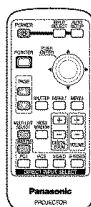
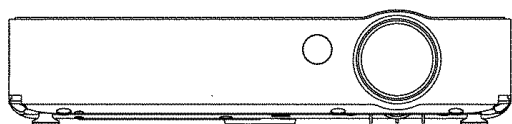


# Service Manual

## LCD Projector



**PT-LB50NTU**  
**PT-LB50NTE**  
**PT-LB50NTEA**  
**PT-LB50U**  
**PT-LB50E**  
**PT-LB50EA**  
**PT-LB50SU**  
**PT-LB50SE**  
**PT-LB50SEA**

The service technician is required to read and follow the "Safety Precautions" and "Important Safety Notice" in this service manual.

## Specifications

**Power supply:** 100 V - 240 V AC, 50 Hz / 60 Hz

**Power consumption:**

240 W [During standby (when fan is stopped):  
Approx. 4 W]

**Amps:** 2.8 A - 1.3 A

**LCD panel:**

Panel size (diagonal): 0.6 type (15.24 mm)  
Aspect ratio: 4:3  
Micro lens array: Available  
Display method: 3 transparent LCD panels (RGB)  
Drive method: Active matrix method  
Pixels:  
PT-LB50NT\*\*/LB50\*\*: 786 432 (1 024 × 768) × 3 panels  
PT-LB50S\*\*: 480 000 (800 × 600) × 3 panels

**Lens:**

Manual zoom (1.2x) / Manual focus  
F 1.6 - 1.9, f 18.8 mm - 22.6 mm

**Lamp:** UHM lamp (165 W)

**Luminosity:**

2 000 lm

**Scanning frequency (for RGB signals):**

Horizontal scanning frequency: 15 kHz - 91 kHz  
Vertical scanning frequency: 50 Hz - 85 Hz  
Dot clock frequency: 100 MHz or less

**YPbPr signals:**

480i, 480p, 576i, 576p, 1 080/60i, 1 080/50i, 720/60p

**Color system:**

7 (NTSC / NTSC 4.43 / PAL / PAL-M / PAL-N / PAL60 / SECAM)

**Projection size:** 838.2 mm - 7 620 mm

**Throw distance:**

PT-LB50NT\*\*/LB50\*\*: 1.1 m - 11.1 m  
PT-LB50S\*\*: 1.1 m - 10.9 m

**Optical axis shift:**

6:1 (fixed)

**Screen aspect ratio:** 4:3

**Installation:**

Front / Desk  
Front / Ceiling  
Rear / Desk  
Rear / Ceiling (menu selection)

**Speaker:** 4.0 cm × 2.0 cm oval × 1

**Max. usable volume output:**

1 W (monaural)

**Wireless LAN (PT-LB50NT\*\* only):**

IEEE802.11b/g

**Connectors:**

**PC IN / OUT:** Dual line, D-sub HD 15-pin (female)  
(One line is available for input and output,  
selectable using an on-screen menu)

During YPbPr input/output:

Y: 1.0 V [p-p] (Including sync), 75 Ω  
PbPr: 0.7 V [p-p], 75 Ω

During RGB input/output:

RGB: 0.7 V [p-p], 75 Ω  
G.SYNC: 1.0 V [p-p], 75 Ω

HD : TTL, automatic positive/negative polarity  
compatible

VD: TTL, automatic positive/negative polarity  
compatible

**VIDEO IN:** Single-line, RCA pin jack

1.0 V [p-p], 75 Ω

**S-VIDEO IN:** Single-line, Mini DIN 4-pin

Y 1.0 V [p-p], C 0.286 V [p-p], 75 Ω,

**AUDIO IN:** Single-Line, RCA pin jack × 2 (L-R)  
0.5 V [rms]

**PC AUDIO IN:** Single-Line, M3 jack (Stereo MINI)  
0.5 V [rms]

**VARIABLE AUDIO OUT:**

Single-Line, M3 jack (Stereo MINI)  
0.5 V [rms]  
(Monitor output/stereo compatible)  
0 V [rms] - 2.0 V [rms] (variable)

**SERIAL:** DIN 8-pin RS-232C compatible

**Cabinet:**

Molded plastic (PC/ABS)

**Dimensions:**

Width: 297 mm  
Height: 57 mm (Not including the projection parts)  
Length: 210 mm

**Weight:**

PT-LB50NT\*\*: 1.9 kg  
PT-LB50\*\*/LB50S\*\*: 1.8 kg

**Operating environment:**

Temperature: 0° C - 40° C  
(When the "HIGHLAND" is set to "ON" 0° C - 35° C)  
Humidity: 20 % - 80 % (no condensation)

**Certifications:**

PT-LB50NTU, LB50U, LB50SU:  
UL60950, C-UL, FCC Class B  
PT-LB50NTE/EA, LB50E/EA, LB50SE/EA:  
EN60950, EN55022, EN61000-3-2,  
EN61000-3-3, EN55024

**< Remote control unit >**

**Power supply:**

3 V DC (AAA battery × 2)

**Operating range:**

Approx. 7 m  
(when operated directly in front of signal receptor)

**Dimensions:** Width: 51.5 mm

Height: 21.1 mm

Length: 123 mm

**Weight:** 74 g (including battery)

**Accessories:**

**Remote control unit**

PT-LB50NT\*\* (N2QAYA000001): 1  
PT-LB50\*\*, LB50S\*\* (N2QAYA000002): 1

**AAA batteries for remote control unit (x2):** 1

**Power cord:**

PT-LB50NTU/LB50U/LB50SU:  
K2CG3DR00006 1  
PT-LB50NTE/LB50E/LB50SE:  
K2CM3DR00002 (continental) 1  
PT-LB50NTEA/LB50EA/LB50SEA:  
K2CT3DR00005 (U.K) 1  
K2CM3DR00002 1

**RGB signal cable [K1HA15DA0002 (1.8 m)]:** 1

**CD-ROM (TQBH9008) (PT-LB50NT\*\* only)** 1

**Carrying bag (TPEP018):** 1

**Options:**

**Ceiling bracket:** ET-PKB50

**Wireless remote control unit:** ET-RM300

**Serial adapter (DIN 8-pin/D-sub 9-pin):** ET-ADSER

- Specifications are subject to change without notice.
- Weight and dimensions shown are approximate.

## ⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

## Trademark Acknowledgements

- VGA and XGA are trademarks of International Business Machines Corporation.
  - Macintosh is a registered trademark of Apple Computer, Inc.
  - S-VGA is a registered trademark of the Video Electronics Standards Association.
- All other trademarks are the property of the various trademark owners.

### Warning

Use UV radiation eye and skin protection during servicing.  
 • The warning label is stuck on the side of the intake air fan (R, G).

### Precaution

If using of this projector at high elevations (above 1 400 m), set HIGHLAND to ON. (Refer to "Option settings" in Operating Instructions.)  
 Failure to observe this may cause malfunctions.  
 Never use this projector at an elevation of 2 700 m or higher.  
 Using this projector at high elevations, consult your dealer or Authorized Service Center about preparations.

## About lead free solder (PbF)

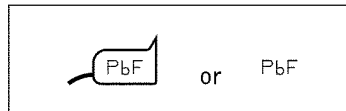
This projector is using the P.C.Board which applies lead free solder. The use of lead free solder is recommended from the standpoint of antipollution for the global environment in service.

Notes:

- Lead free solder: Sn-Ag-Cu (tin, silver and copper) has a higher melting point (approx. 217°C) than standard solder. Typically, the melting point is 30°C to 40°C higher. When servicing, use a high temperature soldering iron with temperature limitation function and set it to 370±10°C.
- Be precautions about lead free solder: Sn-Ag-Cu (tin, silver and copper) will tend to splash when heated too high (approx. 600°C or higher).
- Use lead free solder for the P.C.Board (specified on it as "PbF") which uses lead free solder. (When you unavoidably use lead solder, use lead solder after removing lead free solder. Or be sure to heat the lead free solder until it melts completely, before applying lead solder.)
- After soldering to double layered P.C.Boards, check the component side for excess solder which may flow onto the opposite side.

About the identification of the lead free solder P.C.Board

For the P.C.Board which applies lead free solder, the symbol as shown in the figure below is printed or stamped on the surface or the back of P.C.Board.



For US

## IMPORTANT SAFETY NOTICE

There are special parts used in Panasonic LCD Projectors which are important for safety. These parts are shaded on the schematic diagram. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of PANASONIC BROADCAST & TELEVISION SYSTEMS COMPANY.

### WARNING:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**CAUTION:** Any unauthorized changes or modifications to this equipment will void the users authority to operate.

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# 1 Safety Precautions

## 1.1. General Guidelines

- For continued safety, no modification of any circuit must be attempted.
- Unplug the power cord from the power outlet before disassembling this projector.
- Use correctly the supplied power cord and must ground it.
- It is advisable to use an isolation transformer in the AC power line before the service.
- Be careful not to touch the rotation part (cooling fan, etc.) of this projector when you service with the upper case removed and the power supply turned ON.
- Observe the original lead dress during the service. If a short circuit is found, replace all the parts overheated or damaged by the short circuit.
- After the service, all the protective devices such as insulation barriers, insulation papers, shields, and isolation R-C combinations must be properly installed.
- After the service, check the leakage current to prevent the customer from getting an electric shock.

## 1.2. Leakage Current Check

1. Prepare the measuring circuit as shown in Fig.1.

Be sure to use a voltmeter having the performance described in Table 1.

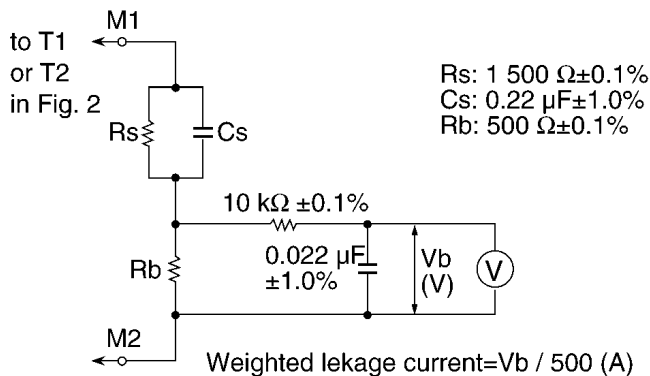


Fig. 1

	Performance
Voltmeter (rms reading)	Accuracy: $\leq 2\%$
	Input resistance: $\geq 1 \text{ M}\Omega$
	Input capacitance: $\leq 200 \text{ pF}$
	Frequency range: 15 Hz to 1 MHz

Table 1

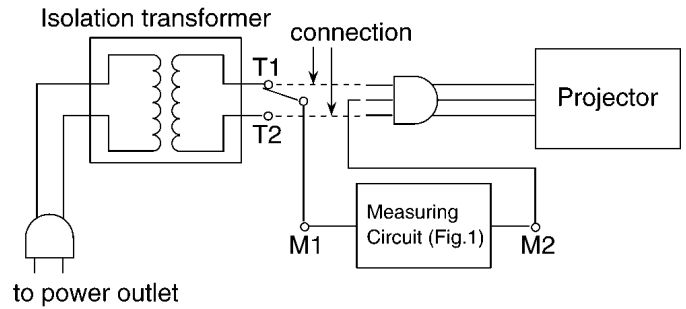


Fig. 2

2. Assemble the circuit as shown in Fig. 2. Plug the power cord in a power outlet.
3. Connect M1 to T1 according to Fig. 2 and measure the voltage.
4. Change the connection of M1 from T1 to T2 and measure the voltage again.
5. The voltmeter must read 0.375 V or lower in both of steps 3 and 4. This means that the current must be 0.75 mA or less.
6. If the reading is out of the above standard, the projector must be repaired and rechecked before returning to the customer because of a possibility of an electric shock.

