMPO 0.22U J 50V     |
| R6182    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | C632                                    | 403 069 1702 | CERAMIC 1000P K 50V      |
| R6186    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | C633                                    | 403 165 8803 | CERAMIC 330P K 2K        |
| R6187    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | C634                                    | 403 070 2606 | CERAMIC 0.1U Z 50V       |
| R6198    | 401 105 0702 | MT-GLAZE 100K JA 1/16W  | <b>COIL</b>                             |              |                          |
| L2101    | 645 020 1776 | INDUCTOR, 3.3U M        |                                         |              |                          |
| L2102    | 645 020 1776 | INDUCTOR, 3.3U M        |                                         |              |                          |
| L2103    | 645 020 1776 | INDUCTOR, 3.3U M        |                                         |              |                          |
| L2104    | 645 020 1776 | INDUCTOR, 3.3U M        |                                         |              |                          |

## Electrical Parts List

| Ref. No.        | Part No.     | Description             | Ref. No. | Part No.     | Description             |
|-----------------|--------------|-------------------------|----------|--------------|-------------------------|
| C635            | 403 167 8603 | CERAMIC 220P K 2K       | △ R633   | 402 079 7803 | FUSIBLE RES 22 JH 1/4W  |
| C636            | 403 083 4307 | POLYPRO 0.022U J 400V   | R634     | 401 238 4509 | MT-GLAZE 47 JA 1/3W     |
| C637            | 403 074 9502 | CERAMIC 680P K 50V      | R635     | 401 037 5400 | MT-GLAZE 1K JA 1/10W    |
| C638            | 403 156 8805 | ELECT 1U M 50V          | R636     | 401 257 7406 | MT-GLAZE 120 JA 1/3W    |
| C639            | 403 148 1807 | ELECT 220U M 35V        | R637     | 401 037 5608 | MT-GLAZE 10K JA 1/10W   |
| C640            | 403 070 2606 | CERAMIC 0.1U Z 50V      | R638     | 401 037 5202 | MT-GLAZE 100 JA 1/10W   |
| C641            | 403 269 5906 | CERAMIC 0.22U K 16V     | R639     | 401 105 9705 | MT-GLAZE 220 JA 1/3W    |
| C642            | 403 070 2606 | CERAMIC 0.1U Z 50V      | R641     | 401 037 5400 | MT-GLAZE 1K JA 1/10W    |
| C643            | 403 166 9809 | TA-SOLID 0.47U M 25V    | R642     | 401 037 5707 | MT-GLAZE 100K JA 1/10W  |
| C648            | 404 059 9203 | CERAMIC 1000P M 400V    | R643     | 401 037 8005 | MT-GLAZE 15K JA 1/10W   |
| C649            | 404 059 9203 | CERAMIC 1000P M 400V    | R644     | 401 038 0909 | MT-GLAZE 220K JA 1/10W  |
| C651            | 403 350 5006 | ELECT 1000U M 25V       | R645     | 401 038 9308 | MT-GLAZE 68K JA 1/10W   |
| C652            | 403 350 5303 | ELECT 3900U M 10V       | R646     | 401 038 9209 | MT-GLAZE 6.8K JA 1/10W  |
| C653            | 403 155 5607 | ELECT 220U M 10V        | R654     | 401 038 2002 | MT-GLAZE 270 JA 1/10W   |
| C654TM          | 403 076 2006 | CERAMIC 330P K 500V     | R655     | 401 037 5400 | MT-GLAZE 1K JA 1/10W    |
| C655TM          | 403 076 2006 | CERAMIC 330P K 500V     | R656     | 401 037 5608 | MT-GLAZE 10K JA 1/10W   |
| C656            | 403 256 0808 | MT-COMPO 0.47U J 50V    | R657     | 401 038 9209 | MT-GLAZE 6.8K JA 1/10W  |
| C66A            | 403 069 9500 | CERAMIC 0.01U Z 50V     | R658     | 401 037 5103 | MT-GLAZE 10 JA 1/10W    |
| C66B            | 403 069 9500 | CERAMIC 0.01U Z 50V     | R659     | 401 037 5400 | MT-GLAZE 1K JA 1/10W    |
| C66C            | 403 148 0305 | ELECT 470U M 16V        | R66F     | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W |
| C67A            | 403 069 9500 | CERAMIC 0.01U Z 50V     | R66G     | 401 038 3603 | MT-GLAZE 3.3K JA 1/10W  |
| C67B            | 403 069 9500 | CERAMIC 0.01U Z 50V     | R66H     | 401 038 5102 | MT-GLAZE 3.9K JA 1/10W  |
| C67C            | 403 148 0305 | ELECT 470U M 16V        | R66J     | 401 038 0107 | MT-GLAZE 2K JA 1/10W    |
| C671            | 403 047 5005 | ELECT 470U M 25V        | R660     | 401 038 3504 | MT-GLAZE 330 JA 1/10W   |
| C676            | 403 069 9500 | CERAMIC 0.01U Z 50V     | R661     | 401 037 5608 | MT-GLAZE 10K JA 1/10W   |
| C68A            | 403 069 9500 | CERAMIC 0.01U Z 50V     | R662     | 401 037 6803 | MT-GLAZE 12K JA 1/10W   |
| C68B            | 403 069 9500 | CERAMIC 0.01U Z 50V     | R663     | 401 038 9209 | MT-GLAZE 6.8K JA 1/10W  |
| C68C            | 403 148 0305 | ELECT 470U M 16V        | R664     | 401 037 7909 | MT-GLAZE 1.5K JA 1/10W  |
| C683            | 403 038 2006 | ELECT 100U M 6.3V       | R665     | 401 038 0701 | MT-GLAZE 2.2K JA 1/10W  |
| C685            | 403 038 2006 | ELECT 100U M 6.3V       | R666     | 401 037 9309 | MT-GLAZE 18K JA 1/10W   |
| C687            | 403 038 2006 | ELECT 100U M 6.3V       | R667     | 401 038 0701 | MT-GLAZE 2.2K JA 1/10W  |
| C69A            | 403 069 9500 | CERAMIC 0.01U Z 50V     | R67D     | 401 102 7506 | MT-GLAZE 22 JA 1W       |
| C69B            | 403 069 9500 | CERAMIC 0.01U Z 50V     | R67E     | 401 198 7701 | MT-GLAZE 33 JA 1W       |
| C69C            | 403 148 0305 | ELECT 470U M 16V        | R67G     | 401 038 3603 | MT-GLAZE 3.3K JA 1/10W  |
| C691            | 403 042 3006 | ELECT 100U M 16V        | R67H     | 401 038 5102 | MT-GLAZE 3.9K JA 1/10W  |
| C692            | 403 042 3006 | ELECT 100U M 16V        | R67J     | 401 038 0107 | MT-GLAZE 2K JA 1/10W    |
| C694            | 403 042 3006 | ELECT 100U M 16V        | R67K     | 401 037 8005 | MT-GLAZE 15K JA 1/10W   |
| C695            | 403 042 3006 | ELECT 100U M 16V        | R67L     | 401 038 7809 | MT-GLAZE 56K JA 1/10W   |
| <b>RESISTOR</b> |              |                         | R67M     | 401 037 5608 | MT-GLAZE 10K JA 1/10W   |
| R001            | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W | R671     | 401 238 4400 | MT-GLAZE 2.7K JA 1/3W   |
| R002            | 401 037 9309 | MT-GLAZE 18K JA 1/10W   | R672     | 401 238 4202 | MT-GLAZE 1.5K JA 1/3W   |
| R003            | 401 037 7909 | MT-GLAZE 1.5K JA 1/10W  | R673     | 401 038 7809 | MT-GLAZE 56K JA 1/10W   |
| R004            | 401 038 2200 | MT-GLAZE 27K JA 1/10W   | R674     | 401 037 5707 | MT-GLAZE 100K JA 1/10W  |
| R005            | 401 110 8601 | MT-GLAZE 1 JA 1/10W     | R68A     | 401 162 6501 | MT-GLAZE 82 JA 1W       |
| R006            | 401 037 5400 | MT-GLAZE 1K JA 1/10W    | R68B     | 401 162 6501 | MT-GLAZE 82 JA 1W       |
| R007            | 401 069 0305 | OXIDE-MT 6.8 JA 2W      | R68C     | 401 162 6501 | MT-GLAZE 82 JA 1W       |
|                 | 401 069 0404 | OXIDE-MT 6.8 JA 2W      | R68D     | 401 203 1106 | MT-GLAZE 8.2 JA 1W      |
| R008            | 401 037 9101 | MT-GLAZE 180 JA 1/10W   | R68E     | 401 203 1106 | MT-GLAZE 8.2 JA 1W      |
| R011            | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W | R68G     | 401 038 1302 | MT-GLAZE 2.4K JA 1/10W  |
| R012            | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W | R68H     | 401 038 5102 | MT-GLAZE 3.9K JA 1/10W  |
| R5501           | 401 038 3603 | MT-GLAZE 3.3K JA 1/10W  | R68J     | 401 038 0107 | MT-GLAZE 2K JA 1/10W    |
| R5502           | 401 038 3603 | MT-GLAZE 3.3K JA 1/10W  | R68K     | 401 038 9209 | MT-GLAZE 6.8K JA 1/10W  |
| R5503           | 401 037 5400 | MT-GLAZE 1K JA 1/10W    | R68L     | 401 038 7809 | MT-GLAZE 56K JA 1/10W   |
| R5504           | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W | R68M     | 401 037 5608 | MT-GLAZE 10K JA 1/10W   |
| R5506           | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W | R681     | 401 038 0800 | MT-GLAZE 22K JA 1/10W   |
| R5507           | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W | R682     | 401 037 5707 | MT-GLAZE 100K JA 1/10W  |
| R5551           | 401 038 3603 | MT-GLAZE 3.3K JA 1/10W  | R686     | 401 038 0800 | MT-GLAZE 22K JA 1/10W   |
| R5552           | 401 038 3603 | MT-GLAZE 3.3K JA 1/10W  | R69D     | 401 102 7407 | MT-GLAZE 10 JA 1W       |
| R5553           | 401 037 5400 | MT-GLAZE 1K JA 1/10W    | R69E     | 401 102 7407 | MT-GLAZE 10 JA 1W       |
| R5554           | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W | R69G     | 401 038 5102 | MT-GLAZE 3.9K JA 1/10W  |
| R5556           | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W | R69H     | 401 038 5102 | MT-GLAZE 3.9K JA 1/10W  |
| R5557           | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W | R69J     | 401 038 0107 | MT-GLAZE 2K JA 1/10W    |
| R63A            | 401 275 2902 | MT-GLAZE 68K JA 1W      | R69K     | 401 038 3702 | MT-GLAZE 33K JA 1/10W   |
| R63B            | 401 275 2902 | MT-GLAZE 68K JA 1W      | R69L     | 401 038 7809 | MT-GLAZE 56K JA 1/10W   |
| R631            | 401 069 4402 | OXIDE-MT 68K JA 2W      | R69M     | 401 037 5608 | MT-GLAZE 10K JA 1/10W   |
| R632            | 401 069 4402 | OXIDE-MT 68K JA 2W      | R69PTM   | 401 026 4308 | CARBON 3.3K JA 1/6W     |

## Electrical Parts List

| Ref. No.             | Part No.     | Description              | Ref. No.                                    | Part No.     | Description              |
|----------------------|--------------|--------------------------|---------------------------------------------|--------------|--------------------------|
| R691                 | 401 037 5608 | MT-GLAZE 10K JA 1/10W    | <b>610 284 5198 ASSY P.F.C.MA6A SERVICE</b> |              |                          |
| R692                 | 401 037 5608 | MT-GLAZE 10K JA 1/10W    | <b>PWB,P.F. MA6A</b>                        |              |                          |
| R693                 | 401 037 5608 | MT-GLAZE 10K JA 1/10W    | <b>TRANSISTOR</b>                           |              |                          |
| R694                 | 401 037 5608 | MT-GLAZE 10K JA 1/10W    | Q611                                        | 405 140 3704 | TR 2SK2698               |
| R695                 | 401 037 5608 | MT-GLAZE 10K JA 1/10W    | <b>CAPACITOR</b>                            |              |                          |
| R696                 | 401 038 7700 | MT-GLAZE 5.6K JA 1/10W   | C611                                        | 403 165 6007 | CERAMIC 1000P K 1K       |
| R697                 | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W  | C612                                        | 403 165 6007 | CERAMIC 1000P K 1K       |
| <b>TRANSFORMER</b>   |              |                          | C613                                        | 403 126 4608 | ELECT 100U M 25V         |
| △ T651               | 645 030 7126 | TRANS,POWER,PULSE        | C616                                        | 403 275 6003 | MT-POLYEST 1.5U J 400V   |
| <b>COIL</b>          |              |                          | C617                                        | 403 119 8002 | ELECT 470U M 25V         |
| L671                 | 645 007 8125 | INDUCTOR,47U K           | C618                                        | 404 081 6003 | ELECT 150U M 450V        |
| L683                 | 645 007 7975 | INDUCTOR,100U K          | C619                                        | 403 323 8706 | MT-POLYEST 0.047U K 450V |
| L685                 | 645 007 7975 | INDUCTOR,100U K          | <b>RESISTOR</b>                             |              |                          |
| L687                 | 645 007 8125 | INDUCTOR,47U K           | R611                                        | 401 105 9705 | MT-GLAZE 220 JA 1/3W     |
| <b>DIODE</b>         |              |                          | R612                                        | 402 079 1900 | RESISTER 0.22 JA 2W      |
| D001                 | 407 058 0509 | ZENER DIODE RD9.1M-T2BB2 | R613                                        | 402 079 1900 | RESISTER 0.22 JA 2W      |
|                      | 407 058 0608 | ZENER DIODE RD9.1M-T2BB3 | R614                                        | 401 237 0007 | MT-GLAZE 47K JA 1W       |
|                      | 407 190 6209 | ZD 02CZ9.1Y(TE85R)       | R615                                        | 401 237 0007 | MT-GLAZE 47K JA 1W       |
|                      | 407 190 3505 | ZD 02CZ9.1Z(TE85R)       | R616                                        | 401 237 0007 | MT-GLAZE 47K JA 1W       |
| D002                 | 407 071 6502 | ZENER DIODE DZD5.1Y-TA   | R617                                        | 401 237 0007 | MT-GLAZE 47K JA 1W       |
|                      | 407 175 3407 | ZD 02CZ5.1Y(TE85R)       | R618                                        | 401 038 5508 | MT-GLAZE 4.7 JA 1/10W    |
| D5501                | 407 217 0302 | ZD 02CZ3.6X(TE85R)       | R620                                        | 401 242 3901 | MT-GLAZE 240K JA 1/2W    |
|                      | 407 175 3100 | ZD 02CZ3.6Z(TE85R)       | R621                                        | 401 242 3901 | MT-GLAZE 240K JA 1/2W    |
| D5551                | 407 071 6502 | ZENER DIODE DZD5.1Y-TA   | R622                                        | 401 259 9002 | MT-GLAZE 150K FA 1/2W    |
|                      | 407 175 3407 | ZD 02CZ5.1Y(TE85R)       | R623                                        | 401 259 9002 | MT-GLAZE 150K FA 1/2W    |
| D631                 | 407 071 0104 | ZENER DIODE DZD12Y-TA    | R624                                        | 401 259 9002 | MT-GLAZE 150K FA 1/2W    |
|                      | 407 054 4204 | ZENER DIODE RD12M-T2BB2  | R625                                        | 401 259 9002 | MT-GLAZE 150K FA 1/2W    |
|                      | 407 175 2806 | ZD 02CZ12Y(TE85R)        | <b>COIL</b>                                 |              |                          |
| D632                 | 407 190 4106 | DIODE SFPL-52V           | L611                                        | 645 039 9749 | INDUCTOR,1800U           |
| D633                 | 407 100 6909 | DIODE AG01               | L615TM                                      | 610 031 9998 | PIPE CORE                |
| D634                 | 407 125 5307 | ZENER DIODE RD27M-T1BB   | <b>DIODE</b>                                |              |                          |
|                      | 407 140 0608 | ZENER DIODE 02CZ27-TE85L | DB611                                       | 407 202 7705 | DIODE D10XB60            |
| D635                 | 407 190 4106 | DIODE SFPL-52V           | DB611B                                      | 411 001 8900 | SCR BIN 3X8              |
| D636                 | 407 149 0807 | DIODE 1SS355-TE-17       | DB611H                                      | 610 281 2275 | HEAT SINK B-MA6A         |
| D641                 | 407 149 0807 | DIODE 1SS355-TE-17       | DB611H1                                     | 645 022 0081 | SPACER                   |
| D642                 | 407 056 9306 | ZENER DIODE RD5.1M-T1BB2 | DS611                                       | 407 175 2400 | THYRISTOR CR12AM-12      |
|                      | 407 056 9405 | ZENER DIODE RD5.1M-T2BB3 | DS611B                                      | 411 174 4808 | SCR S-TPG PAN+SWW 3X8    |
| D651                 | 407 202 9808 | DIODE FMB-26L            | D611                                        | 407 174 2302 | DIODE AK06               |
| D651B                | 411 174 4808 | SCR S-TPG PAN+SWW 3X8    | D612                                        | 407 191 3900 | DIODE FML-G16S           |
| D651H                | 610 273 6472 | HEAT SINK C-M6RA         | D612B                                       | 411 174 4808 | SCR S-TPG PAN+SWW 3X8    |
| D652                 | 407 164 2206 | DIODE FMB-24L            | <b>MISCELLANEOUS</b>                        |              |                          |
| D652B                | 411 174 4808 | SCR S-TPG PAN+SWW 3X8    | FB611                                       | 610 229 3531 | CORE                     |
| D653                 | 407 190 4106 | DIODE SFPL-52V           | FB612                                       | 610 229 3531 | CORE                     |
| D656                 | 407 071 7806 | ZENER DIODE DZD6.8Z-TA   | △ PTH611                                    | 408 037 5607 | THERMISTOR NTH11D8R0LC   |
| D660                 | 407 101 5109 | ZD 02CZ4.7Y(TE85R)       | △ TSW611                                    | 645 027 4145 | SWITCH,THERMAL           |
| D661                 | 407 149 0807 | DIODE 1SS355-TE-17       |                                             | 645 031 0256 | THERMOSTATS              |
| D662                 | 407 149 0807 | DIODE 1SS355-TE-17       | <b>ASSY,PWB,HIC MA6A</b>                    |              |                          |
| D663                 | 407 149 0807 | DIODE 1SS355-TE-17       | <b>TRANSISTOR</b>                           |              |                          |
| D664                 | 407 149 0807 | DIODE 1SS355-TE-17       | Q01                                         | 405 014 4509 | TR 2SC2412K T146 R       |
| D665                 | 407 149 0807 | DIODE 1SS355-TE-17       | Q02                                         | 405 002 0308 | TR 2SA1037K T146 R       |
| D666                 | 407 149 0807 | DIODE 1SS355-TE-17       | <b>INTEGRATED CIRCUIT</b>                   |              |                          |
| D667                 | 407 149 0807 | DIODE 1SS355-TE-17       | IC01                                        | 409 406 7000 | IC FA5331M               |
| D668                 | 407 149 0807 | DIODE 1SS355-TE-17       | <b>CAPACITOR</b>                            |              |                          |
| D669                 | 407 149 0807 | DIODE 1SS355-TE-17       | C01                                         | 403 074 9502 | CERAMIC 680P K 50V       |
| D691                 | 407 004 0706 | DIODE DCB015-TB          | C02                                         | 403 075 2304 | CERAMIC 0.068U Z 50V     |
| D692                 | 407 004 0706 | DIODE DCB015-TB          |                                             |              |                          |
| D693                 | 407 004 0706 | DIODE DCB015-TB          |                                             |              |                          |
| <b>MISCELLANEOUS</b> |              |                          |                                             |              |                          |
| △ PC641              | 408 039 3502 | PC TLP721F(D4-GB)        |                                             |              |                          |
| △ PC642              | 408 039 3502 | PC TLP721F(D4-GB)        |                                             |              |                          |
| △ PC643              | 408 039 3502 | PC TLP721F(D4-GB)        |                                             |              |                          |
| △ PC644              | 408 039 3502 | PC TLP721F(D4-GB)        |                                             |              |                          |