## 1.3. UV Precaution and UHM Lamp Precautions

- Be sure to unplug the power cord from the power outlet when replacing the lamp.
- Because the lamp reaches a very high temperature during its operation, wait until it cools completely when replacing the Lamp Unit.
- The lamp emits small amounts of UV-radiation, avoid direct-eye contact with the light.
- The lamp unit has high internal pressure. If improperly handled, explosion might result.
- Because the high pressure lamp involves a risk of failure, never touch the lamp wire lead during the service. (See Fig. 3)

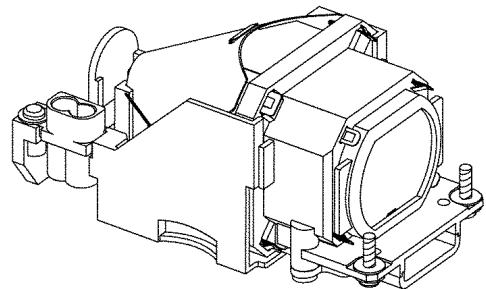


Fig.3

## 2 Ext Option

This projector has EXT OPTION in addition to standard on-screen menus.

- There are SELF CHECK and SERVICE MODE for service, etc.

### 2.1. Procedure to enter EXT OPTION

1. Press "MENU" button on the main unit or remote control unit to display "MENU" screen, then select "OPTION" and press "ENTER" button.
2. Select "INPUT GUIDE" on "OPTION" menu and press "ENTER" button 3 seconds or longer.

MENU → OPTION → INPUT GUIDE

### 2.2. EXT OPTION Menu and Functions

#### EXT OPTION

FREEZE MSG	OFF / ON
ANGLE RESET	OFF / ON
FAN FULL MODE	OFF / ON
AUTO SETUP	STANDARD / SPECIAL
SYNC	STANDARD / SPECIAL
VGA60/480p	AUTO / VGA60 / 480p
SELF CHECK	
TEST PATTERN	
FLICKER ADJUST	
HPLL	OFF / ON

- FREEZE MSG

Switching ON/OFF "FREEZE" on-screen display

- ANGLE RESET

Switching ON/OFF "Realtime Keystone" reference level setting

**Note:**

- Normally, do not select. (Angle reset data will be rewritten.)

- FAN FULL MODE

Setting the cooling fan motor rotation speed

- Switching ON "FAN FULL MODE", the rotation level of the fan becomes high-speed rotation (fixed). Moreover, when "FAN FULL MODE" is ON, changing "HIGHLAND" in OPTION becomes impossible (setting "FAN FULL MODE" is given priority more than "HIGHLAND").

- AUTOS SETUP

Setting AUTO SETUP mode

- STANDARD: To set the normal mode (the dot clock is adjusted strictly))
- SPECIAL: To set the special mode (the dot clock is adjusted roughly)

**Note:**

- Do not change the initial setting (STANDARD).

- SYNC

Setting SYNC processing mode

- STANDARD: To set the normal mode
- SPECIAL: To set the special mode (noise reduction mode)

**Note:**

- Do not change the setting when it is possible to receive normally.

Change the setting only when the image is not displayed normally because of the sync signal noise of connected equipment.

- VGA60/480p

- AUTO: Switching RGB of VGA60 and 480p automatically

- VGA60: Inputting signals in 59.9Hz / VGA480
- 480p: Inputting signals in RGB of 480p
- SELF CHECK
  - To enter the self-check mode
- TEST PATTERN
  - To enter the service mode
- FLICKER ADJUST
  - To enter the flicker adjustment mode
- HPLL
  - When non-standard signal of VIDEO/S-VIDEO is inputted (VTR, VHD, etc.), horizontal synchronization might be disordered according to connected equipment. In this case, set HPLL to OFF.

## 2.3. Canceling EXT OPTION

Press "MENU" button on the main unit or remote control unit.

# 3 Self-Check Mode

This mode is used to narrow down the location of the failure.

## 3.1. Procedure to enter the self-check mode

Select "SELF CHECK" on "EXT OPTION" menu and press "ENTER" button on the main unit or remote control unit.

## 3.2. Self Check Display and Contents

Display example

①	SELF CHECK	MM1.00	NT1.00	PT-LB50NTU/E/EA only
②	XGA60			
③	H ***.***Hz	G SAVED	OK	⑮
④	V ***.***Hz	U SAVED	OK	⑯
⑤	TEMP OK	FAN	OK	⑰
⑥	TEMP1 ***	TEMP1	***	⑱
⑦	TEMP2 ***	TEMP2	***	⑲
⑧	TEMP3 ***	TEMP3[0]	***	㉑
⑨	ANGLE ***	ANGLE[0]	***	㉒
⑩	DEGREE ***			
⑪	LAMP OK	2000H	OK	㉓
⑫	TOTAL *****	RESET	***	㉔
⑬	****H**	****	****H**	
⑭	****H**	****	****H**	
⑮	****H**	****	****H**	

\* This display is an example and the display contents depend on the input signal mode.

• The result of items "G SAVED" and "U SAVED", "OK" is displayed for OK and "NG" is displayed for NG.

• The result of items "TEMP", "FAN", "LAMP" and "2000H", the OK display becomes red characters when shutting down because abnormality happened last time.

	Display Contents	Remarks	
①	Microcomputer Version Display	Software Version	
②	Resolution Name	Different display according to the input signal	
③	Horizontal Signal Frequency	RGB or YP <sub>B</sub> P <sub>R</sub> signal reception only	
④	Vertical Signal Frequency		
⑤	Temperature Abnormality Check	Cause of Lamp Malfanction	
⑥	Thermosensor 1 Measurement Value * <sup>1</sup>	Around Air Outlet (A/D conversion value: 0 - 255)	
⑦	Thermosensor 2 Measurement Value * <sup>1</sup>	Around Air Inlet (A/D conversion value: 0 - 255)	
⑧	Thermosensor 3 Measurement Value	Around Tilt Sensor (A/D conversion value: 0 - 1 023)	
⑨	Tilt Sensor Measurement Value	Voltage Value (0.00 - 3.30)	
⑩	Tilt Degree * <sup>2</sup>	Degree of tilt of the projector, that is a value by which temperature correction is given to the tilt sensor A/D conversion value. (When realtime keystone, the keystone distortion is corrected with this value.)	
⑪	Lamp - Abnormality Check	Cause of Lamp Malfanction	
⑫	Total Usage Time	Projector Cumulative Usage Time	
⑬	Lamp ON - Cumulative Usage Time / Frequency / Cumulative Usage Time	Current	Cumulative Usage Time (actual time), ON Frequency and Cumulative Usage Time (conversion time for 165 W) of the lamp are shown from the left.
⑭		Second	
⑮		First	
⑯	Gamma Correction Data Check	It is distinguished whether gamma data is stored in the flash ROM.	
⑰	Color Unevenness Correction Data Check	It is distinguished whether color unevenness correction data is stored in the flash ROM.	
⑱	Fan Stop Check	Cause of Lamp Malfanction	
⑲	Thermosensor 1 A/D Conversion Value	Temperature around the air outlet when the last thermal shutdown occurs	
⑳	Thermosensor 2 A/D Conversion Value	Temperature around the air inlet when the last thermal shutdown occurs	
㉑	Thermosensor 3 Reference Value	Thermosensor 3 A/D Conversion Value (0 - 1 023) at angle reset	
㉒	Tilt Sensor Reference Value	Tilt Sensor Voltage Value (0.00 - 3.30) at angle reset	
㉓	Lamp - Judgment for Cumulative Usage more than 2 000 h * <sup>3</sup>	Judgment for Replacement Time of Lamp	
㉔	Lamp - Reset Frequency of Cumulative Usage Time	Reset Frequency (0 - 255)	

\*<sup>1</sup> When detected abnormal temperature (high temperature around the air inlet and/or outlet ports, large difference between temperature around the air inlet/outlet ports), TEMP indicator turned on. If arriving at the critical temperature, the power supply will be shutdown automatically and the indicator will flash.

\*<sup>2</sup> When "Realtime Keystone" is set to ON, the keystone distortion is corrected automatically with this value during automatic setup.

\*<sup>3</sup> Warning of the lamp cumulative usage time and shutdown use the conversion time for 165 W.

## 3.3. Canceling the self-check mode

Press "MENU" button on the main unit or remote control unit.



## 4 Service Mode

This mode is used to display seven kinds of test patterns [Horizontal lines, Vertical lines, Dots, Crosshatch, White cross, Black cross and White (No pattern)] in the four colors (White, Red, Green and Blue)..

**Note:**

- On the service mode, displays above patterns by each color without test equipment such as PC or SG. Use the service mode for simplified adjustments by your eyes and so on.

### 4.1. Procedure to enter the service mode

Select "TEST PATTERN" on "EXT OPTION" menu and press "ENTER" button on the main unit or remote control unit.

**Note:**

- In the service mode, pressing the up-arrow " ▲ " or down-arrow " ▼ " button allows the test pattern selection and the left-arrow " ◀ " or right-arrow " ▶ " button the color selection (White / Red / Green / Blue).

### 4.2. Canceling the service mode

Press "MENU" button on the main unit or remote control unit.

## 5 Flicker Adjustment Mode

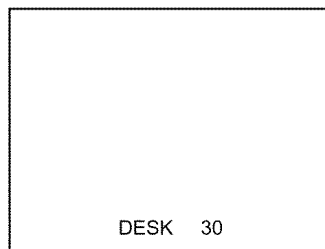
If replacing the optical parts (Analysis / LCD / Lens block) of this projector and/or A-P.C.Board (assembly), enter the flicker adjustment mode and minimize the flicker.

### 5.1. Procedure to enter the adjustment mode

Select "FLICKER ADJUST" on "EXT OPTION" menu and press "ENTER" button on the main unit or remote control unit.

**Note:**

"DESK setting (blue)" is displayed when entering the adjustment mode.



Adjustment Display when DESK setting

### 5.2. Adjustment Display and Contents

- Setting value is increased and decreased with the right-arrow " ▶ " and left-arrow " ◀ " buttons.  
 " ◀ ": Decrease, " ▶ ": Increase
  - Adjust the setting value to minimize the flicker on the screen.
  - Execute the adjustment by 6 patterns below.
- The pattern (adjustment display) is switched with the up-arrow " ▲ " and down-arrow " ▼ " buttons.  
 " ▲ ": Forward direction, " ▼ ": Reverse direction
  - There are 6 patterns of "DESK setting (blue)", "DESK setting (red)", "DESK setting (green)", "CEILING setting (blue)", "CEILING setting (red)" and "CEILING setting (green)".
  - The setting value is saved into this projector when the pattern is switched.

### 5.3. Canceling the flicker adjustment mode

Press "MENU" button on the main unit or remote control unit.

**Note:**

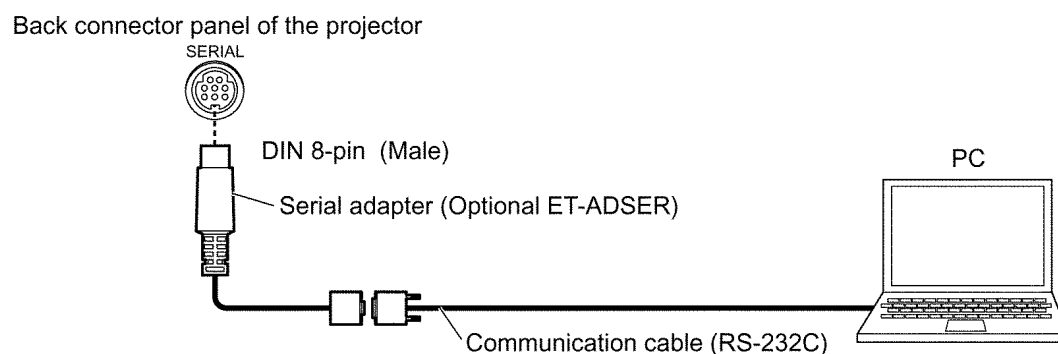
When "MENU" button is pressed, the setting value at that time is saved into this projector and the adjustment mode is canceled.

## 6 Using the SERIAL Connector

The serial connector which is on the back connector panel of the projector conforms to RS-232C standard. This projector can be controlled by a PC which is connected as shown in "6.1. Connection".

For controlling this projector by a PC, requires communication software on the market, and inputs control commands according to communication settings and basic format below.

### 6.1. Connection

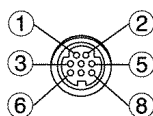


**Note:**

Use a proper communication cable which is suitable for the PC to connect the optional serial adapter, which is connected with SERIAL connector of this projector, and the PC.