## Electrical Parts List

| Ref. No.                                                          | Part No.     | Description             | Ref. No.                                                 | Part No.     | Description             |
|-------------------------------------------------------------------|--------------|-------------------------|----------------------------------------------------------|--------------|-------------------------|
| C03                                                               | 403 070 2606 | CERAMIC 0.1U Z 50V      | RC2851                                                   | 645 028 1044 | UNIT, REMOCON RECEIVER  |
| C04                                                               | 403 030 7009 | CERAMIC 68P J 50V       | R2851                                                    | 401 037 5202 | MT-GLAZE 100 JA 1/10W   |
| C05                                                               | 403 069 5601 | CERAMIC 0.01U K 50V     | R2852                                                    | 401 037 5202 | MT-GLAZE 100 JA 1/10W   |
| C06                                                               | 403 073 7301 | CERAMIC 470P K 50V      | <b>610 280 5871 ASSY, PWB, AV MA6A<br/>1AA0B10C2260A</b> |              |                         |
| C07                                                               | 403 073 1200 | CERAMIC 0.033U K 50V    |                                                          |              |                         |
| C08                                                               | 403 072 3403 | CERAMIC 0.022U Z 50V    |                                                          |              |                         |
| C10                                                               | 403 070 2606 | CERAMIC 0.1U Z 50V      |                                                          |              |                         |
| C11                                                               | 403 070 2606 | CERAMIC 0.1U Z 50V      |                                                          |              |                         |
| <b>RESISTOR</b>                                                   |              |                         | <b>TRANSISTOR</b>                                        |              |                         |
| R01                                                               | 401 038 0800 | MT-GLAZE 22K JA 1/10W   | Q2001                                                    | 405 014 4509 | TR 2SC2412K T146 R      |
| R02                                                               | 401 037 5608 | MT-GLAZE 10K JA 1/10W   | Q2002                                                    | 405 014 4509 | TR 2SC2412K T146 R      |
| R03                                                               | 401 037 9507 | MT-GLAZE 1.8M JA 1/10W  | Q2003                                                    | 405 014 4509 | TR 2SC2412K T146 R      |
| R04                                                               | 401 038 0503 | MT-GLAZE 22 JA 1/10W    | <b>INTEGRATED CIRCUIT</b>                                |              |                         |
| R05                                                               | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W | IC1001                                                   | 409 461 7304 | IC AD8057ART            |
| R06                                                               | 401 037 5004 | MT-GLAZE 0.000 ZA 1/10W | IC1002                                                   | 409 461 7304 | IC AD8057ART            |
| R07                                                               | 401 038 3504 | MT-GLAZE 330 JA 1/10W   | <b>CAPACITOR</b>                                         |              |                         |
| R08                                                               | 401 037 5202 | MT-GLAZE 100 JA 1/10W   | C1001                                                    | 403 348 5803 | CERAMIC 0.47U K 10V     |
| R09                                                               | 401 037 7909 | MT-GLAZE 1.5K JA 1/10W  | C1002                                                    | 407 149 0807 | DIODE 1SS355-TE-17      |
| R11                                                               | 401 038 6604 | MT-GLAZE 470K JA 1/10W  | C1003                                                    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| R12                                                               | 401 038 0909 | MT-GLAZE 220K JA 1/10W  | C1006                                                    | 403 157 3601 | CERAMIC 100P J 50V      |
| R13                                                               | 401 148 2701 | MT-GLAZE 1.1K FA 1/10W  | C1007                                                    | 403 157 1904 | CERAMIC 10P D 50V       |
| R14                                                               | 401 092 3304 | MT-GLAZE 1.2K FA 1/10W  | C1008                                                    | 403 157 1904 | CERAMIC 10P D 50V       |
| <b>VARIABLE RESISTOR</b>                                          |              |                         | C1009                                                    | 403 162 4006 | ELECT 22U M 6.3V        |
| VR01                                                              | 645 041 5333 | VR, SEMI, 1K M          | C1011                                                    | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| <b>DIODE</b>                                                      |              |                         | C1012                                                    | 403 162 4006 | ELECT 22U M 6.3V        |
| D01                                                               | 407 004 1000 | DIODE DCC010-TB         | C1013                                                    | 403 164 0204 | CERAMIC 0.1U Z 25V      |
| D02                                                               | 407 004 1000 | DIODE DCC010-TB         | C1081                                                    | 403 149 9208 | CERAMIC 0.01U Z 50V     |
| <b>610 280 5833 ASSY, PWB, LINE FILTER MA6A<br/>1AA0B10C2250C</b> |              |                         | C2001                                                    | 403 175 4505 | ELECT 47U M 6.3V        |
|                                                                   |              |                         | C2002                                                    | 403 348 5803 | CERAMIC 0.47U K 10V     |
|                                                                   |              |                         | C2003                                                    | 403 175 4505 | ELECT 47U M 6.3V        |
|                                                                   |              |                         | C2004                                                    | 403 348 5803 | CERAMIC 0.47U K 10V     |
|                                                                   |              |                         | C2006                                                    | 403 162 4006 | ELECT 22U M 6.3V        |
| <b>CAPACITOR</b>                                                  |              |                         | C2801                                                    | 403 283 6309 | CERAMIC 1U Z 10V        |
| △ C601                                                            | 404 081 4702 | MT-POLYEST 0.22U M 275V | C2802                                                    | 403 157 6602 | CERAMIC 470P K 50V      |
| △ C602                                                            | 404 081 4702 | MT-POLYEST 0.22U M 275V | <b>RESISTOR</b>                                          |              |                         |
| △ C603                                                            | 404 081 4702 | MT-POLYEST 0.22U M 275V | RC2801                                                   | 645 034 8501 | UNIT, REMOCON RECEIVER  |
| △ C604                                                            | 404 081 4702 | MT-POLYEST 0.22U M 275V | R1001                                                    | 401 037 7800 | MT-GLAZE 150 JA 1/10W   |
| △ C606                                                            | 404 059 9203 | CERAMIC 1000P M 400V    | R1002                                                    | 401 037 7800 | MT-GLAZE 150 JA 1/10W   |
| <b>RESISTOR</b>                                                   |              |                         | R1003                                                    | 401 037 7800 | MT-GLAZE 150 JA 1/10W   |
| R601                                                              | 401 008 8607 | CARBON 220K JA 1/2W     | R1004                                                    | 401 037 7800 | MT-GLAZE 150 JA 1/10W   |
| <b>VARIABLE RESISTOR</b>                                          |              |                         | R1006                                                    | 401 037 7800 | MT-GLAZE 150 JA 1/10W   |
| VA601                                                             | 408 018 9808 | VARISTOR ENC471D-14AS   | R1007                                                    | 401 037 7800 | MT-GLAZE 150 JA 1/10W   |
| <b>COIL</b>                                                       |              |                         | R1021                                                    | 401 037 5202 | MT-GLAZE 100 JA 1/10W   |
| △ L601                                                            | 645 025 7827 | LINE FILTER             | R1024                                                    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| △ L602                                                            | 645 025 7827 | LINE FILTER             | R1026                                                    | 401 203 9805 | MT-GLAZE 2.7K FA 1/16W  |
| <b>MISCELLANEOUS</b>                                              |              |                         | R1027                                                    | 401 247 0202 | MT-GLAZE 3.9K FA 1/16W  |
| △ F601                                                            | 423 022 2102 | FUSE 250V 4A            | R1028                                                    | 401 037 5202 | MT-GLAZE 100 JA 1/10W   |
| F601A                                                             | 645 000 5077 | HOLDER, FUSE            | R1031                                                    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| F601B                                                             | 645 000 5077 | HOLDER, FUSE            | R1032                                                    | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| △ K601                                                            | 645 000 2793 | SOCKET, INLET AC        | R1033                                                    | 401 203 9805 | MT-GLAZE 2.7K FA 1/16W  |
| <b>610 281 8123 ASSY, PWB, R/C MA6A<br/>1AA0B10C2250D</b>         |              |                         | R1034                                                    | 401 247 0202 | MT-GLAZE 3.9K FA 1/16W  |
|                                                                   |              |                         | R1036                                                    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
|                                                                   |              |                         | R1037                                                    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
|                                                                   |              |                         | R1038                                                    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
|                                                                   |              |                         | R1039                                                    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| <b>CAPACITOR</b>                                                  |              |                         | R1041                                                    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C2851                                                             | 403 316 5408 | CERAMIC 1U K 10V        | R1042                                                    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| C2852                                                             | 403 073 7301 | CERAMIC 470P K 50V      | R1043                                                    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| <b>RESISTOR</b>                                                   |              |                         | R1044                                                    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
|                                                                   |              |                         | R1046                                                    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
|                                                                   |              |                         | R1047                                                    | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
|                                                                   |              |                         | R2001                                                    | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
|                                                                   |              |                         | R2002                                                    | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
|                                                                   |              |                         | R2003                                                    | 401 037 7800 | MT-GLAZE 150 JA 1/10W   |

## Electrical Parts List

| Ref. No.    | Part No.     | Description             | Ref. No.                                 | Part No.     | Description               |
|-------------|--------------|-------------------------|------------------------------------------|--------------|---------------------------|
| R2004       | 401 037 7800 | MT-GLAZE 150 JA 1/10W   | L2022                                    | 645 014 2659 | FILTER,EMI 10MHZ          |
| R2006       | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | L2023                                    | 645 014 2659 | FILTER,EMI 10MHZ          |
| R2007       | 401 037 7800 | MT-GLAZE 150 JA 1/10W   | L2024                                    | 645 014 2659 | FILTER,EMI 10MHZ          |
| R2008       | 401 037 7800 | MT-GLAZE 150 JA 1/10W   |                                          |              | DIODE                     |
| R2009       | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | D1001                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| R2011       | 401 037 7800 | MT-GLAZE 150 JA 1/10W   | D1002                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| R2012       | 401 037 7800 | MT-GLAZE 150 JA 1/10W   | D1003                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| R2013       | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | D1004                                    | 407 149 0807 | DIODE 1SS355-TE-17        |
| R2014       | 401 105 5509 | MT-GLAZE 470K JA 1/16W  | D1006                                    | 407 187 8209 | ZENER DIODE UDZ12B-TE-17  |
| R2016       | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | D1007                                    | 407 187 8209 | ZENER DIODE UDZ12B-TE-17  |
| R2017       | 401 105 5509 | MT-GLAZE 470K JA 1/16W  | D1008                                    | 407 149 0807 | DIODE 1SS355-TE-17        |
| R2018       | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | D1009                                    | 407 149 0807 | DIODE 1SS355-TE-17        |
| R2021       | 401 105 5509 | MT-GLAZE 470K JA 1/16W  | D1011                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| R2022       | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | D1012                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| R2023       | 401 105 5509 | MT-GLAZE 470K JA 1/16W  | D1013                                    | 407 187 8209 | ZENER DIODE UDZ12B-TE-17  |
| R2024       | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W | D1014                                    | 407 187 8209 | ZENER DIODE UDZ12B-TE-17  |
| R2026       | 401 105 0702 | MT-GLAZE 100K JA 1/16W  | D1016                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| R2027       | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | D1017                                    | 407 187 8605 | ZENER DIODE UDZ20B-TE-17  |
| R2029       | 401 105 0405 | MT-GLAZE 100 JA 1/16W   | D1018                                    | 407 187 8605 | ZENER DIODE UDZ20B-TE-17  |
| R2031       | 401 105 0702 | MT-GLAZE 100K JA 1/16W  | D1019                                    | 407 187 8605 | ZENER DIODE UDZ20B-TE-17  |
| R2032       | 401 105 0306 | MT-GLAZE 10 JA 1/16W    | D1021                                    | 407 187 8605 | ZENER DIODE UDZ20B-TE-17  |
| R2033       | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | D1022                                    | 407 187 8605 | ZENER DIODE UDZ20B-TE-17  |
| R2034       | 401 105 5202 | MT-GLAZE 470 JA 1/16W   | D1023                                    | 407 187 8605 | ZENER DIODE UDZ20B-TE-17  |
| R2036       | 401 105 0306 | MT-GLAZE 10 JA 1/16W    | D1024                                    | 407 187 8605 | ZENER DIODE UDZ20B-TE-17  |
| R2037       | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | D1025                                    | 407 187 8605 | ZENER DIODE UDZ20B-TE-17  |
| R2038       | 401 105 5202 | MT-GLAZE 470 JA 1/16W   | D1026                                    | 407 187 8605 | ZENER DIODE UDZ20B-TE-17  |
| R2039       | 401 105 0306 | MT-GLAZE 10 JA 1/16W    | D1027                                    | 407 149 0807 | DIODE 1SS355-TE-17        |
| R2041       | 401 105 0603 | MT-GLAZE 10K JA 1/16W   | D1028                                    | 407 149 0807 | DIODE 1SS355-TE-17        |
| R2042       | 401 105 5202 | MT-GLAZE 470 JA 1/16W   | D2001                                    | 407 187 8209 | ZENER DIODE UDZ12B-TE-17  |
| R2043       | 401 105 0504 | MT-GLAZE 1K JA 1/16W    | D2002                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| R2044       | 401 105 4601 | MT-GLAZE 3.9K JA 1/16W  | D2003                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| R2801       | 401 105 1907 | MT-GLAZE 180 JA 1/16W   | D2004                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| R2802       | 401 105 1907 | MT-GLAZE 180 JA 1/16W   | D2006                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| R2803       | 401 105 2706 | MT-GLAZE 220 JA 1/16W   | D2007                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| R2804       | 401 105 2706 | MT-GLAZE 220 JA 1/16W   | D2008                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| <b>COIL</b> |              |                         | D2009                                    | 407 187 8209 | ZENER DIODE UDZ12B-TE-17  |
| L1001       | 645 024 0669 | FILTER,EMI 20PF         | D2011                                    | 407 187 8209 | ZENER DIODE UDZ12B-TE-17  |
| L1002       | 645 024 0669 | FILTER,EMI 20PF         | D2012                                    | 407 187 8209 | ZENER DIODE UDZ12B-TE-17  |
| L1003       | 645 024 0669 | FILTER,EMI 20PF         | D2013                                    | 407 187 8209 | ZENER DIODE UDZ12B-TE-17  |
| L1007       | 645 002 3910 | FILTER,EMI 100MHZ       | D2021                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| L1008       | 645 002 3910 | FILTER,EMI 100MHZ       | D2022                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| L1009       | 645 002 3910 | FILTER,EMI 100MHZ       | D2023                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| L1011       | 645 014 2659 | FILTER,EMI 10MHZ        | D2024                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| L1012       | 645 014 2659 | FILTER,EMI 10MHZ        | D2026                                    | 407 187 8209 | ZENER DIODE UDZ12B-TE-17  |
| L1017       | 645 014 2659 | FILTER,EMI 10MHZ        | D2027                                    | 407 187 8209 | ZENER DIODE UDZ12B-TE-17  |
| L1018       | 645 014 2659 | FILTER,EMI 10MHZ        | D2028                                    | 407 187 8209 | ZENER DIODE UDZ12B-TE-17  |
| L1019       | 645 014 2659 | FILTER,EMI 10MHZ        | D2029                                    | 407 187 8209 | ZENER DIODE UDZ12B-TE-17  |
| L1021       | 645 014 2659 | FILTER,EMI 10MHZ        | D2801                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| L1022       | 645 014 2659 | FILTER,EMI 10MHZ        | D2802                                    | 407 179 0501 | ZENER DIODE UDZ6.2B-TE-17 |
| L1023       | 645 014 2659 | FILTER,EMI 10MHZ        | <b>MISCELLANEOUS</b>                     |              |                           |
| L1024       | 645 014 2659 | FILTER,EMI 10MHZ        | K1001                                    | 645 009 8093 | SOCKET,D-SUB 15P          |
| L1027       | 645 025 0637 | FILTER,EMI 190PF        | K1002                                    | 645 009 8093 | SOCKET,D-SUB 15P          |
| L1028       | 645 025 0637 | FILTER,EMI 190PF        | K1003                                    | 645 000 2595 | SOCKET,DIN 8P             |
| L2001       | 645 008 4904 | INDUCTOR,5.6U K         | K2001                                    | 645 030 6297 | SOCKET,DIN 4P             |
|             | 645 040 2906 | INDUCTOR,5.6U K         |                                          | 645 016 0806 | SOCKET,DIN 4P             |
| L2002       | 645 008 4904 | INDUCTOR,5.6U K         | K2002                                    | 645 038 4462 | JACK,RCA-3                |
|             | 645 040 2906 | INDUCTOR,5.6U K         | K2003                                    | 645 000 2571 | JACK,PHONE D8.0           |
| L2003       | 645 014 2659 | FILTER,EMI 10MHZ        | K2004                                    | 645 000 2571 | JACK,PHONE D8.0           |
| L2004       | 645 002 3910 | FILTER,EMI 100MHZ       | <b>610 280 5888 ASSY,PWB,AV SUB MA6A</b> |              |                           |
| L2006       | 645 002 3910 | FILTER,EMI 100MHZ       | <b>1AA0B10C2260B</b>                     |              |                           |
| L2007       | 645 002 3910 | FILTER,EMI 100MHZ       | <b>TRANSISTOR</b>                        |              |                           |
| L2008       | 645 014 2659 | FILTER,EMI 10MHZ        | Q3001                                    | 405 014 4509 | TR 2SC2412K T146 R        |
| L2009       | 645 014 2659 | FILTER,EMI 10MHZ        |                                          |              |                           |
| L2011       | 645 008 4904 | INDUCTOR,5.6U K         |                                          |              |                           |
|             | 645 040 2906 | INDUCTOR,5.6U K         |                                          |              |                           |
| L2021       | 645 014 2659 | FILTER,EMI 10MHZ        |                                          |              |                           |