### 6.2. Pin Layout and Signal Names for SERIAL Connector

DIN 8-pin (female)  
seen from outside



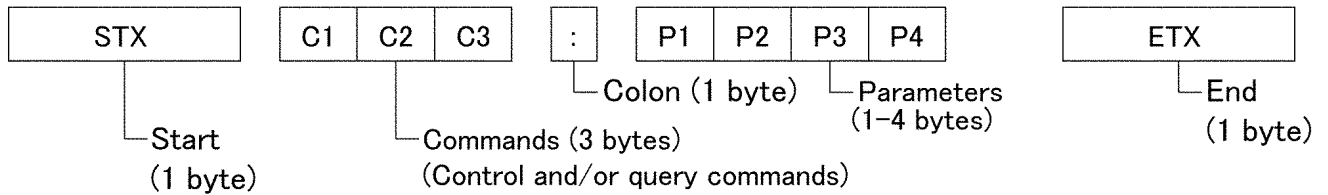
Pin No	Signal Name	Contents
3	RXD	Receive data
4	GND	Ground
5	TXD	Transmit data
1	---	Connected internally
2	---	
6	---	
7	---	NC
8	---	NC

### 6.3. Communication Settings

Signal Level	Conforms to RS-232C standard	Contents	Description
Sync. method		Asynchronous	Synchronizes every 1 character (8 bits)
Baud rate		9 600 bps	Data transfer speed
Parity		None	Error detection method
Character length		8 bits	Number of bit composing 1 character
Stop bit		1 bit	Uses stop bit when asynchronous method
X parameter		Not used	
S parameter		Not used	

## 6.4. Basic Format

The data sent from the PC to the projector is transmitted in the format shown below.



### Notes:

- If sending multiple commands, check that a call back has been received from the projector for 1 command before sending the next command.
- When a command which does not require parameters is sent, the colon (:) is not required.

## 6.5. Control / Query Commands

### Control Commands

Command Name (Parameter format is shown in <>)	Function / Contents	Call back from Projector (Parameter format is shown in <>)	Minimum Value of Parameter	Maximum Value of Parameter
PON *1	POWER ON	PON	—	—
POF *1	POWER OFF	POF	—	—
AVL :<pl>	VOLUME	AVL :<pl>	0	63
IIS :<input signal>	INPUT SELECT	IIS :<input signal>	—	—
OST	DEFAULT	OST	—	—
OFZ :<off_on>	FREEZE	OFZ :<off_on>	0	1
OEN :	ENTER	OEN	—	—
VPM :<picture mode>	PICTURE MODE	VPM :<picture mode>	—	—
<NAT>	NATURAL	<NAT>	—	—
<STD>	STANDARD	<STD>	—	—
<DYN>	DYNAMIC	<DYN>	—	—
<BBD>	BLACK-BD	<BBD>	—	—
AUU	VOLUME UP	AUU	—	—
AUD	VOLUME DOWN	AUD	—	—
OMN	MENU	OMN	—	—
OCU	CURSOR UP	OCU	—	—
OCD	CURSOR DOWN	OCD	—	—
OCL	CURSOR LEFT	OCL	—	—
OCR	CURSOR RIGHT	OCR	—	—
OAS	AUTO SETUP	OAS	—	—
OSH *1 *3	SHUTTER	OSH	—	—
OIX	INDEX WINDOW (Double)	OIX	—	—
DZU	D.ZOOM UP	DZU	—	—
DZD	D.ZOOM DOWN	DZD	—	—
OLP :<lamp power> *1 *2	LAMP POWER	OLP :<lamp power>	0	1

\*1 Do not transmit the PON, POF, OSH and/or OLP commands continuously in a short time.

The lamp may be damaged and/or cause malfunctions.

\*2 The OLP command is invalid at a no signal.

\*3 If a command except OSH is sent from the PC during "SHUTTER" mode, the "ER401" command will be sent from the projector to the PC, and the projector is going to return to normal operating mode.

## Query Commands

Query Command	Contents	Call back from Projector (Parameter format is shown in < >)
QPW	POWER CONDITION	<power condition>
QIN	INPUT SIGNAL	<input signal>
QAV	VOLUME LEVEL	<pl>
QVC	COLOR LEVEL	<pl>
QVT	TINT LEVEL	<pl>
QVB	BRIGHT LEVEL	<pl>
QVR	CONTRAST LEVEL	<pl>
QVS	SHARPNESS LEVEL	<pl>
QWR	WHITE BALANCE LEVEL (RED)	<pl>
QWG	WHITE BALANCE LEVEL (GREEN)	<pl>
QWB	WHITE BALANCE LEVEL (BLUE)	<pl>
QHP	H-POSITION LEVEL	<pl>
QVP	V-POSITION LEVEL	<pl>
QCP	COLOR PHASE LEVEL	<pl>
QDC	DOT CLOCK LEVEL	<pl>
QSP	INSTALLATION	<installation>
QLG	LANGUAGE	<language>
QPM	PICTURE MODE	<NAT>=NATURAL <STD>=STANDARD <DYN>=DYNAMIC <BBD>=BLACK-BD
QFZ	FREEZE	<off_on>
QLP	LAMP POWER	<lamp power>
Q\$L	LAMP ON TIME	<acctch>
QSH	SHUTTER	<off_on>
QKS	KEystone	<pl>
QTE	COLOR TEMPERATURE	<color temp.>

## Parameters

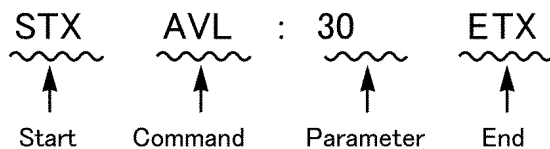
Parameter Format	Parameter Size (Byte)	Parameter Definition
<pl>	3 (provided that approves of 1 byte or 2 bytes when control)	Decimal notation without plus/minus sign (0 to 999), Decimal notation with plus/minus sign (-99 to +99) Returns 3 bytes call back from the projector. (Decimal notation without plus/minus sign (000, 001, 002, ..., 999), Decimal notation with plus/minus sign (-99, -98, ..., -01, +00, +01, ..., +99) )
<off__on>	1	0=OFF, 1=ON
<input signal>	3	VID=VIDEO, SVD=S-VIDEO, RG1=PC1, RG2=PC2 NWP = WIRELESS (PT-LB50NTU/E/EA only)
<installation>	1	0=FRONT/DESK, 1=REAR/DESK, 2=FRONT/CEILING, 3=REAR/CEILING
<language>	3	ENG=English, DEU=German, FRA=French, ESP=Spanish, ITA=Italian, JPN=Japanese, CHI=Chinese, KOR=Korean, RUS=Russian, POR=Portuguese, SVE=Swedish, NOR=Norwegian, DAN=Danish, POL=Polish, CES=Czech, MAG=Hungarian, THA=Thai
<power condition>	3	000=Power OFF, 001=Power ON
<acctch>	4	Decimal notation without plus/minus sign: 0000 hour to 9999 hours
<lamp power>	1	0=ECO, 1=STD
<color temp.>	1	0=LOW, 1=STD, 2=HIGH

\* If an incorrect command is sent from the PC, the "ER401" command will be sent from the projector to the PC.

### [Example]

When controls the audio volume to +30 by a PC

(Sends commands as the following:)



• When a command which does not require parameters is sent, the colon (:) is not required.

## 6.6. Communication Cable Specifications

Serial adapter		at the PC (DTE)			
---	---	1	NC	NC	1
5	2	2			2
3	3	3			3
---	---	4	NC	NC	4
4	5	5			5
6	6	6	DSR	NC	6
1	7	7			7
2	8	8			8
	---	9	NC	NC	9

## 6.7. Signal Selector Connecting Cable Specifications

When connecting to a signal selector (ex. TW-SWS62J), use a cable with specifications below.

Connecting method: Connects a video signal cable from the signal selector to "VIDEO IN", and an RGB signal cable to "RGB1 IN".

At the signal selector D-sub 9p (male)		At the serial adapter (DCE) D-sub 9p (male)		Serial adapter	
Signal Name	Pin No.	Pin No.	Signal Name	Pin No. (cable side)	Pin No. (projector side)
NC	1	1	NC	---	---
RD Receive data	2	2	SD Transmit data	2	5
SD Transmit data	3	3	RD Receive data	3	3
NC	4	4	NC	---	---
GND Ground	5	5	GND Ground	5	4
NC	6	6	DSR	6	6
RS Transmit request	7	7	CS Transmit permission	7	1
CS Transmit permission	8	8	RS Transmit request	8	2
NC	9	9	NC	---	---

**Note:**

Set VP control terminal switch of the signal selector to VP TYPE "B".

## 7 Disassembly Instructions

### Warning:

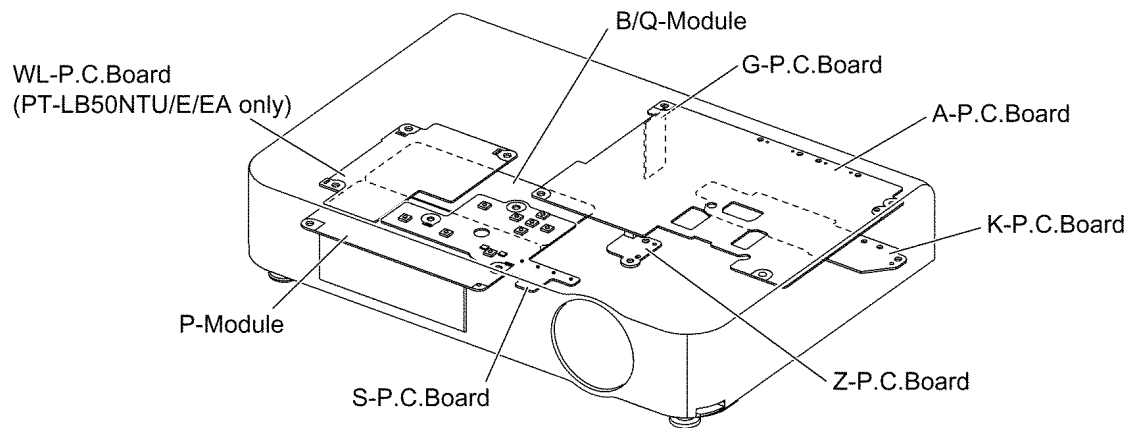
- Be sure to unplug the power cord from the power outlet before disassembling this projector.

### Caution:

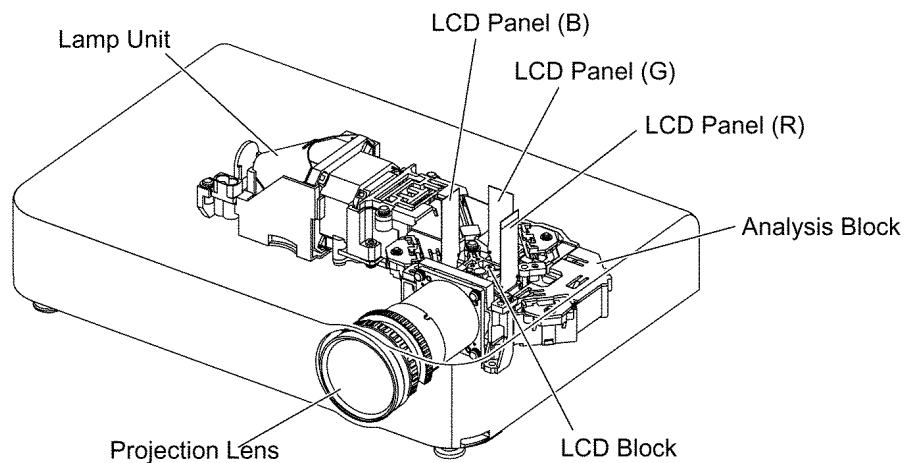
- While turning over a printed circuit board, be sure to put a insulating material under it to prevent a short circuit.
- Printed circuit boards and wires must not be pulled forcibly, but be handled carefully.
- Connectors also must be handled carefully.
- When reassembling, replace used adhesive tape with new one (Do not re-use used tape).
- After repairing this projector, be sure to put back the wires and connectors to the original condition.