## Electrical Parts List

| Ref. No.                  | Part No.     | Description         | Ref. No.        | Part No.     | Description             |
|---------------------------|--------------|---------------------|-----------------|--------------|-------------------------|
| Q3002                     | 405 014 4509 | TR 2SC2412K T146 R  | C5011           | 403 343 8809 | CERAMIC 0.47U Z 16V     |
| Q3003                     | 405 014 4509 | TR 2SC2412K T146 R  | C5012           | 403 162 4709 | ELECT 10U M 16V         |
| Q5001                     | 405 014 4509 | TR 2SC2412K T146 R  | C5013           | 403 162 4709 | ELECT 10U M 16V         |
| Q5002                     | 405 014 4509 | TR 2SC2412K T146 R  | <b>RESISTOR</b> |              |                         |
| Q5003                     | 405 014 4509 | TR 2SC2412K T146 R  | RB3841          | 645 025 5380 | R-NETWORK 10KX4 1/16W   |
| Q5004                     | 405 014 4509 | TR 2SC2412K T146 R  |                 | 645 026 8014 | R-NETWORK 10KX4 1/16W   |
| Q5007                     | 405 014 4509 | TR 2SC2412K T146 R  | RB3861          | 645 025 5380 | R-NETWORK 10KX4 1/16W   |
| Q5008                     | 405 014 4509 | TR 2SC2412K T146 R  |                 | 645 026 8014 | R-NETWORK 10KX4 1/16W   |
| <b>INTEGRATED CIRCUIT</b> |              |                     | R3001           | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W  |
| IC3001                    | 409 464 1408 | IC TC74ACT14FT      | R3002           | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W  |
| IC3002                    | 409 461 7403 | IC LT1399CS         | R3003           | 401 038 9506 | MT-GLAZE 75 JA 1/10W    |
| IC3031                    | 409 417 1400 | IC CXA2016S         | R3004           | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W  |
| IC3801                    | 410 275 5707 | IC TWM7000-162020   | R3006           | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W  |
|                           | 410 275 5806 | IC TWM7000-162020   | R3007           | 401 038 9506 | MT-GLAZE 75 JA 1/10W    |
| IC3841                    | 410 296 5700 | IC TWM7000-151020   | R3008           | 401 038 9506 | MT-GLAZE 75 JA 1/10W    |
| IC3861                    | 410 296 2402 | IC TMP47C101M-JV45  | R3009           | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W  |
| IC3862                    | 409 344 1900 | IC MN1382-Q-TX      | R3011           | 401 105 1501 | MT-GLAZE 1.5K JA 1/16W  |
| IC3871                    | 409 380 6303 | IC HIN232CB         | R3012           | 401 105 3208 | MT-GLAZE 270 JA 1/16W   |
|                           | 409 273 3501 | IC SP232ACT         | R3013           | 401 105 3208 | MT-GLAZE 270 JA 1/16W   |
| IC5001                    | 409 051 2900 | IC TC4053BF-TP1     | R3014           | 401 105 3208 | MT-GLAZE 270 JA 1/16W   |
| <b>CAPACITOR</b>          |              |                     | R3016           | 401 105 3208 | MT-GLAZE 270 JA 1/16W   |
| C3001                     | 403 157 1508 | CERAMIC 3P C 50V    | R3017           | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| C3002                     | 403 157 1508 | CERAMIC 3P C 50V    | R3018           | 401 105 3208 | MT-GLAZE 270 JA 1/16W   |
| C3003                     | 403 157 1508 | CERAMIC 3P C 50V    | R3019           | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| C3009                     | 403 162 4006 | ELECT 22U M 6.3V    | R3021           | 401 105 3208 | MT-GLAZE 270 JA 1/16W   |
| C3011                     | 403 162 4006 | ELECT 22U M 6.3V    | R3022           | 401 105 0504 | MT-GLAZE 1K JA 1/16W    |
| C3012                     | 403 283 6309 | CERAMIC 1U Z 10V    | R3023           | 401 105 0306 | MT-GLAZE 10 JA 1/16W    |
| C3013                     | 403 205 7803 | TA-SOLID 2.2U M 16V | R3026           | 401 038 8905 | MT-GLAZE 68 JA 1/10W    |
| C3014                     | 403 283 6309 | CERAMIC 1U Z 10V    | R3027           | 401 038 8905 | MT-GLAZE 68 JA 1/10W    |
| C3016                     | 403 162 4006 | ELECT 22U M 6.3V    | R3031           | 401 105 2607 | MT-GLAZE 22 JA 1/16W    |
| C3017                     | 403 283 6309 | CERAMIC 1U Z 10V    | R3036           | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| C3018                     | 403 162 4006 | ELECT 22U M 6.3V    | R3038           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C3019                     | 403 283 6309 | CERAMIC 1U Z 10V    | R3040           | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| C3032                     | 403 205 7803 | TA-SOLID 2.2U M 16V | R3042           | 401 105 4205 | MT-GLAZE 33K JA 1/16W   |
| C3033                     | 403 325 6304 | CERAMIC 0.22U K 10V | R3043           | 401 105 2706 | MT-GLAZE 220 JA 1/16W   |
| C3034                     | 403 325 6304 | CERAMIC 0.22U K 10V | R3045           | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| C3036                     | 403 091 0209 | TA-SOLID 1U M 16V   | R3046           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C3037                     | 403 298 9609 | CERAMIC 0.1U K 16V  | R3047           | 401 211 9903 | MT-GLAZE 12K FA 1/16W   |
| C3038                     | 403 325 6304 | CERAMIC 0.22U K 10V | R3048           | 401 211 9903 | MT-GLAZE 12K FA 1/16W   |
| C3039                     | 403 091 0209 | TA-SOLID 1U M 16V   | R3052           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C3042                     | 403 298 9609 | CERAMIC 0.1U K 16V  | R3055           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C3043                     | 403 162 4709 | ELECT 10U M 16V     | R3056           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C3044                     | 403 298 9609 | CERAMIC 0.1U K 16V  | R3059           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C3047                     | 403 155 2200 | CERAMIC 3300P K 50V | R3060           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C3048                     | 403 298 9609 | CERAMIC 0.1U K 16V  | R3061           | 401 105 2805 | MT-GLAZE 2.2K JA 1/16W  |
| C3049                     | 403 298 9609 | CERAMIC 0.1U K 16V  | R3068           | 401 105 5806 | MT-GLAZE 56 JA 1/16W    |
| C3802                     | 403 283 6309 | CERAMIC 1U Z 10V    | R3069           | 401 105 5806 | MT-GLAZE 56 JA 1/16W    |
| C3841                     | 403 283 6309 | CERAMIC 1U Z 10V    | R3070           | 401 105 5806 | MT-GLAZE 56 JA 1/16W    |
| C3842                     | 403 283 6309 | CERAMIC 1U Z 10V    | R3071           | 401 105 0306 | MT-GLAZE 10 JA 1/16W    |
| C3844                     | 403 283 6309 | CERAMIC 1U Z 10V    | R3072           | 401 105 0306 | MT-GLAZE 10 JA 1/16W    |
| C3861                     | 403 283 6309 | CERAMIC 1U Z 10V    | R3074           | 401 105 0306 | MT-GLAZE 10 JA 1/16W    |
| C3864                     | 403 162 6208 | ELECT 1U M 50V      | R3801           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C3867                     | 403 283 6309 | CERAMIC 1U Z 10V    | R3806           | 401 105 0405 | MT-GLAZE 100 JA 1/16W   |
| C3871                     | 403 283 6309 | CERAMIC 1U Z 10V    | R3811           | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| C3881                     | 403 162 6208 | ELECT 1U M 50V      | R3812           | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| C3882                     | 403 162 6208 | ELECT 1U M 50V      | R3813           | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| C3883                     | 403 162 6208 | ELECT 1U M 50V      | R3814           | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| C3884                     | 403 162 6208 | ELECT 1U M 50V      | R3816           | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| C5001                     | 403 205 7803 | TA-SOLID 2.2U M 16V | R3841           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C5002                     | 403 205 7803 | TA-SOLID 2.2U M 16V | R3851           | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| C5003                     | 403 205 7803 | TA-SOLID 2.2U M 16V | R3852           | 401 105 4205 | MT-GLAZE 33K JA 1/16W   |
| C5004                     | 403 205 7803 | TA-SOLID 2.2U M 16V | R3861           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C5006                     | 403 205 7803 | TA-SOLID 2.2U M 16V | R3862           | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| C5007                     | 403 343 8809 | CERAMIC 0.47U Z 16V | R3863           | 401 105 0603 | MT-GLAZE 10K JA 1/16W   |
| C5008                     | 403 343 8809 | CERAMIC 0.47U Z 16V | R3864           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |
| C5009                     | 403 162 4709 | ELECT 10U M 16V     | R3866           | 401 105 7909 | MT-GLAZE 0.000 ZA 1/16W |

| Ref. No.             | Part No.     | Description               |       |    |       | Ref. No. | Part No.     | Description |       |    |       |
|----------------------|--------------|---------------------------|-------|----|-------|----------|--------------|-------------|-------|----|-------|
| R3867                | 401 105 7909 | MT-GLAZE                  | 0.000 | ZA | 1/16W | R6804    | 401 037 8005 | MT-GLAZE    | 15K   | JA | 1/10W |
| R3871                | 401 105 7909 | MT-GLAZE                  | 0.000 | ZA | 1/16W | R6805    | 401 038 7700 | MT-GLAZE    | 5.6K  | JA | 1/10W |
| R3882                | 401 105 0405 | MT-GLAZE                  | 100   | JA | 1/16W | R6806    | 401 038 6406 | MT-GLAZE    | 4.7K  | JA | 1/10W |
| R3883                | 401 105 0603 | MT-GLAZE                  | 10K   | JA | 1/16W | R6807    | 401 038 2101 | MT-GLAZE    | 2.7K  | JA | 1/10W |
| R3884                | 401 105 0405 | MT-GLAZE                  | 100   | JA | 1/16W | R6808    | 401 037 9200 | MT-GLAZE    | 1.8K  | JA | 1/10W |
| R3886                | 401 037 5004 | MT-GLAZE                  | 0.000 | ZA | 1/10W | R6809    | 401 037 7909 | MT-GLAZE    | 1.5K  | JA | 1/10W |
| R3891                | 401 105 0405 | MT-GLAZE                  | 100   | JA | 1/16W | R6811    | 401 037 5004 | MT-GLAZE    | 0.000 | ZA | 1/10W |
| R5001                | 401 105 0702 | MT-GLAZE                  | 100K  | JA | 1/16W | R6812    | 401 037 5004 | MT-GLAZE    | 0.000 | ZA | 1/10W |
| R5002                | 401 105 0702 | MT-GLAZE                  | 100K  | JA | 1/16W | R6814    | 401 038 0800 | MT-GLAZE    | 22K   | JA | 1/10W |
| R5003                | 401 105 0702 | MT-GLAZE                  | 100K  | JA | 1/16W | R6815    | 401 037 8005 | MT-GLAZE    | 15K   | JA | 1/10W |
| R5004                | 401 105 0702 | MT-GLAZE                  | 100K  | JA | 1/16W | R6816    | 401 038 7700 | MT-GLAZE    | 5.6K  | JA | 1/10W |
| R5006                | 401 105 6605 | MT-GLAZE                  | 6.8K  | JA | 1/16W | R6817    | 401 038 6406 | MT-GLAZE    | 4.7K  | JA | 1/10W |
| R5007                | 401 105 6605 | MT-GLAZE                  | 6.8K  | JA | 1/16W | R6818    | 401 038 2101 | MT-GLAZE    | 2.7K  | JA | 1/10W |
| R5008                | 401 105 7909 | MT-GLAZE                  | 0.000 | ZA | 1/16W | R6819    | 401 037 9200 | MT-GLAZE    | 1.8K  | JA | 1/10W |
| R5009                | 401 105 2805 | MT-GLAZE                  | 2.2K  | JA | 1/16W | R6821    | 401 037 7909 | MT-GLAZE    | 1.5K  | JA | 1/10W |
| R5011                | 401 105 1501 | MT-GLAZE                  | 1.5K  | JA | 1/16W | R6822    | 401 037 5004 | MT-GLAZE    | 0.000 | ZA | 1/10W |
| R5013                | 401 105 7909 | MT-GLAZE                  | 0.000 | ZA | 1/16W | R6823    | 401 037 5004 | MT-GLAZE    | 0.000 | ZA | 1/10W |
| R5014                | 401 105 2805 | MT-GLAZE                  | 2.2K  | JA | 1/16W |          |              |             |       |    |       |
| R5016                | 401 105 1501 | MT-GLAZE                  | 1.5K  | JA | 1/16W |          |              |             |       |    |       |
| R5017                | 401 105 2003 | MT-GLAZE                  | 1.8K  | JA | 1/16W |          |              |             |       |    |       |
| R5018                | 401 105 7909 | MT-GLAZE                  | 0.000 | ZA | 1/16W |          |              |             |       |    |       |
| R5021                | 401 037 5004 | MT-GLAZE                  | 0.000 | ZA | 1/10W |          |              |             |       |    |       |
| R5022                | 401 037 5004 | MT-GLAZE                  | 0.000 | ZA | 1/10W |          |              |             |       |    |       |
| R5023                | 401 037 5004 | MT-GLAZE                  | 0.000 | ZA | 1/10W |          |              |             |       |    |       |
| R5024                | 401 037 5004 | MT-GLAZE                  | 0.000 | ZA | 1/10W |          |              |             |       |    |       |
| R5026                | 401 038 9001 | MT-GLAZE                  | 680   | JA | 1/10W |          |              |             |       |    |       |
| R5027                | 401 105 2805 | MT-GLAZE                  | 2.2K  | JA | 1/16W |          |              |             |       |    |       |
| R5028                | 401 038 9001 | MT-GLAZE                  | 680   | JA | 1/10W |          |              |             |       |    |       |
| R5029                | 401 105 2805 | MT-GLAZE                  | 2.2K  | JA | 1/16W |          |              |             |       |    |       |
| R5031                | 401 105 5202 | MT-GLAZE                  | 470   | JA | 1/16W |          |              |             |       |    |       |
| R5036                | 401 105 7909 | MT-GLAZE                  | 0.000 | ZA | 1/16W |          |              |             |       |    |       |
| R5037                | 401 105 7909 | MT-GLAZE                  | 0.000 | ZA | 1/16W |          |              |             |       |    |       |
| <b>COIL</b>          |              |                           |       |    |       |          |              |             |       |    |       |
| L3001                | 645 020 1776 | INDUCTOR, 3.3U M          |       |    |       |          |              |             |       |    |       |
| L3002                | 645 020 1776 | INDUCTOR, 3.3U M          |       |    |       |          |              |             |       |    |       |
| <b>DIODE</b>         |              |                           |       |    |       |          |              |             |       |    |       |
| D3851                | 407 179 1706 | ZENER DIODE UDZ5.1B-TE-17 |       |    |       |          |              |             |       |    |       |
| D3882                | 407 149 0807 | DIODE 1SS355-TE-17        |       |    |       |          |              |             |       |    |       |
| D5001                | 407 149 0807 | DIODE 1SS355-TE-17        |       |    |       |          |              |             |       |    |       |
| D5002                | 407 149 0807 | DIODE 1SS355-TE-17        |       |    |       |          |              |             |       |    |       |
| <b>MISCELLANEOUS</b> |              |                           |       |    |       |          |              |             |       |    |       |
| K3001                | 645 025 0330 | PLUG,PWB-PWB 54P          |       |    |       |          |              |             |       |    |       |
| K3002                | 645 037 7426 | PLUG,PWB-PWB 40P          |       |    |       |          |              |             |       |    |       |
| K3801                | 645 025 0330 | PL                        |       |    |       |          |              |             |       |    |       |