### 7.1. Printed Circuit Board and Main Parts Location

#### Electrical Parts

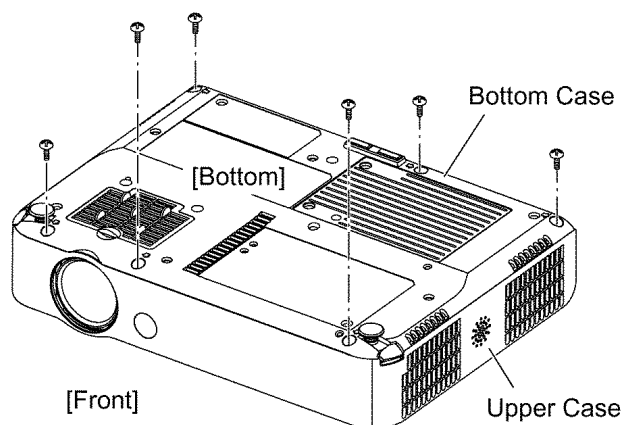


#### Optical Parts



## 7.2. Removal of Upper Case

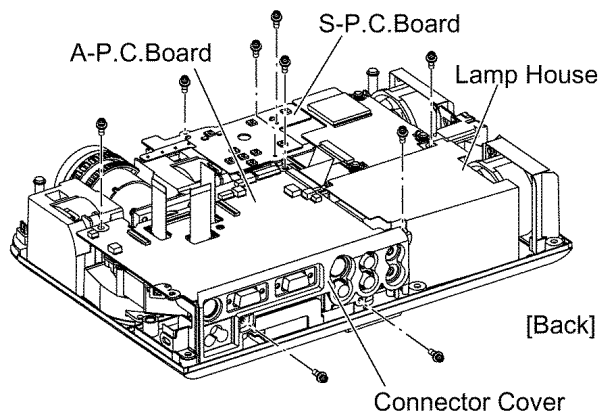
1. Turn the projector upside down.
2. Unscrew the 6 screws.



3. Return the projector to the normal position.
4. Remove the upper case.

## 7.3. Removal of A-P.C.Board

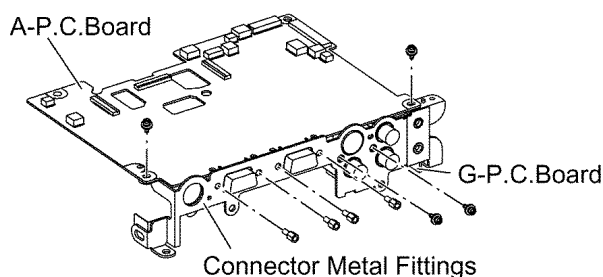
1. Remove the upper case according to the section 7.2. "Removal of Upper Case".
2. Unscrew the 2 screws and remove the lamp house.
3. Unscrew the 1 screw and remove the connector cover.
4. Unscrew the 3 screws fixing the S-P.C.Board.
5. Unscrew the 3 screws fixing the A-P.C.Board.



6. Disconnect the connectors from/to the A-P.C.Board, then remove the A-P.C.Board block with the G-P.C.Board and S-P.C.Board.
7. Unscrew the 8 screws and remove the connector metal fittings.

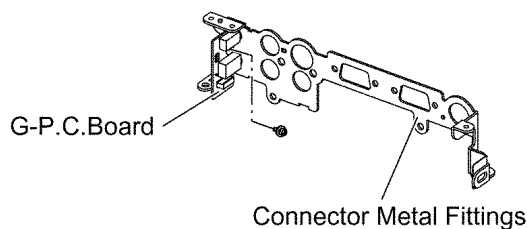
### Note:

- The G-P.C.Board is attached on the connector metal fittings, and it is connected with the A-P.C.Board. Work carefully when removing the connector metal fittings.



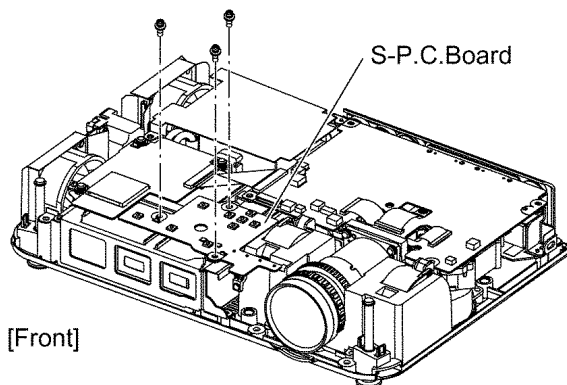
## 7.4. Removal of G-P.C.Board

1. Remove the connector metal fittings with the G-P.C.Board according to the section 7.3. "Removal of A-P.C.Board".
2. Unscrew the 1 screw and remove the G-P.C.Board.



## 7.5. Removal of S-P.C.Board

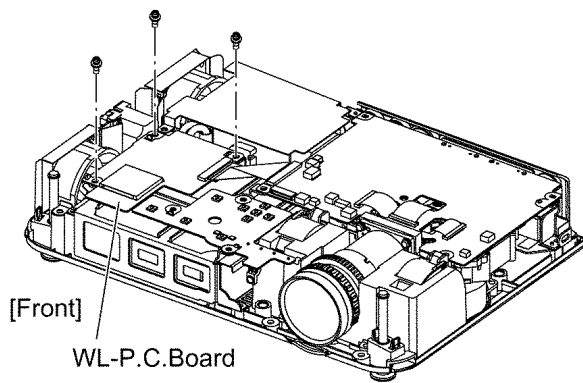
1. Remove the upper case according to the section 7.2. "Removal of Upper Case".
2. Unscrew the 3 screws.
3. Disconnect the flexible cable and remove the S-P.C.Board.



## 7.6. Removal of WL-P.C.Board (PT-LB50NTU/E/EA only)

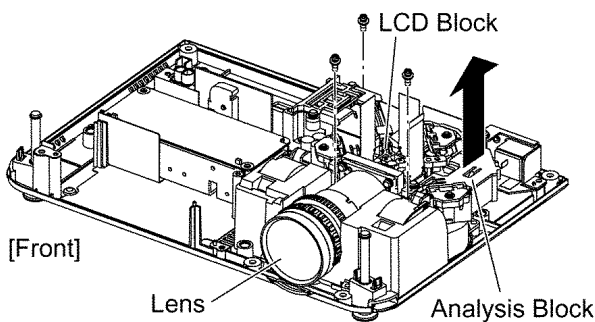
1. Remove the upper case according to the section 7.2. "Removal of Upper Case".
2. Unscrew the 3 screws and remove the WL-P.C.Board with wireless LAN module.



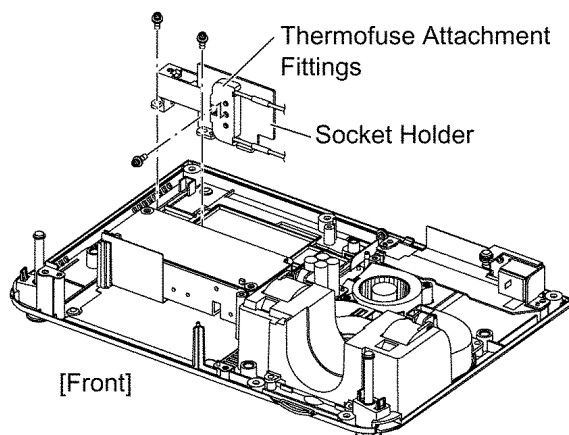


## 7.7. Removal of K-P.C.Board

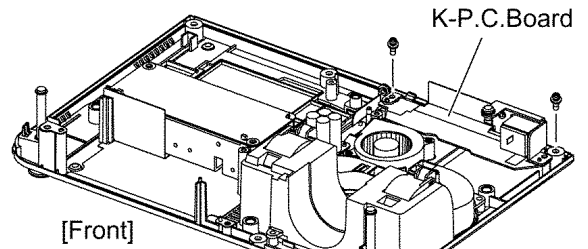
1. Remove the lamp unit according to the section 7.11. "Removal of Lamp Unit".
2. Take the P-Module out according to the section 7.8. "Removal of P-Module", and disconnect the connector from the K-P.C.Board.
3. Unscrew the 3 screws and remove the analysis block, LCD block and lens.



4. Unscrew the 2 screws and remove the socket holder.
5. Unscrew the 1 screw and remove the thermofuse attachment fittings from the socket holder.

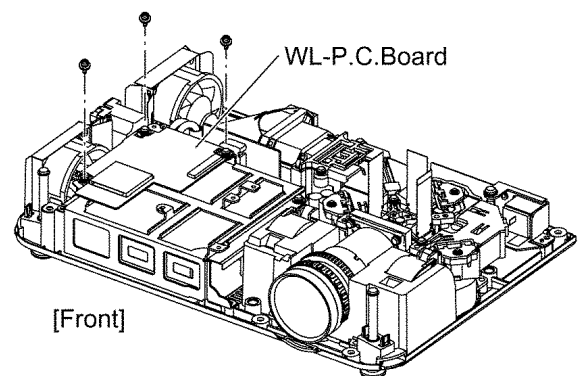


6. Unscrew the 2 screws and remove the K-P.C.Board.

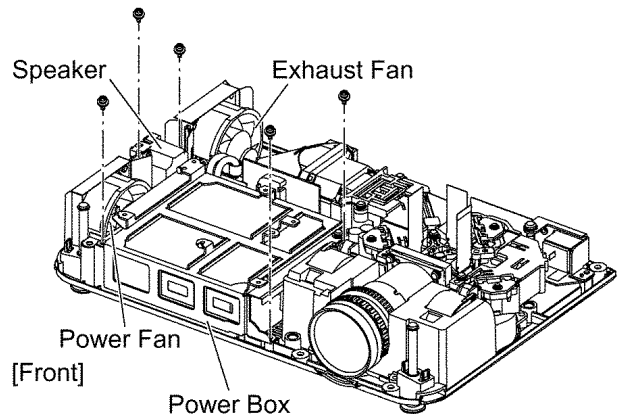


## 7.8. Removal of P-Module

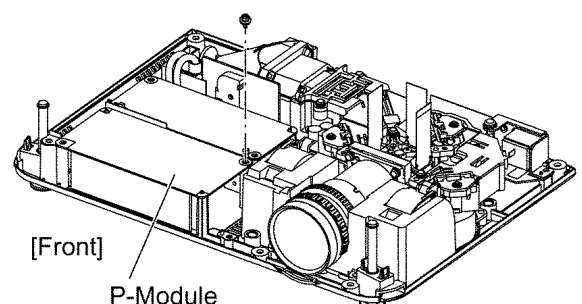
1. Remove the A-P.C.Board block according to the steps 1 through 6 in the section 7.3. "Removal of A-P.C.Board".
2. For PT-LB50NTU/E/EA, Unscrew the 3 screws and remove the WL-P.C.Board and WL shield plate.



3. Unscrew the 2 screws and remove the block of power fan, speaker and exhaust fan.
4. Unscrew the 3 screw and remove the power box.

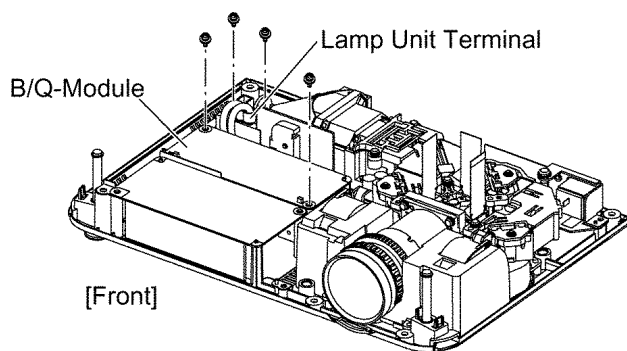


5. Unscrew the 1 screw and remove the P-Module.



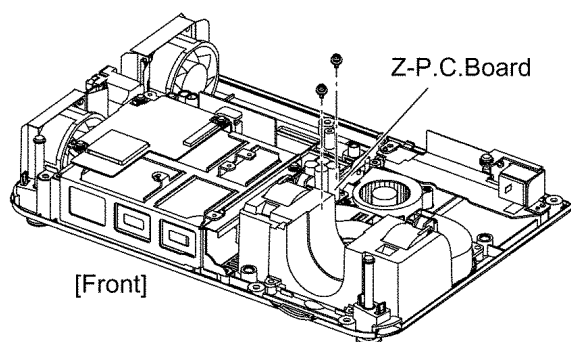
## 7.9. Removal of B/Q-Module

1. Remove the power box according to the steps 1 through 4 in the section 7.8. "Removal of P-Module".
2. Unscrew the 2 screws and remove the lamp unit terminal.
3. Unscrew the 2 screws and remove the B/Q-Module.



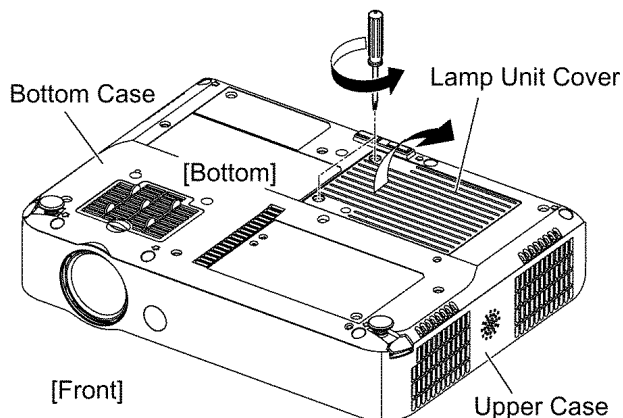
## 7.10. Removal of Z-P.C.Board

1. Remove the analysis block, LCD block and lens according to the steps 1 through 3 in the section 7.12. "Removal of Analysis Block and Lens".
2. Unscrew the 2 screws and remove the Z-P.C.Board.

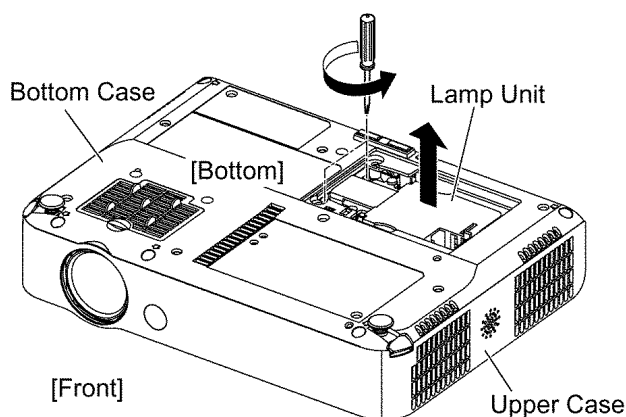


## 7.11. Removal of Lamp Unit

1. Turn the projector upside down.
2. Loosen the 2 screws until they idle, remove the lamp unit cover.



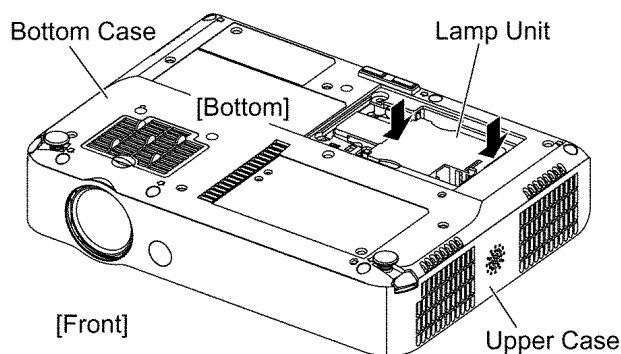
3. Loosen the 2 screws fixing the lamp unit until they idle, remove the lamp unit.



### Note:

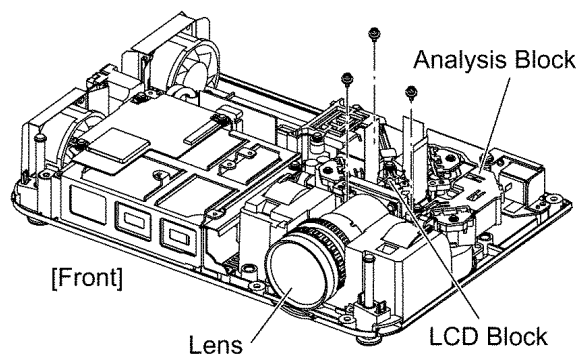
- When installing the lamp unit in the main unit, place it in a specified position and press the connector side and the opposite side of the lamp unit (arrow positions shown in the figure below), and confirm the lamp unit is inserted securely.

Then, tighten the 2 screws fixing the lamp unit, and attach the lamp unit cover.

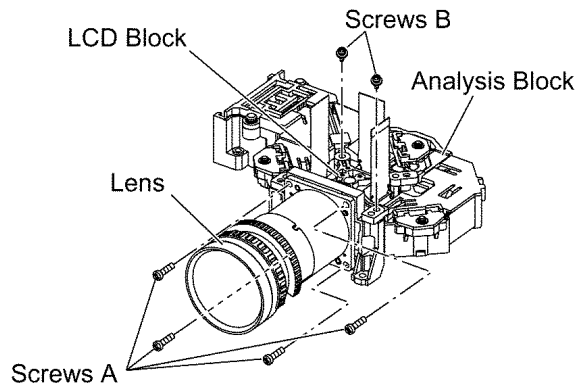


## 7.12. Removal of Analysis Block and Lens

1. Remove the lamp unit according to the section 7.11. "Removal of Lamp Unit".
2. Remove the A-P.C.Board block according to the steps 1 through 6 in the section 7.3. "Removal of A-P.C.Board".
3. Unscrew the 3 screws and remove the analysis block, LCD block and lens.



4. Unscrew the 4 screws A and remove the lens.
5. Unscrew the 2 screws B and remove the LCD block (the analysis block remains).

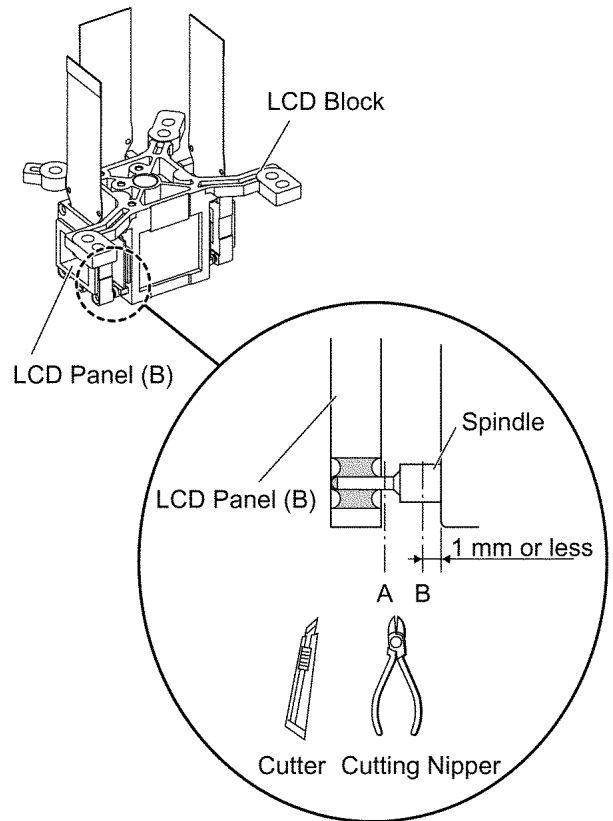
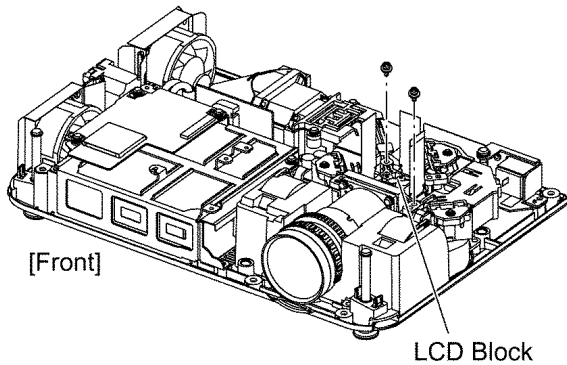


### 7.13. Removal of LCD Block

1. Remove the A-P.C.Board block according to the steps 1 through 6 in the section 7.3. "Removal of A-P.C.Board".
2. Unscrew the 2 screws and remove the LCD block.

**Note:**

- Be careful not to touch the surface of prism and LCD panel.



4. Tighten the 2 screws temporarily just until new LCD panel (with the panel attachment and panel adjuster) can be shifted by your fingers.

**Note:**

- The panel adjustment fittings set (panel attachment and panel adjuster) is an option for service.

### 7.14. Replacement of LCD Panel (B)

1. Remove the LCD block according to the section 7.13. "Removal of LCD Block".

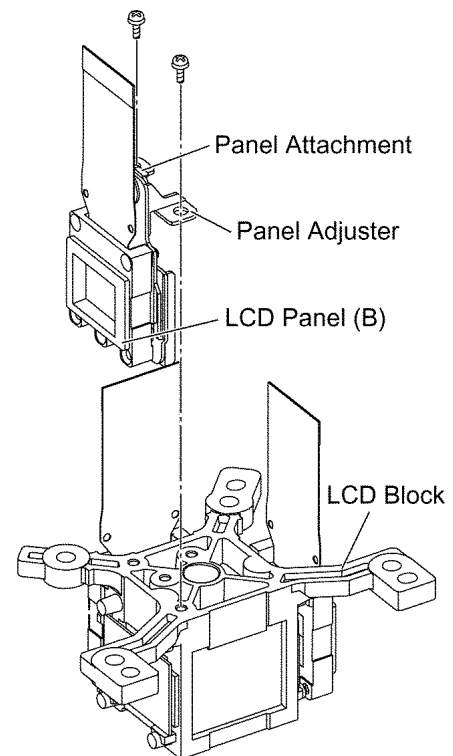
**Note:**

- Be careful not to touch the surface of prism and LCD panel.

2. Cut the 4 LCD panel installation spindles at the position A and remove the LCD panel.
3. Cut the 4 LCD panel installation spindles at the position B and remove them.

**Notes:**

- Work carefully not to apply external force around the spindle part by using a cutter, cutting nipper or the like for cutting the spindle.
- Adjust the height after the spindle is cut to 1 mm or less.



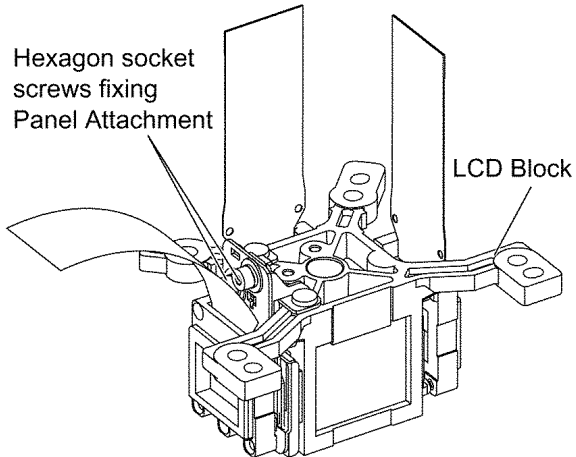
5. Reassemble the projector in the reverse order of disassembling, but leave the upper case and the screws

fixing the A-P.C.Board block as they are removed.

6. Adjust the convergence according to the section 8.4. "Convergence Adjustment".
7. After the adjustment, while paying attention not to vary the adjusting result, tighten the 2 screws fixing the panel attachment with a hexagon head wrench.

**Notes:**

- Prepare a hexagon head wrench processed short.

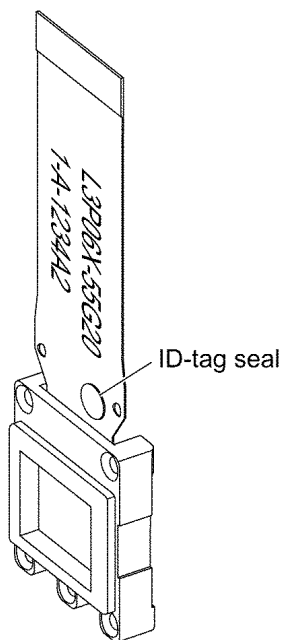


8. Reassemble the projector as it was.

## 7.15. LCD Panel Discrimination

ID-tag seal color	LCD panel
Red	LCD panel (R)
Blue	LCD panel (B)
(No seal)	LCD panel (G)

- Since the ID-tag seal is pasted to the FPC of LCD Panel, (R), (G) or (B) can be easily identified by the color of the seal.
- Finally, identify the panel color by the part number printed on the FPC.



## 7.16. LCD Panel Combination

- Part number is printed on the FPC of LCD Panel.
- When replacing LCD Panel, use a component which has the same part number as the original.