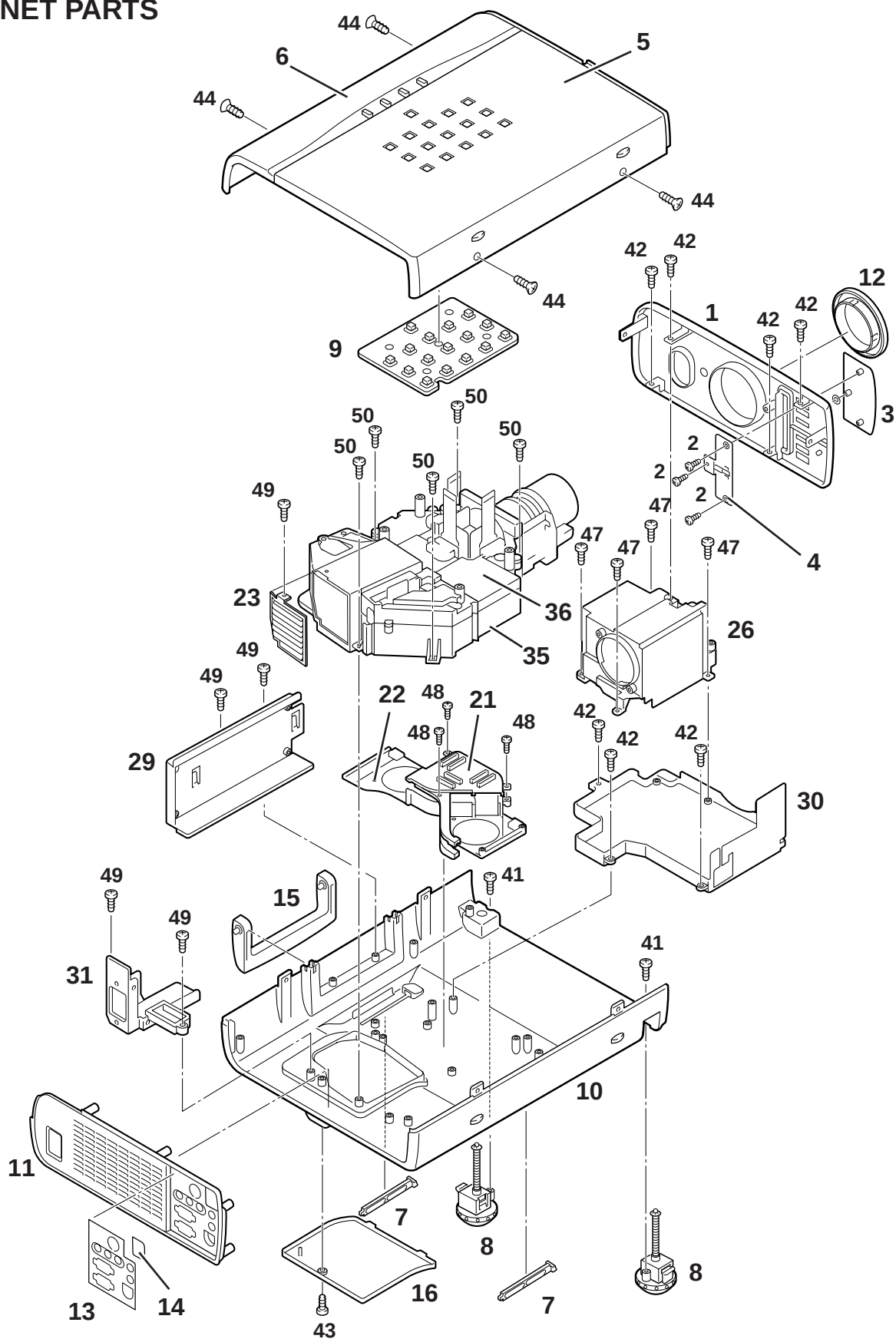
Electrical Parts List

| Ref. No. | Part No. | Description | Ref. No. | Part No. | Description |
|----------|----------|-------------|----------|----------|-------------|
|          |          |             |          |          |             |

# Mechanical Parts List

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

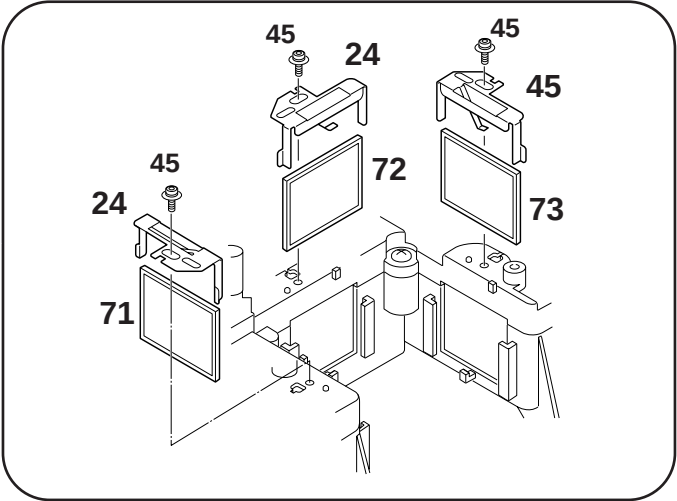
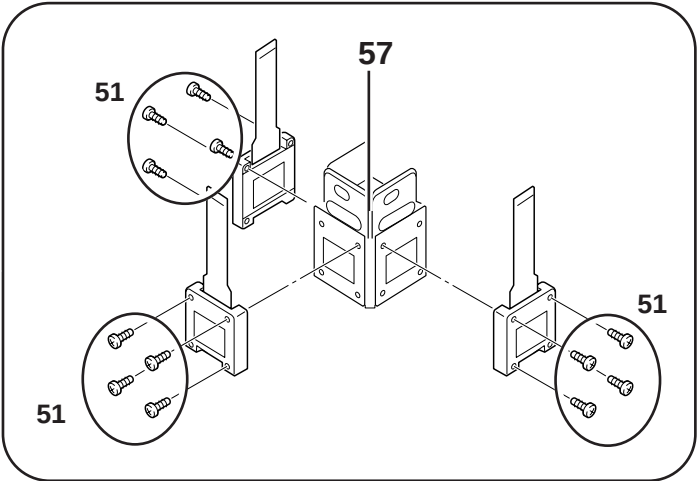
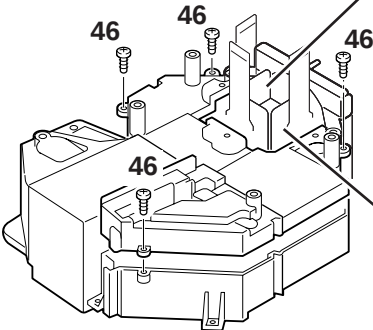
## ● CABINET PARTS

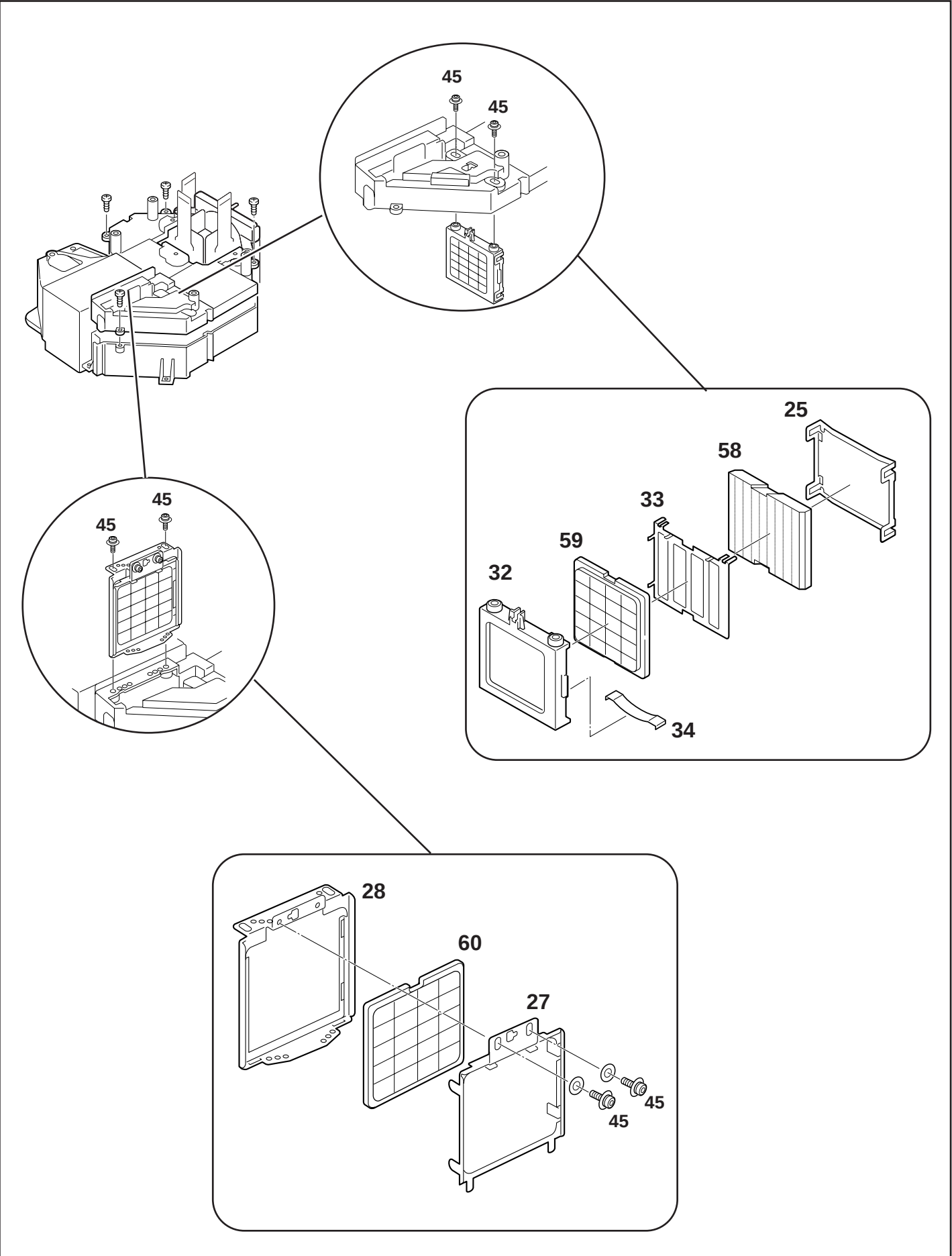


# Mechanical Parts List

| Key No.              | Part No.     | Description                                         | Key No.                | Part No.     | Description             |
|----------------------|--------------|-----------------------------------------------------|------------------------|--------------|-------------------------|
| <b>CABINET PARTS</b> |              |                                                     | 34                     | 610 280 4577 | SPRING INT OUT-MA6A     |
| 1                    | 610 282 1338 | ASSY,CABINET FR-MA6A<br>(Including Key No. 2, 3, 4) | 35                     | 610 280 2696 | OPTICAL BASE BTM-MA6A   |
| 2                    | 411 179 1901 | SCR S-TPG PAN PCS 1.7X4                             | 36                     | 610 280 2702 | OPTICAL BASE TOP-MA6A   |
| 3                    | 610 281 5054 | COVER PC-MA6A                                       | <b>SCREWS-CABINET-</b> |              |                         |
| 4                    | 610 281 5917 | HOLDER COVER PC-MA6A                                | 41                     | 411 025 6500 | SCR S-TPG BIN 3X8       |
| 5                    | 610 285 1717 | COMPL,CABINET TOP-MA6A                              | 42                     | 411 001 8702 | SCR BIN 3X6             |
| 6                    | 610 285 5708 | COMPL,COVER C-TOP-MA6A                              | 43                     | 411 001 8801 | SCR BIN 3X6             |
| 7                    | 610 281 0028 | ASSY,PANEL NET-MA6A                                 | 44                     | 411 052 9109 | SCR OVL 3X6             |
| 8                    | 610 280 4218 | ASSY,STAND LEG-MA6A                                 | <b>SCREWS-CHASSIS-</b> |              |                         |
| 9                    | 610 281 0394 | BUTTON-MA6A                                         | 45                     | 411 174 9308 | BOLT HEX-SCT+SW+W 2.5X6 |
| 10                   | 610 285 3377 | COMPL,CABINET BOTTOM-MA6A                           | 46                     | 411 025 5206 | SCR S-TPG BIN 3X10      |
| 11                   | 610 280 2603 | CABINET BACK-MA6A                                   | 47                     | 411 025 6500 | SCR S-TPG BIN 3X8       |
| 12                   | 610 280 4287 | CAP LENS-MA6A                                       | 48                     | 411 026 7704 | SCR S-TPG PAN 3X6       |
| 13                   | 610 280 4362 | DEC AV SHEET-MA6A                                   | 49                     | 411 001 8702 | SCR BIN 3X6             |
| 14                   | 610 280 4386 | DEC RC SHEET R-MA6A                                 | 50                     | 411 001 8900 | SCR BIN 3X8             |
| 15                   | 610 280 2641 | HANDLE-MA6A                                         | 51                     | 411 052 1806 | SCR OVL 2X8             |
| 16                   | 610 280 2689 | PANEL LAMP-MA6A                                     |                        |              |                         |
| <b>CHASSIS PARTS</b> |              |                                                     |                        |              |                         |
| 21                   | 610 280 2610 | COVER DUCT TOP-MA6A                                 |                        |              |                         |
| 22                   | 610 280 2627 | COVER DUCT BTM-MA6A                                 |                        |              |                         |
| 23                   | 610 280 4324 | COVER LAMP OUT-MA6A                                 |                        |              |                         |
| 24                   | 610 274 4231 | HOLDER POLA-M6RA                                    |                        |              |                         |
| 25                   | 610 280 4416 | HOLDER INT OUT-MA6A                                 |                        |              |                         |
| 26                   | 610 280 4423 | HOLDER POW PWB-MA6A                                 |                        |              |                         |
| 27                   | 610 280 4461 | MOUNTING INT IN A-MA6A                              |                        |              |                         |
| 28                   | 610 280 4478 | MOUNTING INT IN B-MA6A                              |                        |              |                         |
| 29                   | 610 280 4485 | MOUNTING LAMP PWB-MA6A                              |                        |              |                         |
| 30                   | 610 280 4492 | MOUNTING SET POW-MA6A                               |                        |              |                         |
| 31                   | 610 280 4508 | MOUNTING SW-MA6A                                    |                        |              |                         |
| 32                   | 610 280 4515 | MOUNTING INT OUT-MA6A                               |                        |              |                         |
| 33                   | 610 280 4539 | SPACER SLIT INT OUT MA6A                            |                        |              |                         |