### PT-LB50NT\*\*/LB50\*\*

LCD panel	Part No.
R	L5BDAYY00003 (L3P06X-55G20)
G	L5BDAYY00004 (L3P06X-55G20)
B	L5BDAYY00001 (L3P06X-55G20)

### PT-LB50S\*\*

LCD panel	Combination1	Combination2
R	L5BDAXN00079 (L3P06S-45G10)	L5BDAXN00082 (L3P06S-46G10)
G	L5BDAXN00083 (L3P06S-46G10)	L5BDAXN00080 (L3P06S-45G10)
B	L5BDAXN00081 (L3P06S-45G10)	L5BDAXN00084 (L3P06S-46G10)

## 7.17. Replacement of Incidence Polarizer (R and B)

1. Remove the LCD block according to the section 7.13. "Removal of LCD Block".

**Note:**

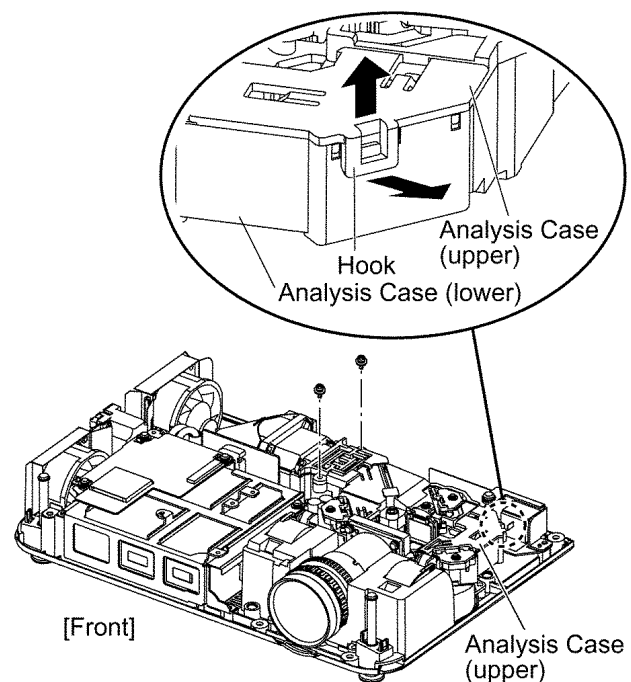
- Be careful not to touch the surface of prism and LCD panel.

2. Unscrew the 2 screws.

3. Remove the analysis case (upper) while expanding the hook of it outside.

**Note:**

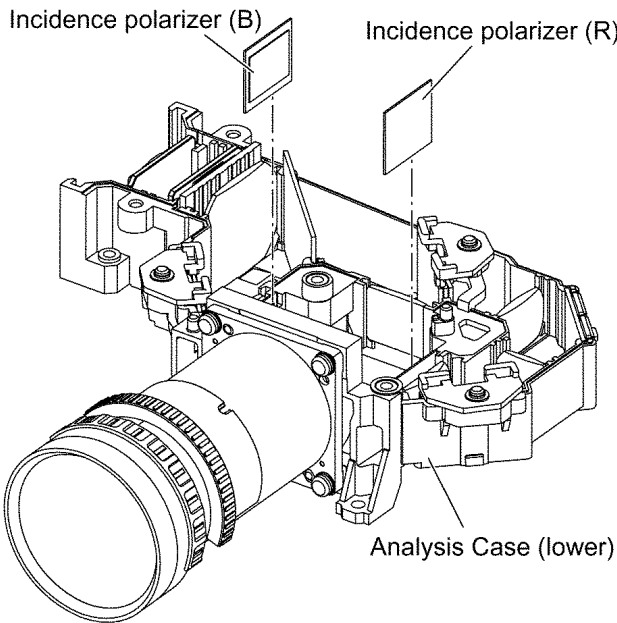
- Because the hook is damaged easily, be careful not to expand it excessively.



4. Replace the incidence polarizer.

**Note:**

- Be careful not to touch the surface of incidence polarizer.



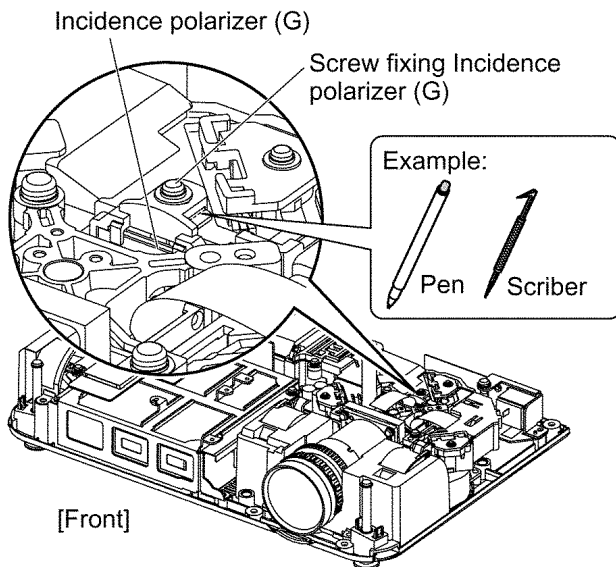
## 7.18. Replacement of Incidence Polarizer (G)

1. Remove the A-P.C.Board block according to the steps 1 through 6 in the section 7.3. "Removal of A-P.C.Board".
2. Mark positions of the incidence polarizer (G).

**Note:**

- Mark accurately as possible because the marks will be used for resetting the incidence polarizer position.

3. Unscrew the 1 screw and remove the incidence polarizer (G).
4. Attach a new incidence polarizer (G) and align it with the mark.
5. Tighten the 1 screw with care not to move the incidence polarizer position.



## 7.19. Replacement of Projection Polarizer

- The procedure is described as an example of projection polarizer (B).

1. Remove the LCD block according to the section 7.13. "Removal of LCD Block".
2. Remove the projection polarizer which requires replacing. (The projection polarizer is secured with adhesive tape.)

**Notes:**

- Be careful not to damage peripheral components (prism, LCD panel, etc.).
- Use tweezers.

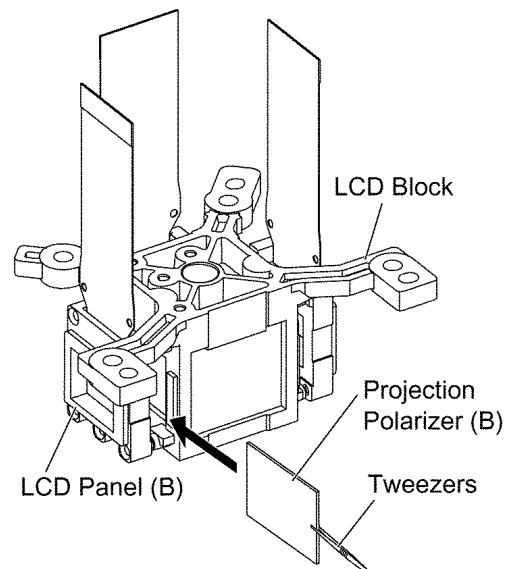
3. Install new projection polarizer.

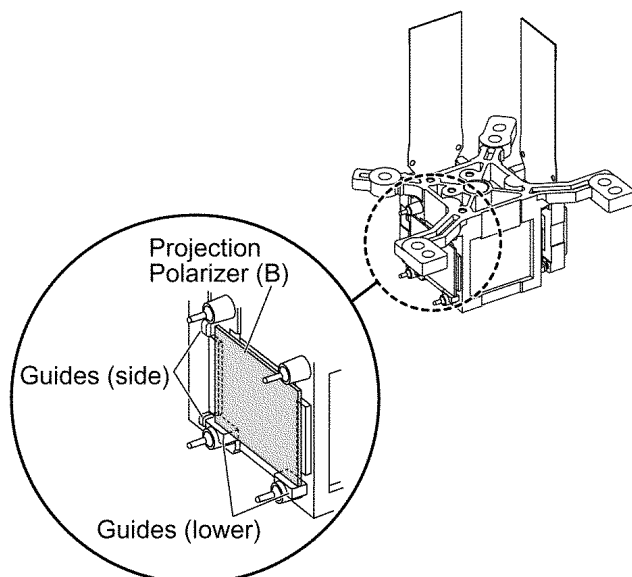
- a. Put adhesive tape on the projection polarizer.
- b. Stick the projection polarizer on the specified position.

**Notes:**

- Align the projection polarizer with the guides (lower, side) of LCD block.
- Be careful not to touch the surface of projection polarizer.
- Use tweezers.

- c. Press the adhesive part and secure the projection polarizer.



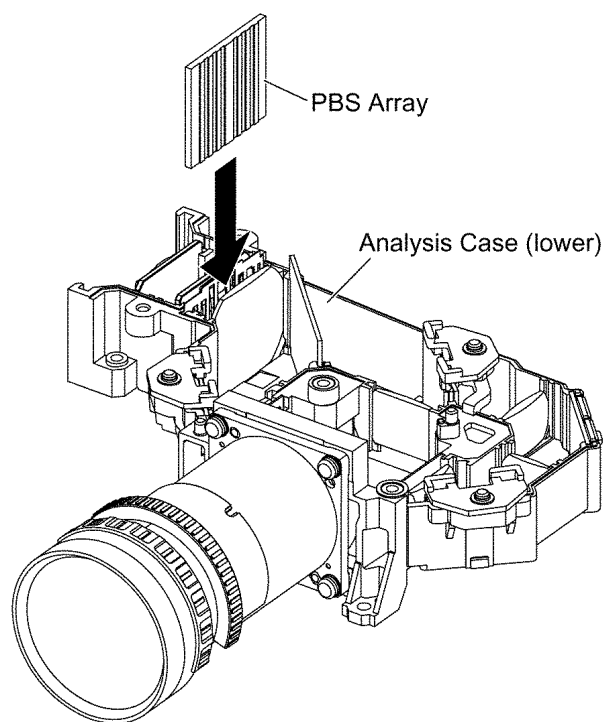


## 7.20. Replacement of PBS Array (Analysis Block)

1. Remove the analysis case (upper) according to the steps 1 through 3 in the section 7.17. "Replacement of Incidence Polarizer (R and B)".
2. Remove the PBS array.
3. Install new PBS array.

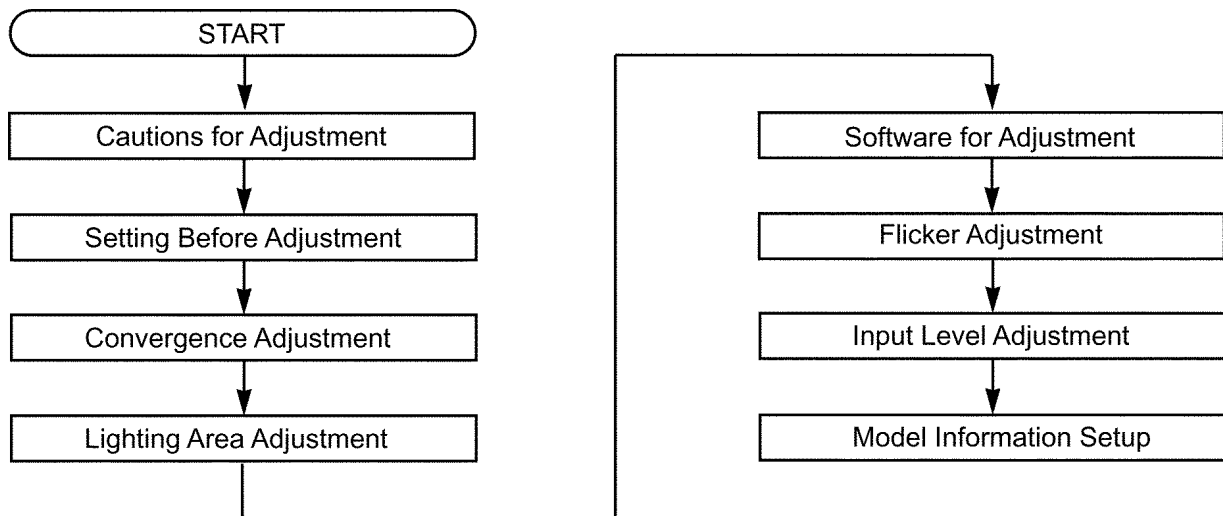
### Note:

- Be careful not to mistake the direction (inside and outside, upper and lower).
- Be careful not to touch the surface of PBS array.