● CHASSIS PARTS

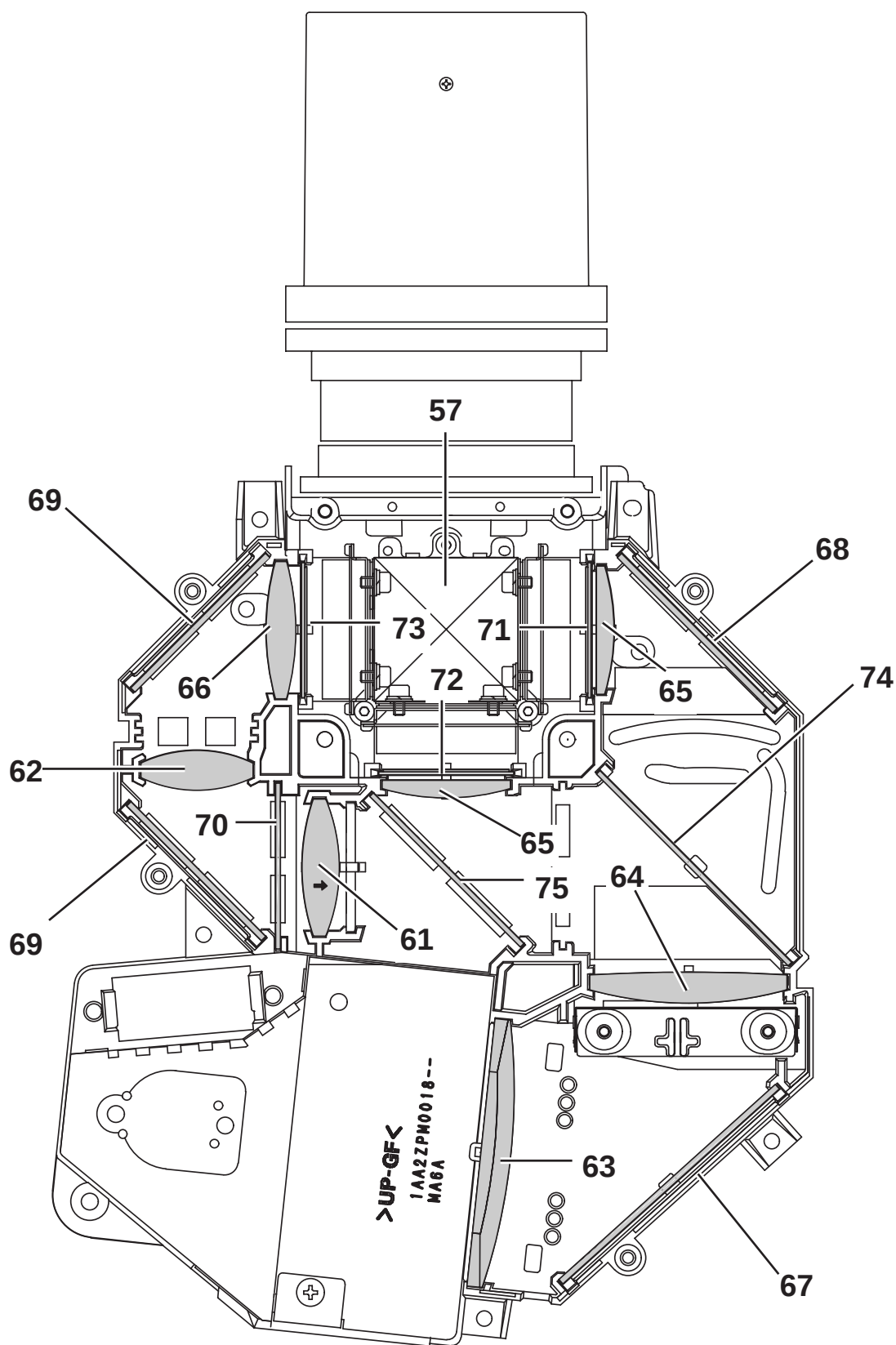


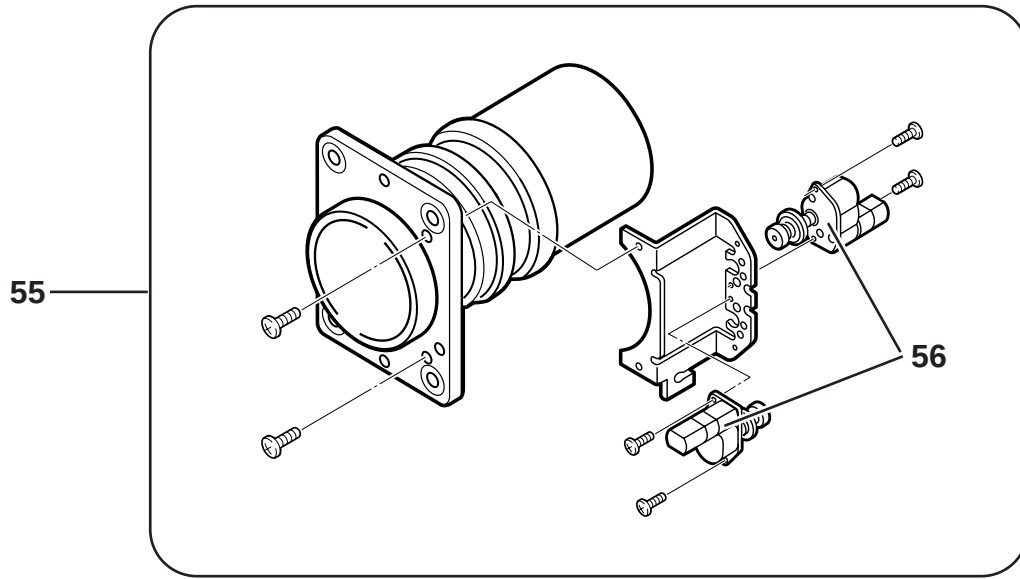


## ■ Optical Parts List

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

### ● OPTICAL PARTS





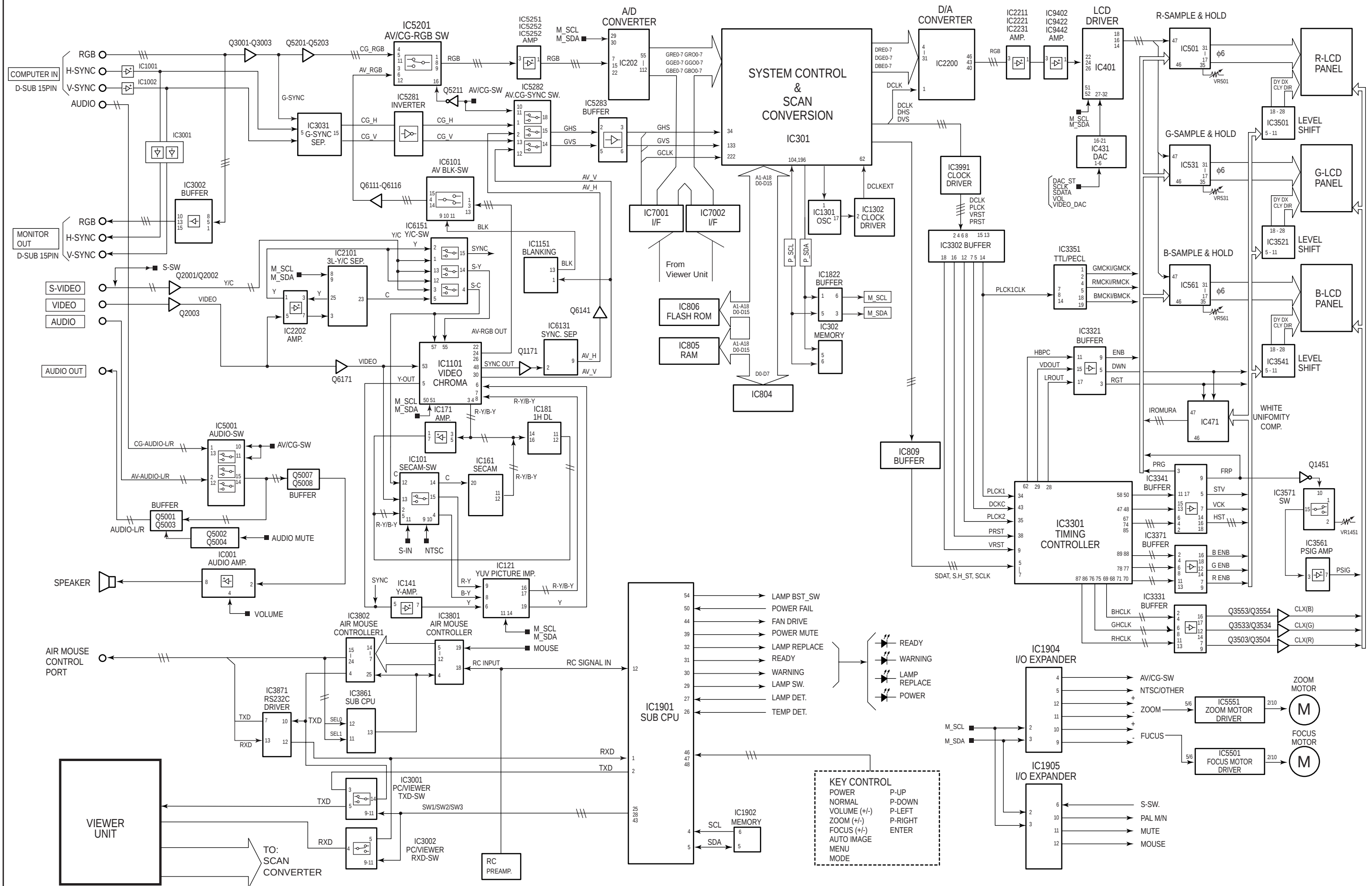
| Key No.              | Part No.     | Description                                      | Key No. | Part No.     | Description             |
|----------------------|--------------|--------------------------------------------------|---------|--------------|-------------------------|
| <b>OPTICAL PARTS</b> |              |                                                  | 67      | 610 284 8892 | MIRROR(W-COLD)          |
| 55                   | 645 035 5950 | ASSY, LENS, PROJECTION<br>(Including Key No. 56) | 68      | 610 284 8908 | MIRROR(R)               |
| 56                   | 645 030 7959 | MOTOR, LENS(Z, F) DC 0.2W                        | 69      | 610 284 8915 | MIRROR(B)               |
| 57                   | 645 040 6638 | ASSY, PRISM A MA6A                               | 70      | 645 037 5637 | OPTICAL FILTER(UV CUT)  |
| 58                   | 645 037 5538 | ASSY, PRISM(PBS)                                 | 71      | 645 036 6635 | POLARIZED GRASS(R-FIL)  |
| 59                   | 645 037 4654 | LENS, INTEGRATOR(OUT)                            | 72      | 645 039 7387 | POLARIZED GRASS(IN/G)SA |
| 60                   | 645 037 4661 | LENS, INTEGRATOR(IN)                             | 73      | 645 039 7394 | POLARIZED GRASS(IN/B)SA |
| 61                   | 645 037 5569 | LENS, RELAY(IN)                                  | 74      | 610 284 8922 | DICHROIC MIRROR (R)AST  |
| 62                   | 645 037 5576 | LENS, RELAY(OUT)                                 | 75      | 610 284 8939 | DICHROIC MIRROR (G)     |
| 63                   | 645 037 5583 | LENS, CONDENSER(IN)                              |         |              |                         |
| 64                   | 645 037 5590 | LENS, CONDENSER(OUT)                             |         |              |                         |
| 65                   | 645 037 5606 | LENS, CONDENSER                                  |         |              |                         |
| 66                   | 645 037 5613 | LENS, CONDENSER(B)                               |         |              |                         |

**CAUTION:**

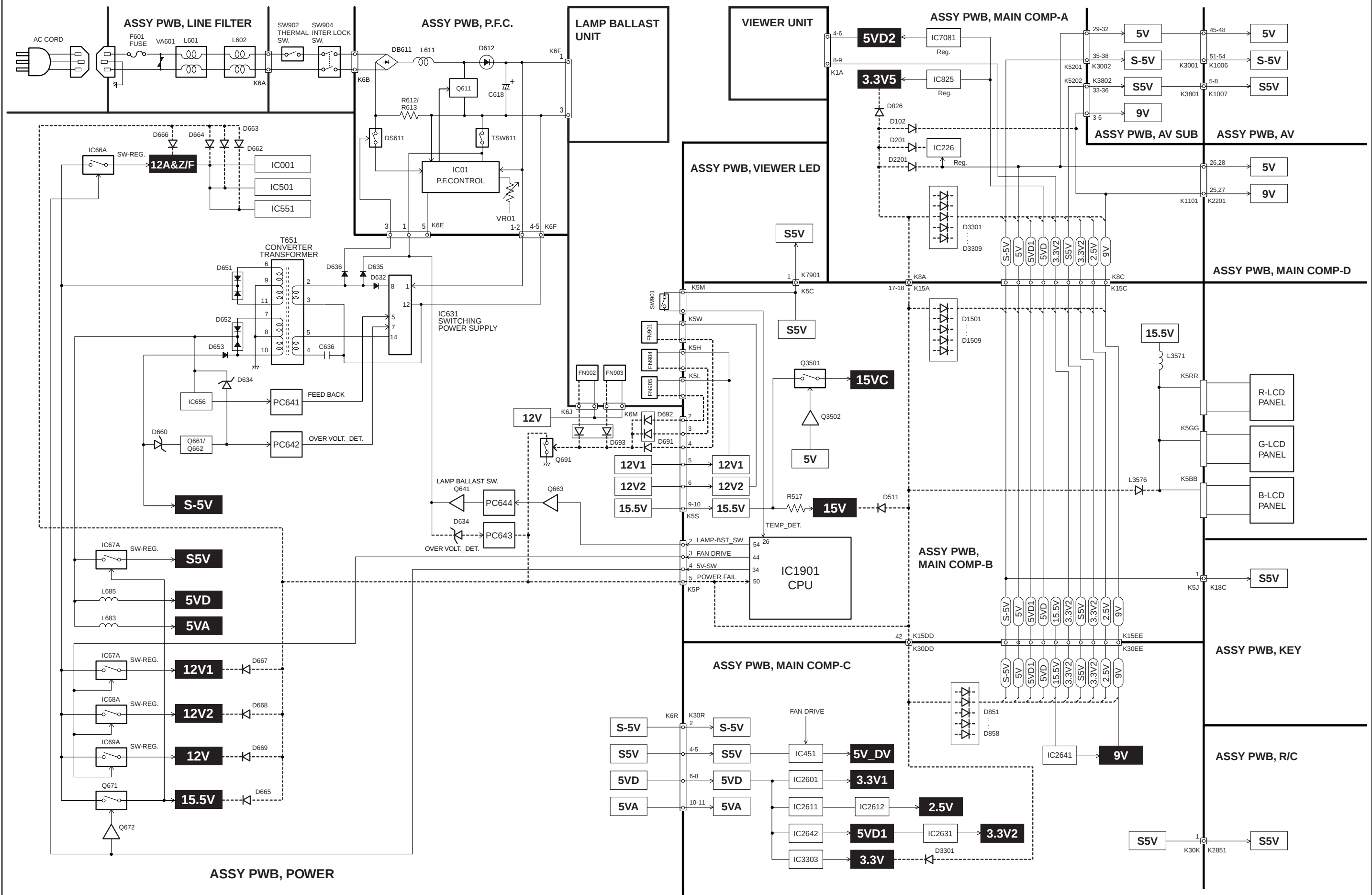
Part must be placed in specified direction when replacing the optical parts. Please see "Optical Parts Disassemblies" for further instructions.



### ■ Circuit Block Diagram (PLC-SU20E/SU20B/SU22E)



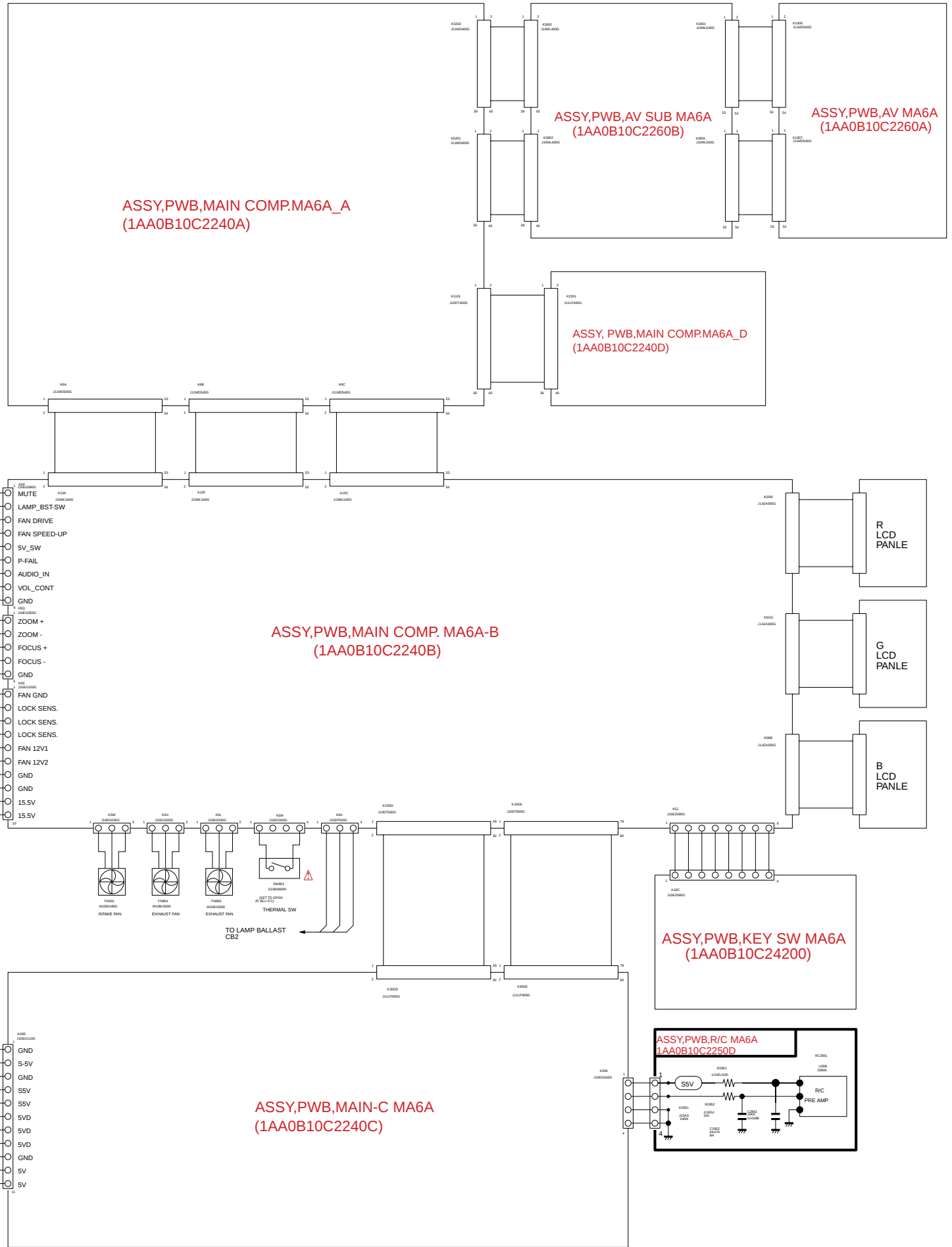
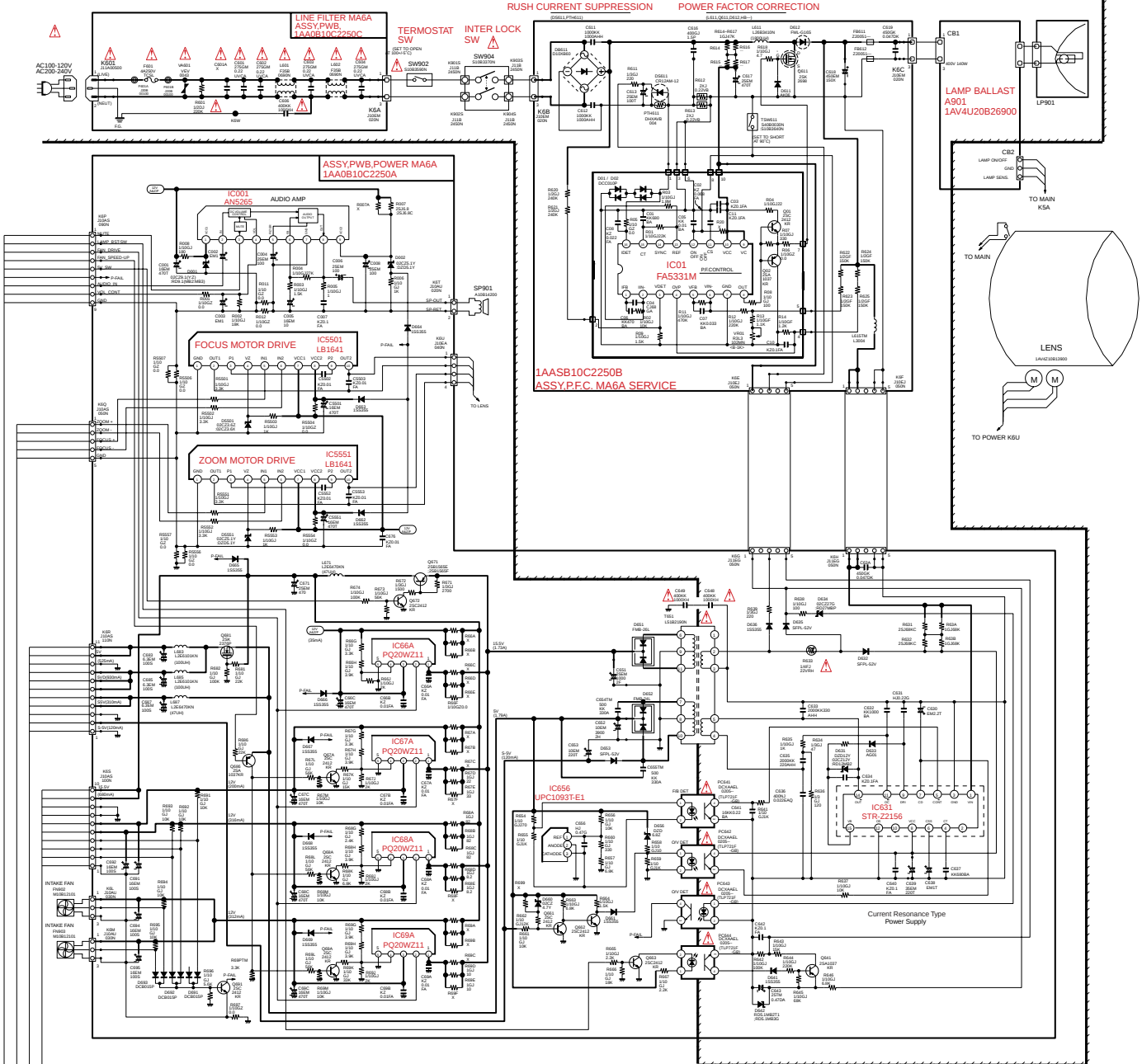
■ Power Supply Lines (PLC-SU20E/SU20B/SU22E)



■ Schematic Diagrams PLC-SU20E/PLC-SU20B

HOT SIDE

COLD SIDE



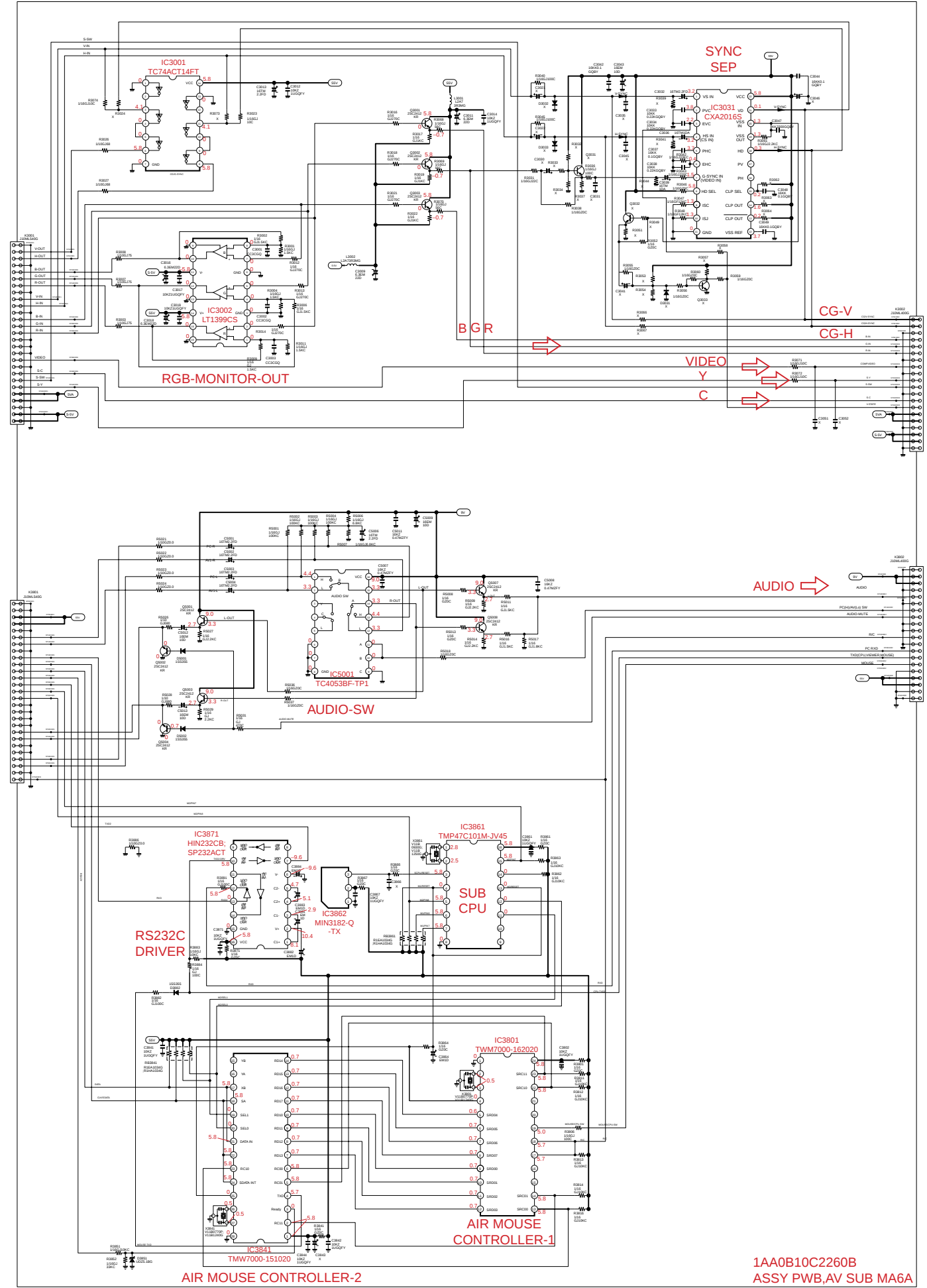
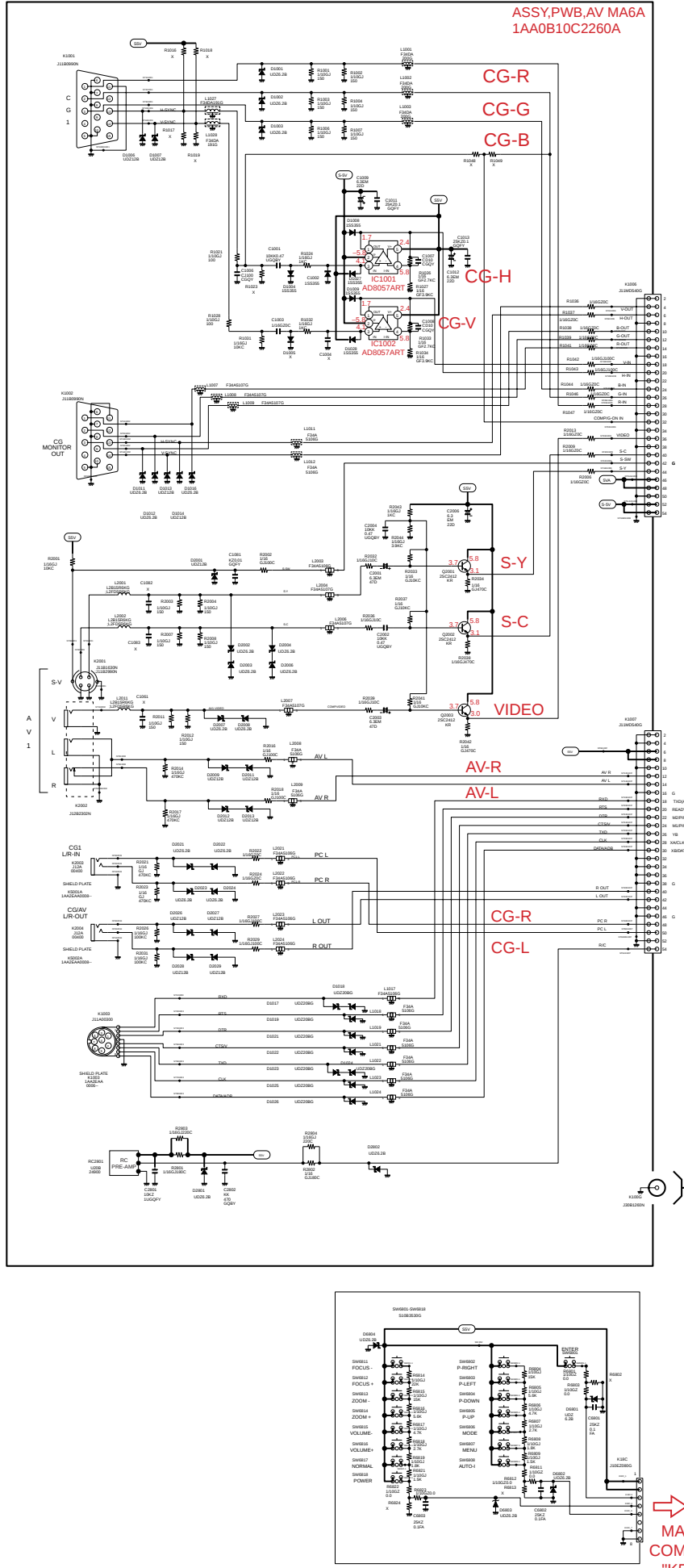
**CAUTION**  
Fuse of the specified parts number must be used.  
Unauthorized substitutions may result in fire or accident.

**CAUTION**

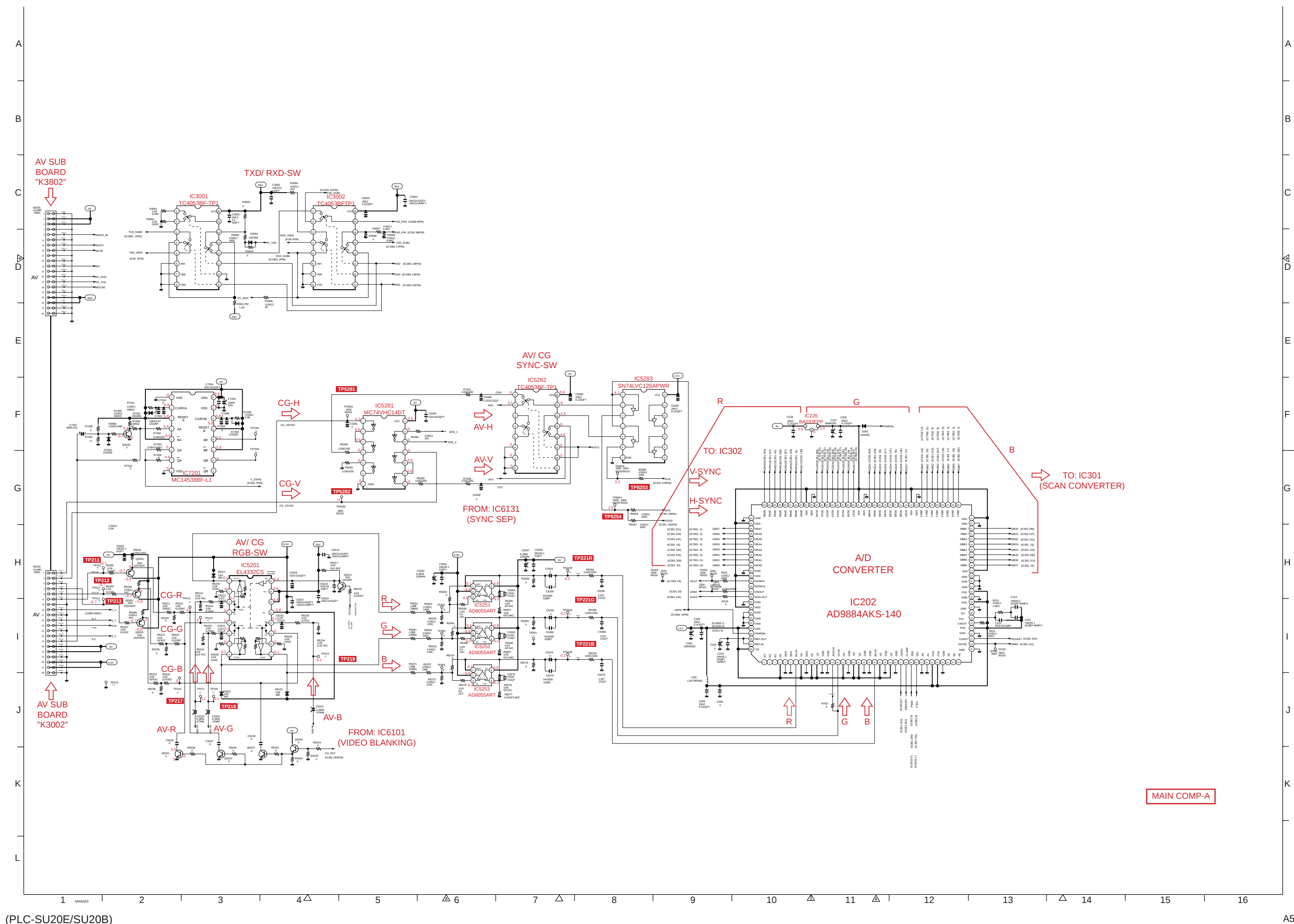
Components indicated by a mark  in this schematic diagram designate components in which safety can be of special significance. It is, therefore, particularly recommended that the replacement of these parts must be made by exactly the same parts.

This projector is isolated from AC line by using the internal converter transformer.  
Please pay attention to the following notes in servicing.  
① Do not touch the part on hot side (primary circuit) or both parts on hot and cold sides (secondary circuit) at the same time.  
② Do not shorten the circuit between hot and cold sides.  
③ The grounding lead must be connected to the ground of the same circuit when measuring of voltages and waveforms.