## 8 Measurement and Adjustments

### 8.1. Adjustment Procedure Flowchart

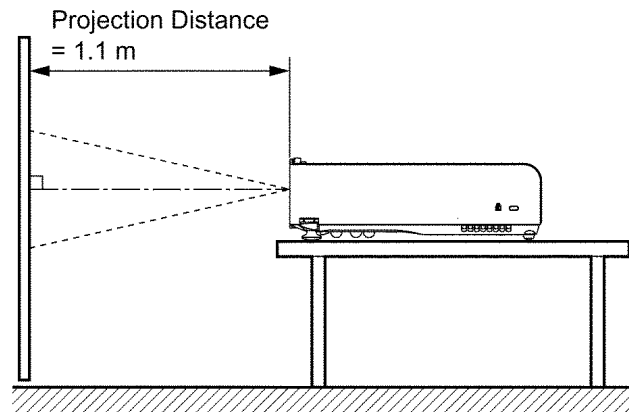


### 8.2. Cautions for Adjustment

- Never unplug the power cord until the power indicator on the projector illuminates red.
- To maintain and ensure safety, always use the designated components for replacement parts.
- If removing any clamps, lead wires or connectors, always place them back in their proper locations.
- Be careful not to damage the lead wires or components when using a soldering iron or similar tool.

### 8.3. Setting Before Adjustment

- Set up the projector to obtain the projection distance below.
- Turn the zoom ring of the projector to obtain the largest size of the picture.



### 8.4. Convergence Adjustment

Execute this adjustment when replacing the LCD panel (B).

#### 8.4.1. Tools to be used

Service Kit : This kit is composed of 3 extension flexible cables.

#### Note:

- Consult your dealer or Authorized Service Center for the service kit.

#### 8.4.2. Preparation

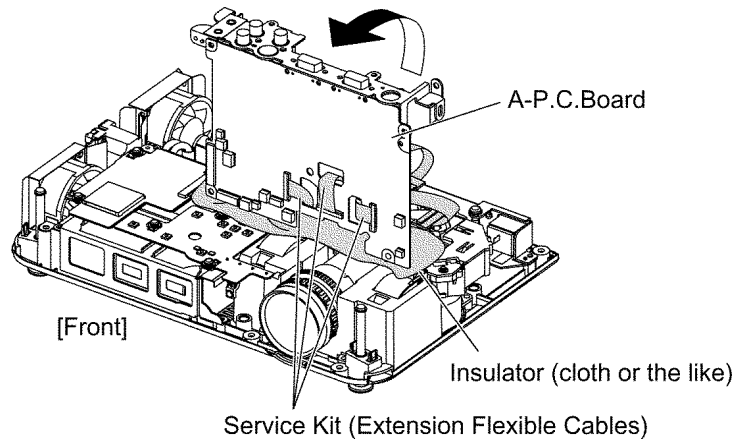
1. Loosen 2 screws fixing the panel adjuster and 2 screws fixing the panel attachment, then tighten the 4 screws temporarily just until the LCD panel can be shifted by your fingers.

**Note:**

- See figures in the section 7.14. "Replacement of LCD Panel (B)" for 2 screws fixing the panel adjuster and 2 screws fixing the panel attachment.
2. Reassemble the projector in the reverse order of disassembling, but leave the upper case and the screws fixing the A-P.C.Board block as they are removed.
  3. Connect the service kit (extension cables).
    - Each flexible cable of LCD Panels (R/G/B) - Connectors (A1/A2/A3) on A-P.C.Board
  4. Covering with an insulator (cloth or the like) to prevent a short circuit, set the A-P.C.Board block on the main unit.

**Note:**

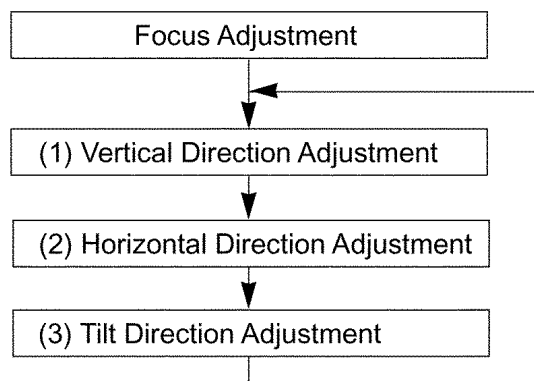
- Handle with care not to apply external force to connecting parts which connect the main unit and A-P.C.Board.



### 8.4.3. Adjustment Procedure

Prepare 2 pieces of thick black paper (23 mm × 100 mm) that can be shaded.

- Cover and shade LCD panels (R) and (G) with the paper.
1. Display the green crosshatch pattern and adjust the lens focus.
  2. Display green and blue crosshatch patterns.
  3. Adjust focus by shifting the panel adjuster for LCD panel (B) back and forth, then tighten the 2 screws.
  4. Adjust the LCD panel (B) position so that the vertical center of blue crosshatch pattern is overlapped with the vertical center of green crosshatch pattern.
  5. Adjust the LCD panel (B) position so that the horizontal center of blue crosshatch pattern is overlapped with the horizontal center of green crosshatch pattern.
  6. Correct the tilt of the blue crosshatch pattern by adjusting the LCD panel (B) position.
  7. Display green, red and blue crosshatch patterns and confirm the convergence. If it is necessary, fine adjust the convergence so that the blue crosshatch pattern is overlapped with green one.

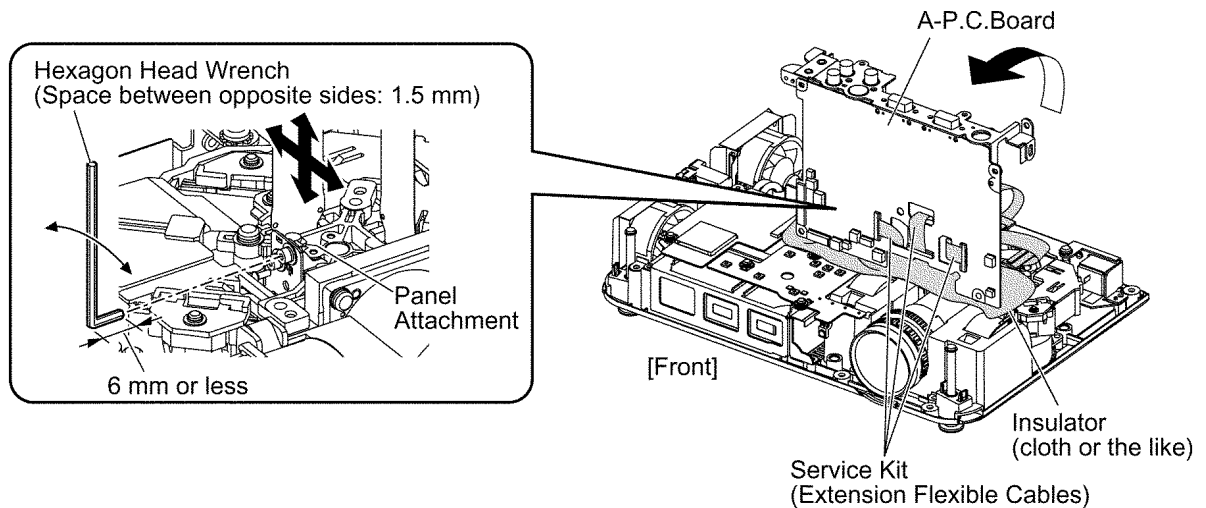


Repeat steps (1) to (3) until the green and blue crosshatch patterns merge into a cyan pattern.

8. After the adjustment, reassemble the projector according to the steps 7 and 8 in the section 7.14. "Replacement of LCD Panel



(B)".



## 8.5. Lighting Area Adjustment

### 8.5.1. Tools to be used

Service Kit: This kit is composed of 3 extension flexible cables.

**Note:**

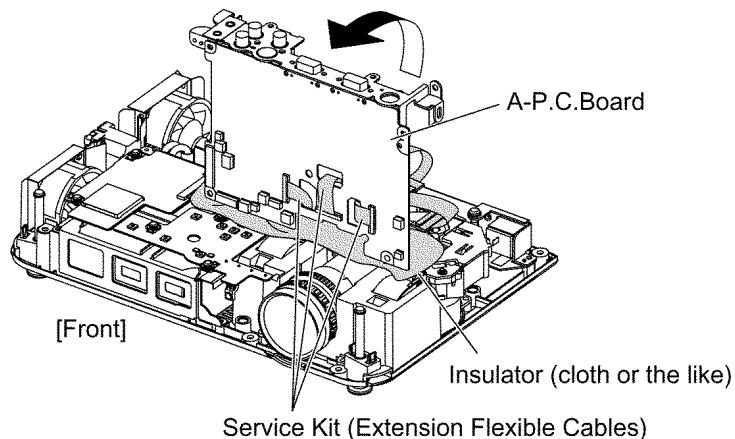
- Consult your dealer or Authorized Service Center for the service kit.

### 8.5.2. Preparation

1. Unfix the A-P.C.Board block according to the steps 1 through 5 in the section 7.3. "Removal of A-P.C.Board".
2. Connect the service kit (extension cables).
  - Each flexible cable of LCD Panels (R/G/B) - Connectors (A1/A2/A3) on A-P.C.Board
3. Covering with an insulator (cloth or the like) to prevent a short circuit, set the A-P.C.Board block on the main unit.

**Note:**

- Handle with care not to apply external force to connecting parts which connect the main unit and A-P.C.Board.



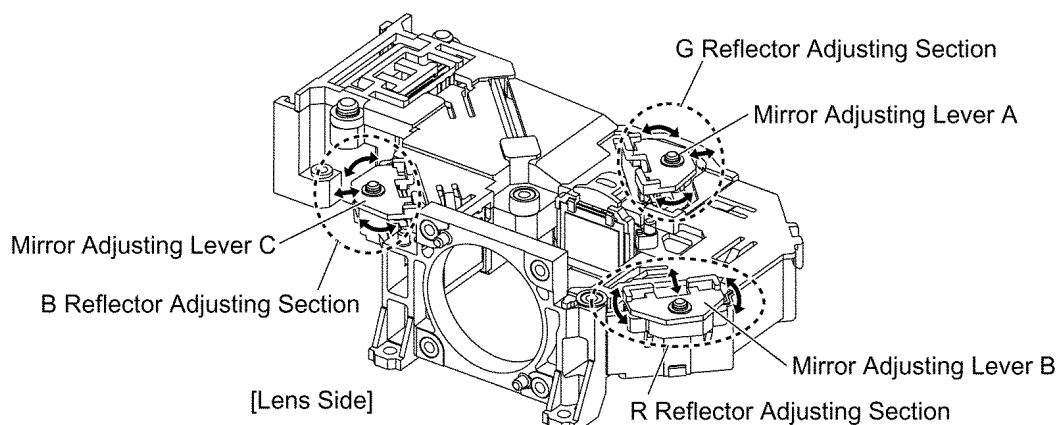
### 8.5.3. Adjustment Procedure

#### 8.5.3.1. Outline

When the lighting area is off from the adjustment and color unevenness appears, adjust the lighting area into correct position.

Symptom	Measure
Magenta unevenness	G Reflector Adjustment
Cyan unevenness	R Reflector Adjustment
Yellow unevenness	B Reflector Adjustment

- Shifting the mirror adjusting lever horizontally, adjust color unevenness on the screen upper/lower sides.
- Twisting the mirror adjusting lever, adjust color unevenness on the screen right/left sides.



[Above figure is shown only the analysis block for explanation.]

### 8.5.3.2. G Reflector Adjustment

1. Turn on the power and display 100 % white pattern on the screen.
2. Loosen the 1 screw fixing the mirror adjusting lever A just until the lever can be shifted.
3. Adjust the mirror adjusting lever A position to minimize color unevenness on the screen by shifting the lever in arrow directions.
4. Tighten the 1 screw.

### 8.5.3.3. R Reflector Adjustment

1. Turn on the power and display 100 % white pattern on the screen.
2. Loosen the 1 screw fixing the mirror adjusting lever B just until the lever can be shifted.
3. Adjust the mirror adjusting lever B position to minimize color unevenness on the screen by shifting the lever in arrow directions.
4. Tighten the 1 screw.