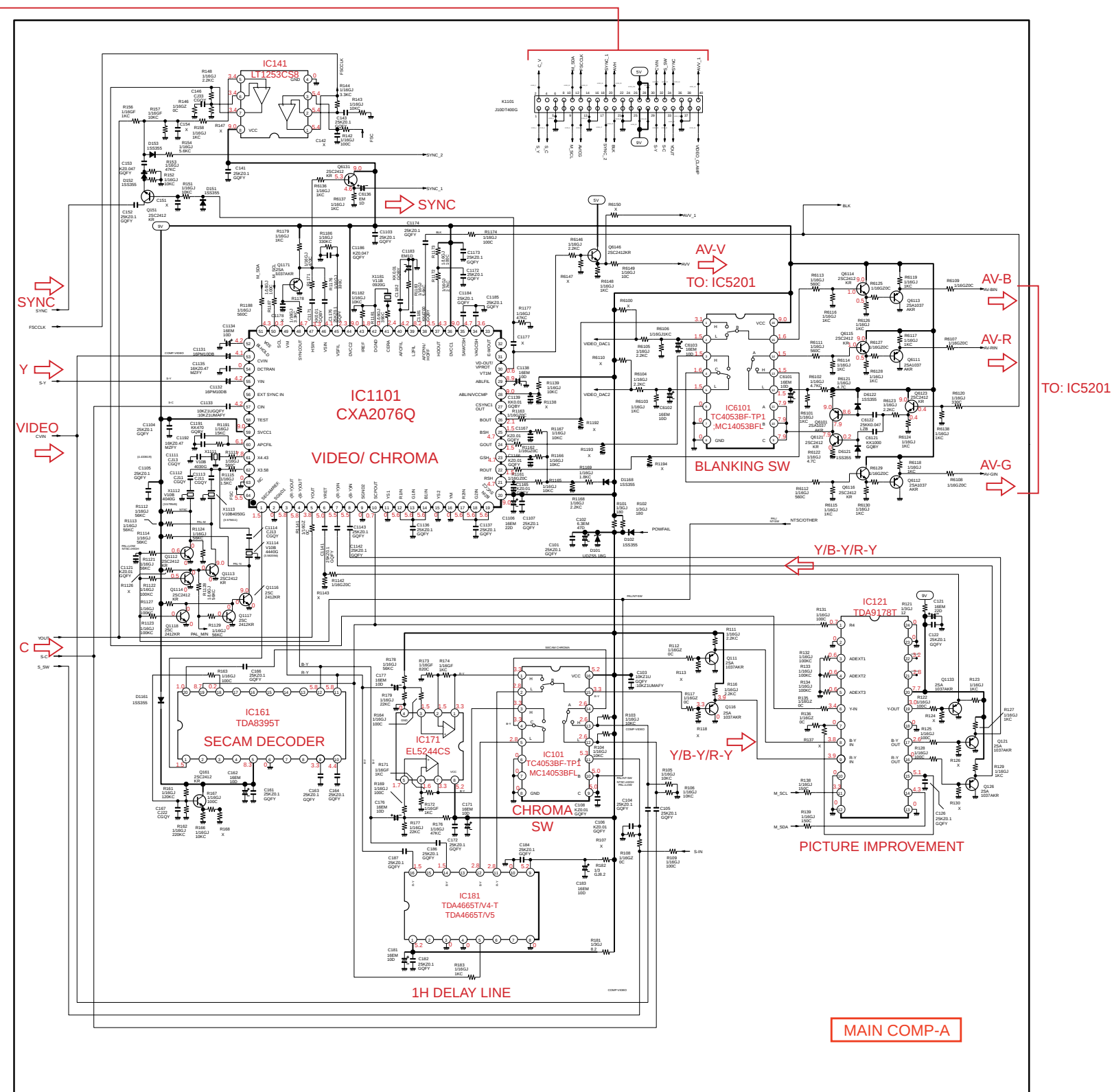
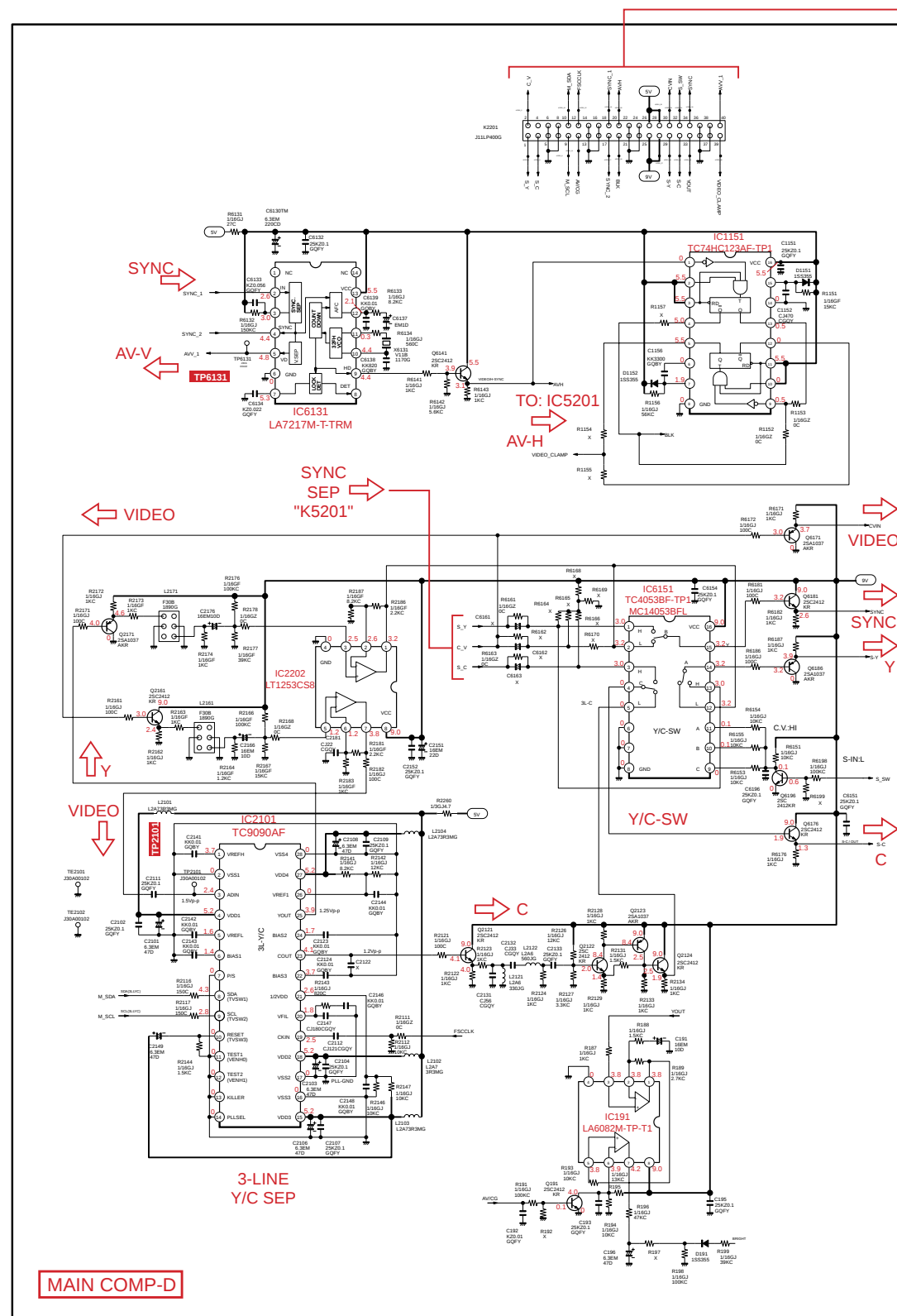
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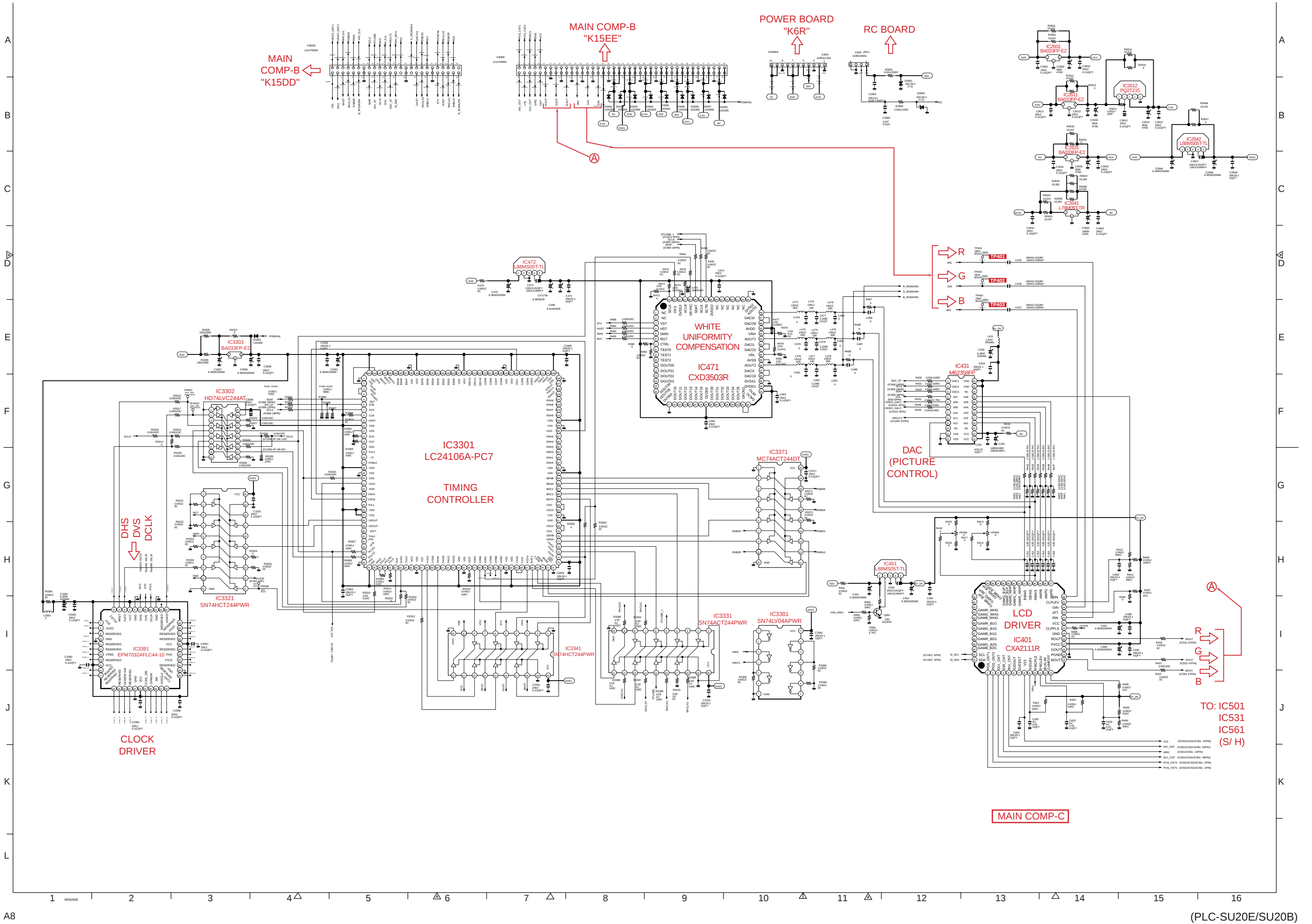


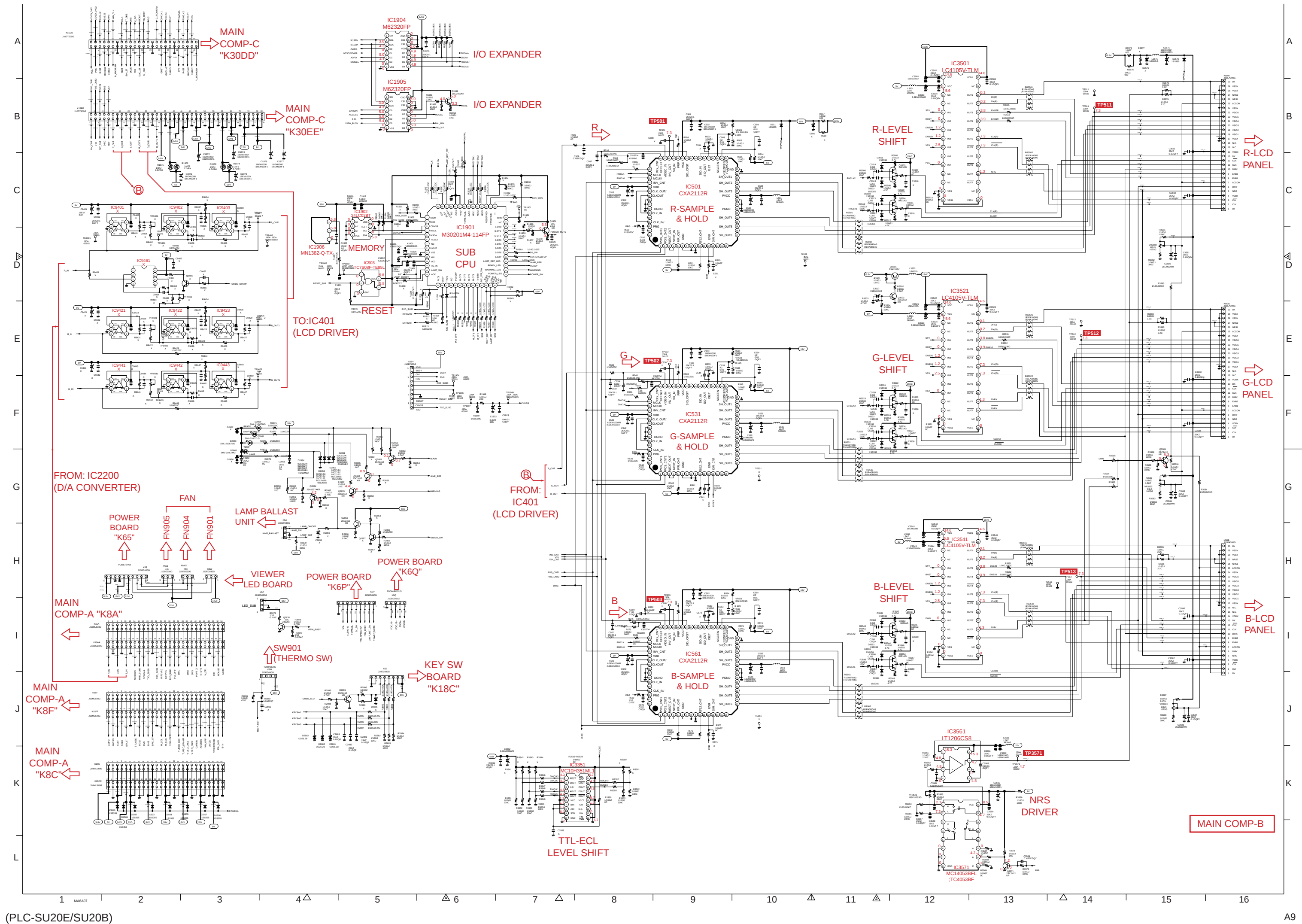
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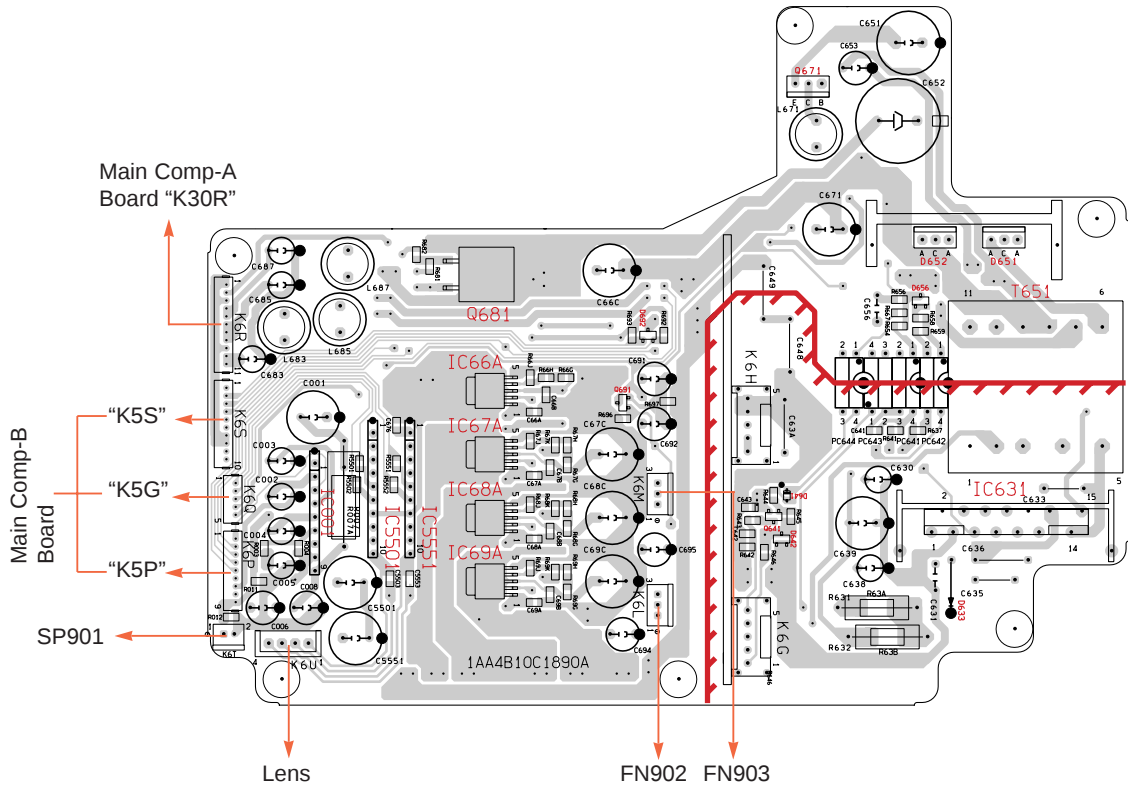
■ Printed Wiring Board Diagrams  
(PLC-SU20E/SU22E/SU20B/SU22B)



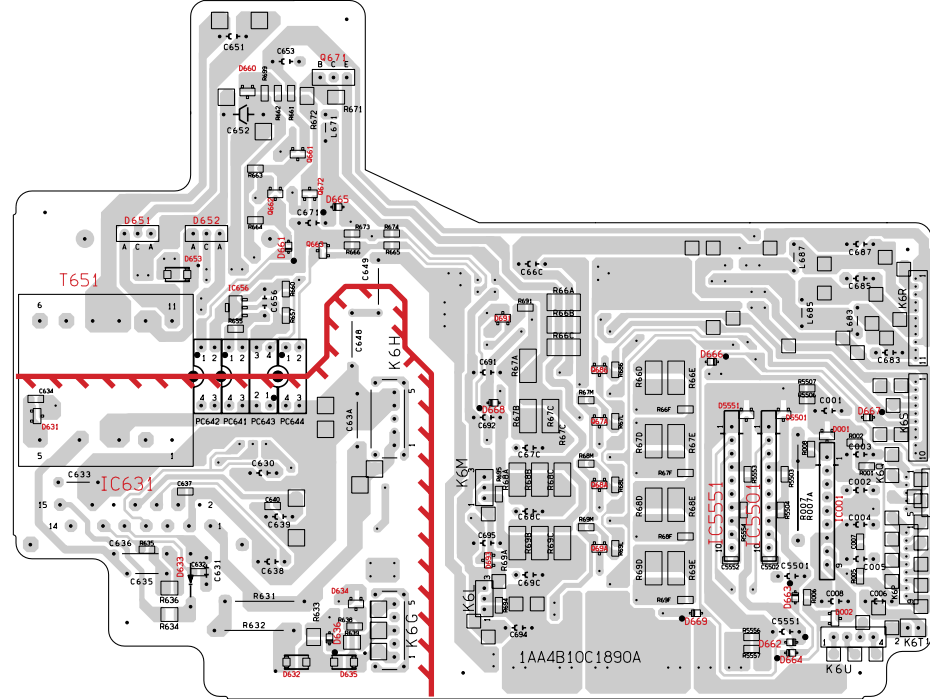
This projector is isolated from AC line by using the internal converter transformer. Please pay attention to the following notes in servicing

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

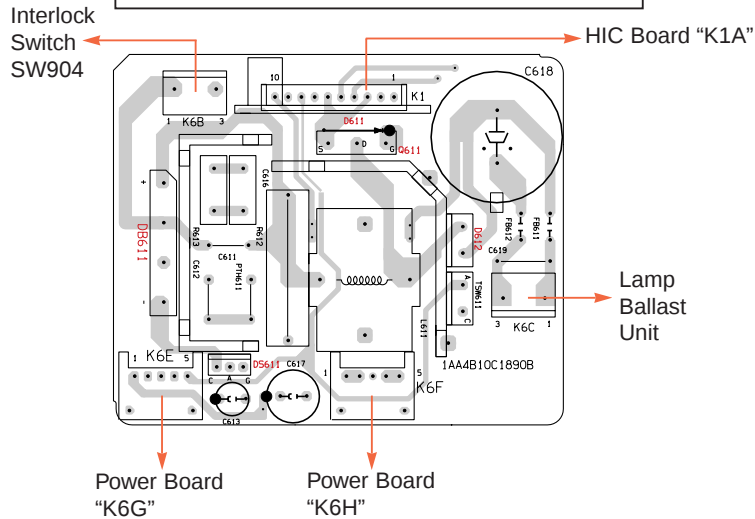
### Power Board (SIDE:A)



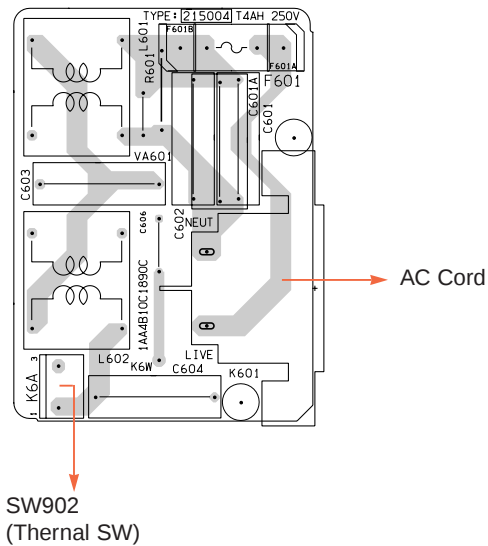
### Power Board (SIDE:B)



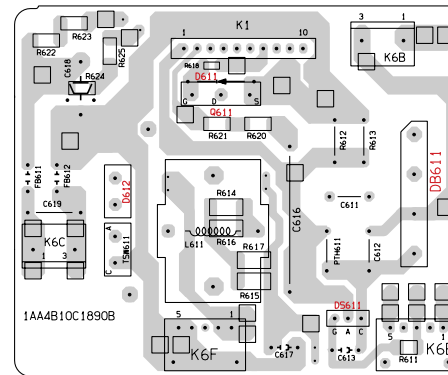
P.F. Board (SIDE: A)



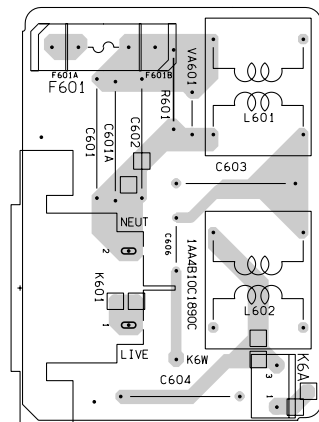
### Line Filter Board (SIDE:A)



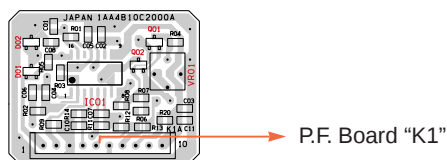
**P.F. Board (SIDE:B)**



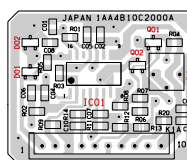
### Line Filter Board (SIDE:B)



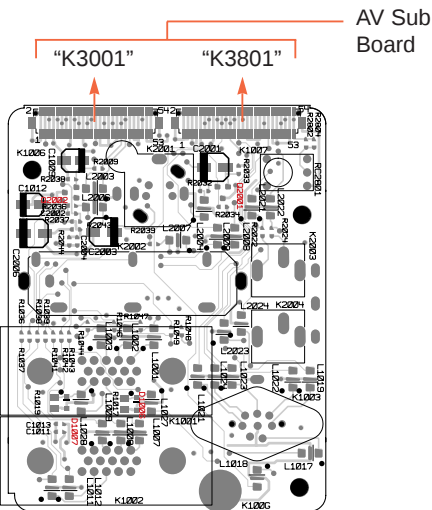
HIC Board (SIDE:A)



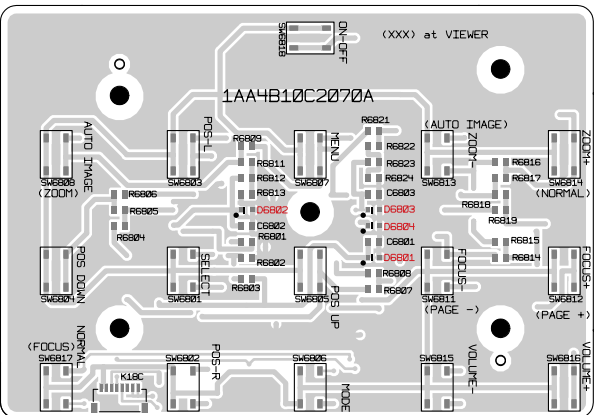
### HIC Board (SIDE:B)



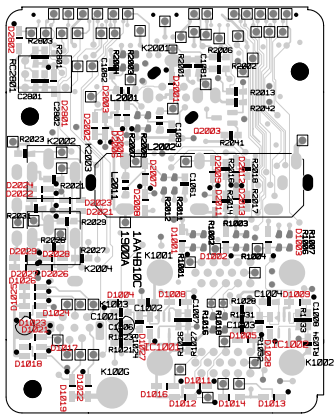
AV Board (SIDE:A)



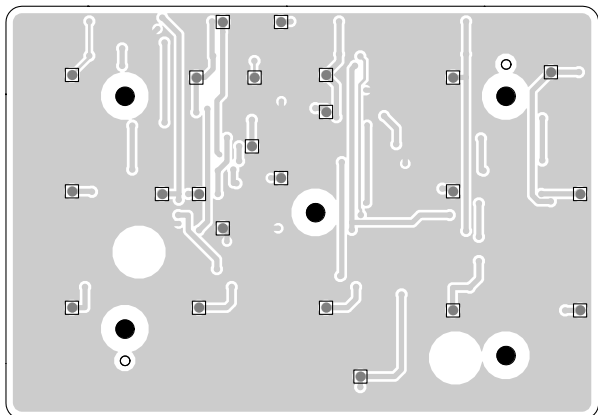
Key Board (SIDE:A)



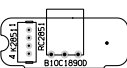
AV Board (SIDE:B)



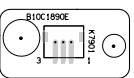
Key Board (SIDE:B)



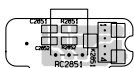
RC Board (SIDE:A)



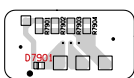
Viewer Led Board (SIDE:A)



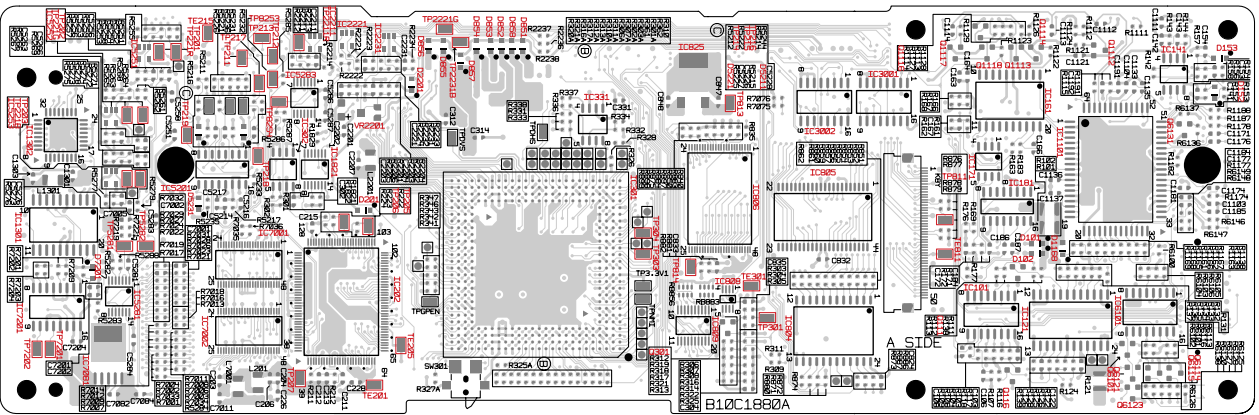
RC Board (SIDE:B)



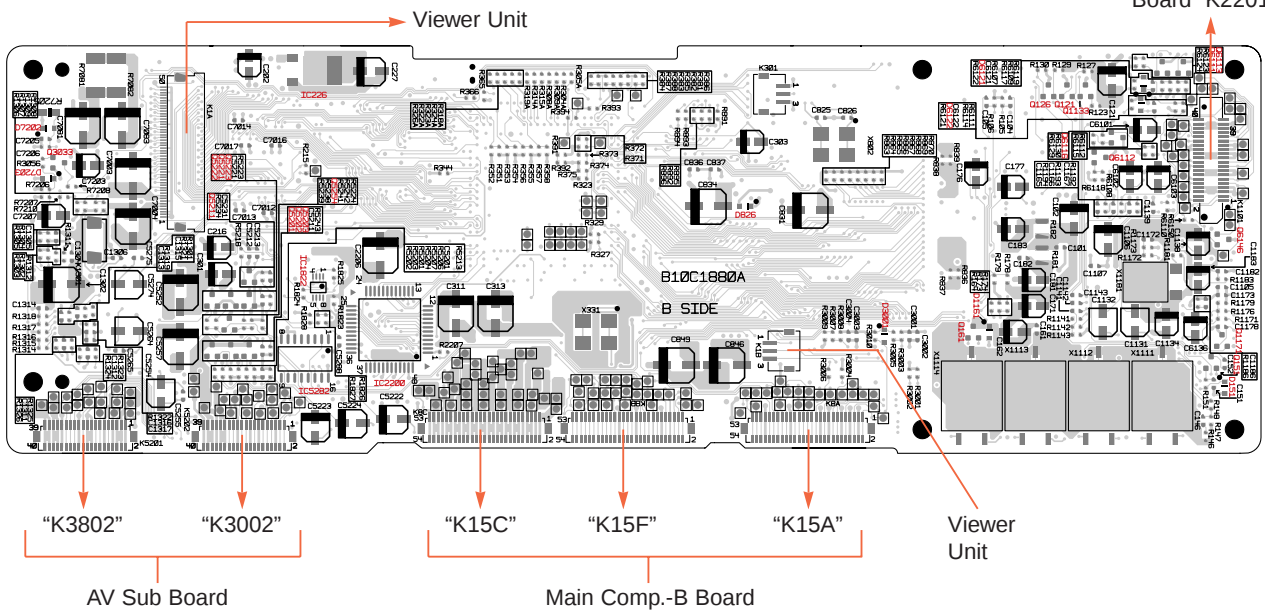
Viewer Led Board (SIDE:B)



Main Comp.-A Board (SIDE:A)

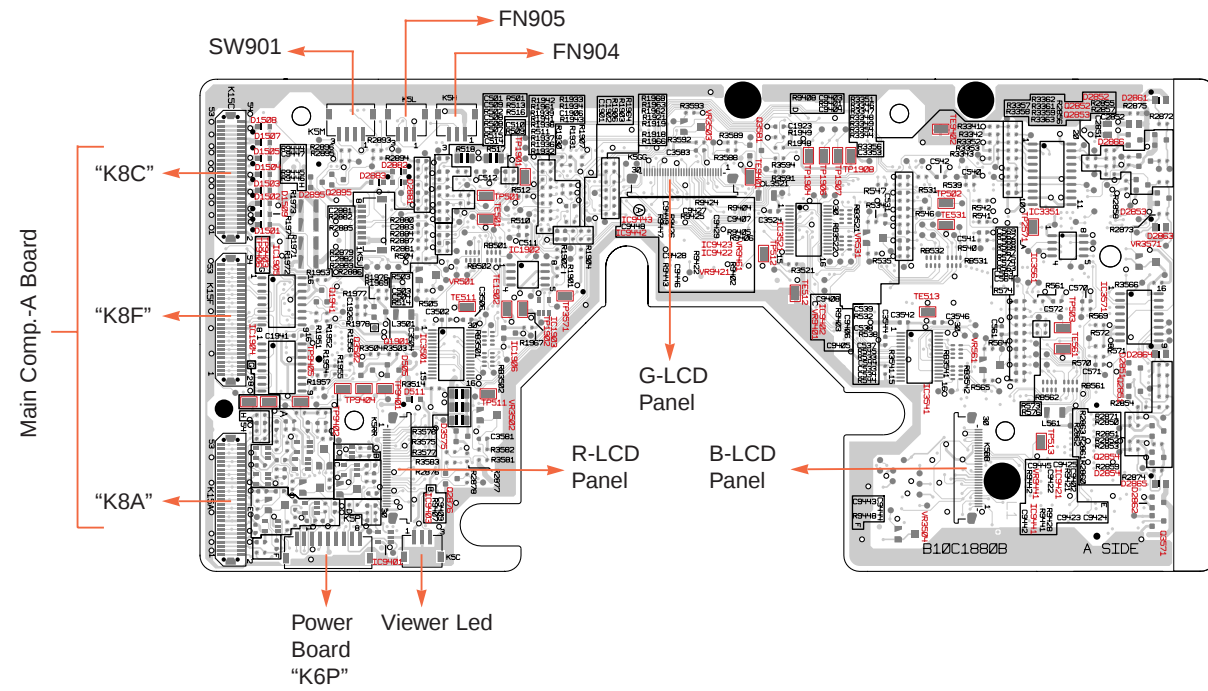


Main Comp.-A Board (SIDE:A)

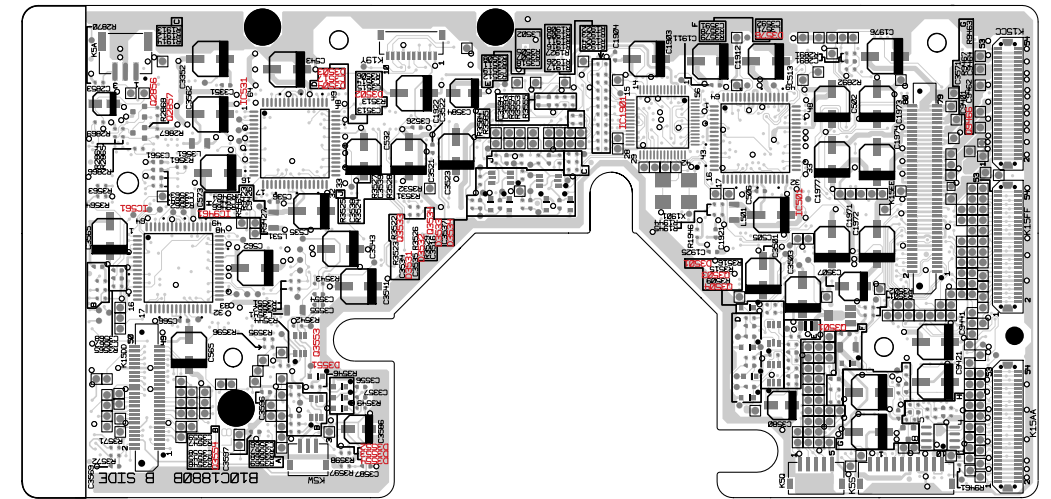


Main Comp.-D Board "K2201"

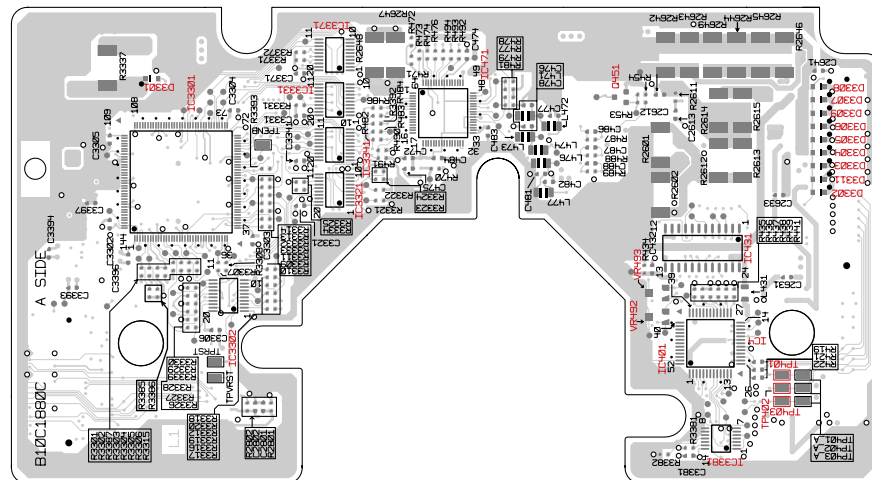
Main Comp.-B Board (SIDE:A)



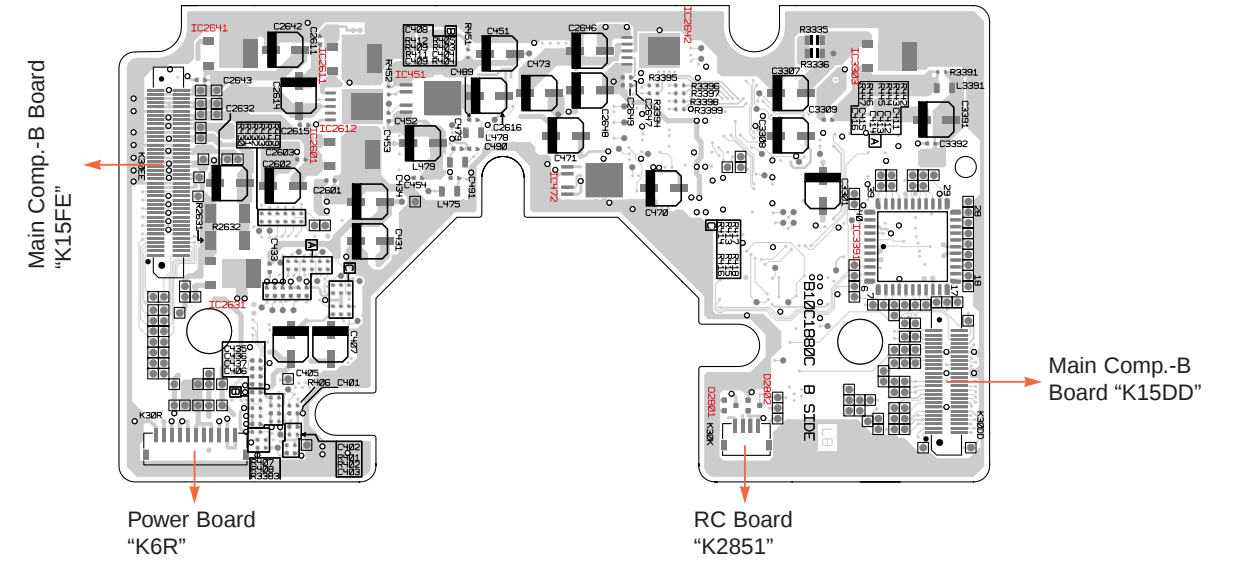
Main Comp.-B Board (SIDE:B)



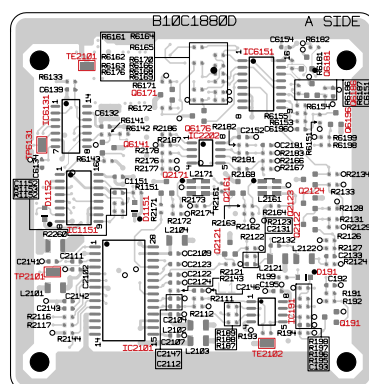
Main Comp.-C Board (SIDE:A)



Main Comp.-C Board (SIDE:B)



Main Comp.-D Board (SIDE:A)



Main Comp.-D Board (SIDE:B)