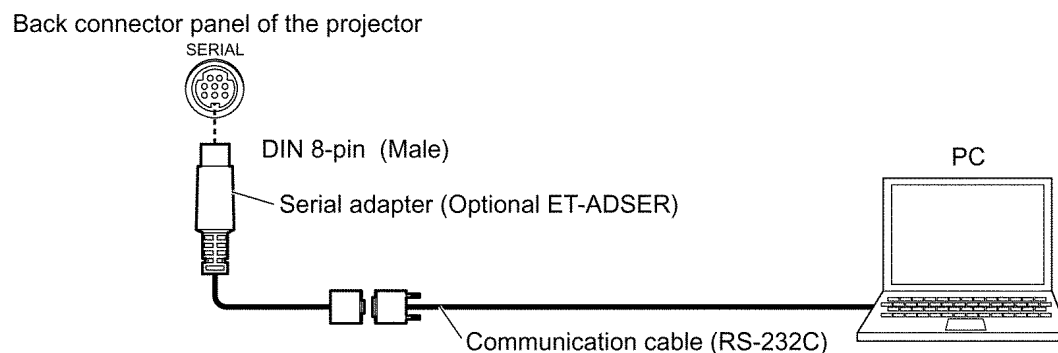
### 8.5.3.4. B Reflector Adjustment

1. Turn on the power and display 100 % white pattern on the screen.
2. Loosen the 1 screw fixing the mirror adjusting lever C just until the lever can be shifted.
3. Adjust the mirror adjusting lever C position to minimize color unevenness on the screen by shifting the lever in arrow directions.
4. Tighten the 1 screw.

## 8.6. Software for Adjustment

### 8.6.1. Outline

- This projector needs computer-aided adjustments.
- After the software adjustments, this projector must be turned off and on again to memorize the settings.
- Connect the cable between the projector and a PC as shown below.
- Updating the software will change the version number.



## 8.6.2. Operating Procedure

1. Run software program by the keyboard entry.

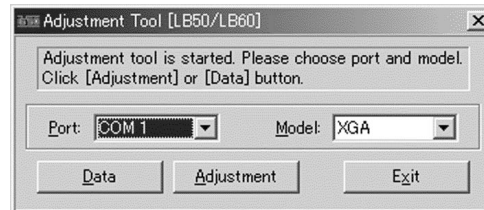
**Note:**

- Use the software program as below.

Adjustment Tool [LB50/LB60]

2. The first menu is Port and Model selection menu.
3. Adjust the projector by selecting the necessary item from the menu in each stage.

## 8.6.3. Port and Model Selection Menu



Select the applying item with the list box and click "Data" or "Adjustment".

### 8.6.3.1. Explanation of Buttons

**Port:**

Port name of PC which connects with the projector

**Model:**

Pixels (XGA/S-VGA) of LCD panels of the model involved

**Data:**

Displays the data transmission/reception menu.

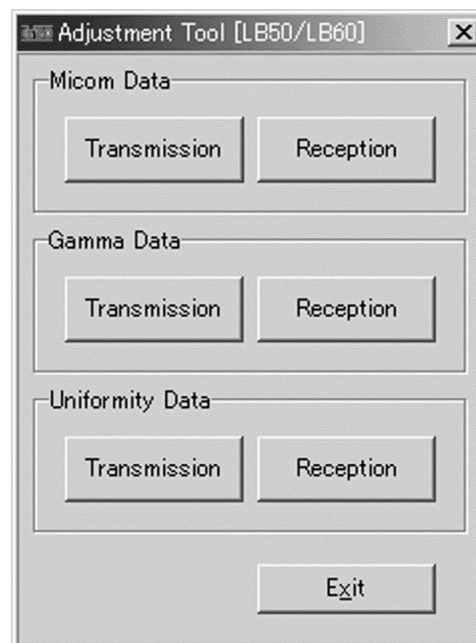
**Adjustment:**

Displays the adjustment menu.

**Exit:**

Exits this application.

## 8.6.4. Data Transmission/Reception Menu



### 8.6.4.1. Explanation of Buttons

**Micom Data Transmission:**

Reads the microcomputer data from the file and transmits it to the projector.

**Micom Data Reception:**

Receives the microcomputer data from the projector and writes it in the file.

**Gamma Data Transmission:**

Reads the gamma data from the file and transmits it to the projector.

**Gamma Data Reception:**

Receives the gamma data from the projector and writes it in the file.

**Uniformity Data Transmission:**

Reads the color unevenness correction data from the file and transmits it to the projector.

**Uniformity Data Reception:**

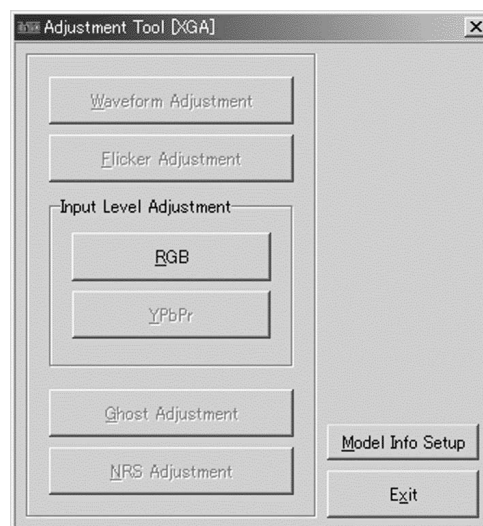
Receives the color unevenness correction data from the projector and writes it in the file.

**Exit:**

Exits this application.

**8.6.4.2. Receiving and transmitting of the data**

Click a target button and specify a file name.

**8.6.5. Adjustment Menu****8.6.5.1. Explanation of Buttons****Input Level Adjustment RGB:**

Displays the RGB input level adjustment menu.

**Model Info Setup**

Displays the model information setup menu.

**Exit:**

Exits this application.

**8.7. Flicker Adjustment**

According to the procedure of chapter 5 "Flicker Adjustment Mode", minimize the flicker.

**8.8. Input Level Adjustment****8.8.1. Adjustment Menu**

### 8.8.2. Explanation of Buttons

#### OK:

Executes automatic sub contrast and sub brightness adjustments, then closes this dialog.

#### Cancel:

Cancels this menu.

### 8.8.3. Equipment to be used

PC, RGB Signal Generator, Software for Adjustment

### 8.8.4. Adjustment Procedure

1. Display the input level adjustment [RGB] menu.
2. Input a window pattern signal to PC IN1 connector.

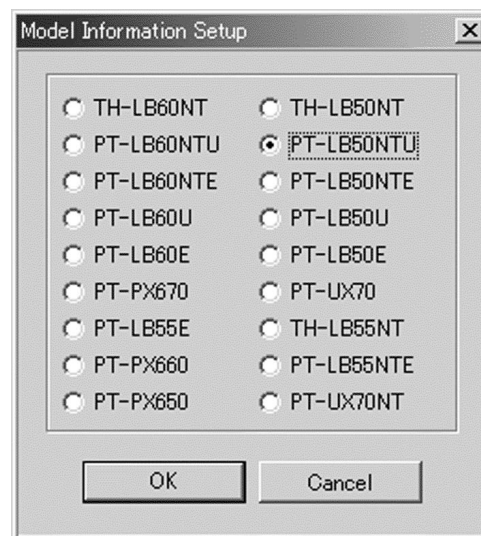
#### Note:

- Use approx. 15 % window pattern as follows.  
Black background (screen width) : White window width = 2 : 1  
Black background (screen height) : White window height = 3 : 1
- PT-LB50NTU/E/EA, LB50U/E/EA must use the window pattern of XGA (1 024 × 768).
- PT-LB50SU/E/EA must use the window pattern of S-VGA (800 × 600).

3. Click the OK button.

## 8.9. Model Information Setup

### 8.9.1. Adjustment Menu



### 8.9.2. Explanation of Buttons

#### Radio buttons:

Selects the corresponding model name.

#### OK:

Executes model information setup, then closes this dialog.

#### Cancel:

Cancels this menu.

### 8.9.3. Equipment to be used

PC, Software for Adjustment

### 8.9.4. Setup Procedure

Set the projector into standby mode (POWER button on the projector control panel illuminated red), and execute the following procedure.

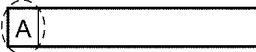
1. Display the model information setup menu.

2. Select the corresponding model name.
3. Click the OK button.

## 9 Troubleshooting

The letters in the left of the inspection items indicate the P.C.Boards or Modules related to their respective descriptions.

Note:



The letter of the alphabet indicates the P.C.Board or Module name.

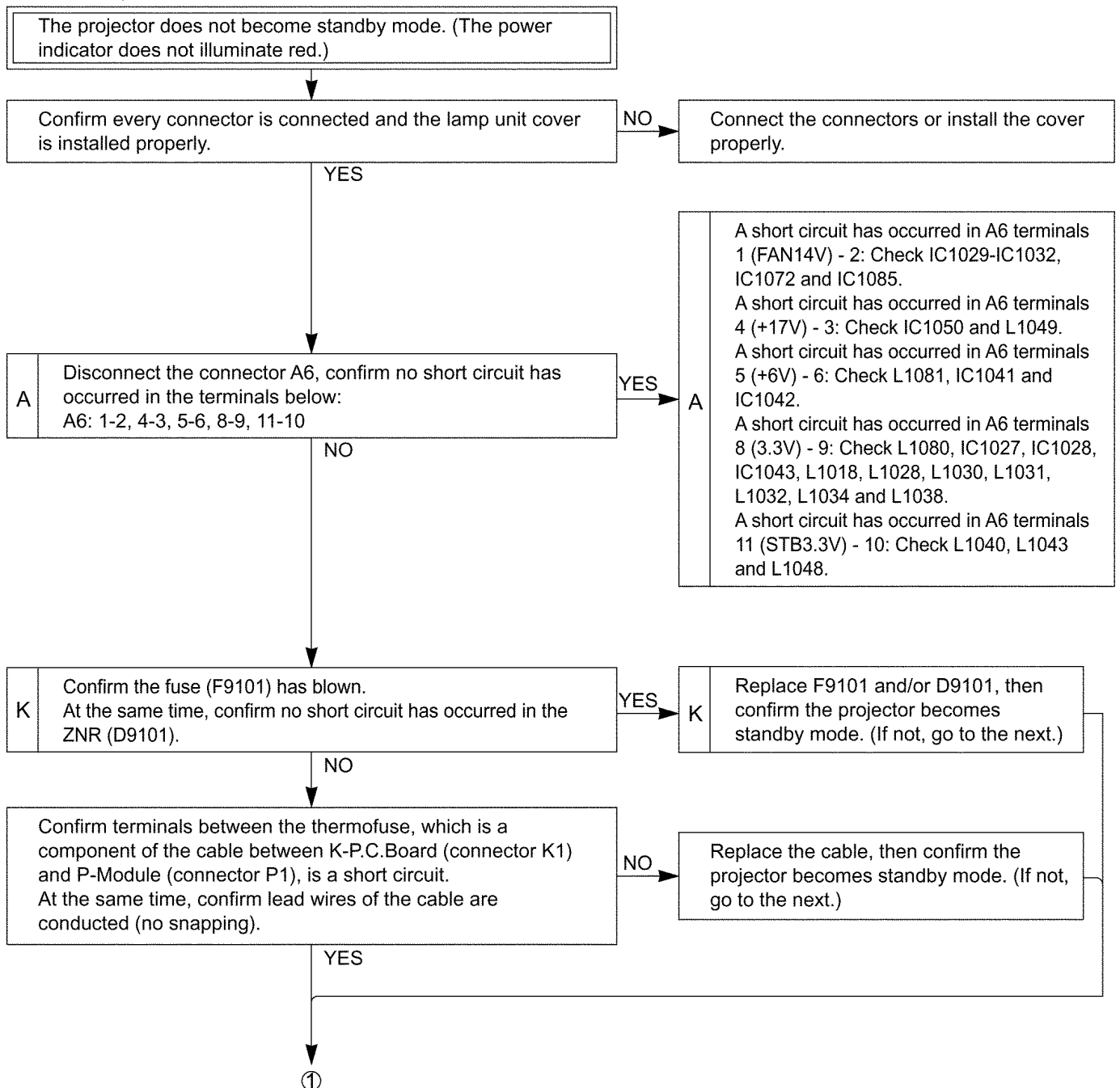
(Example) A: A-P.C.Board, B: B-Module

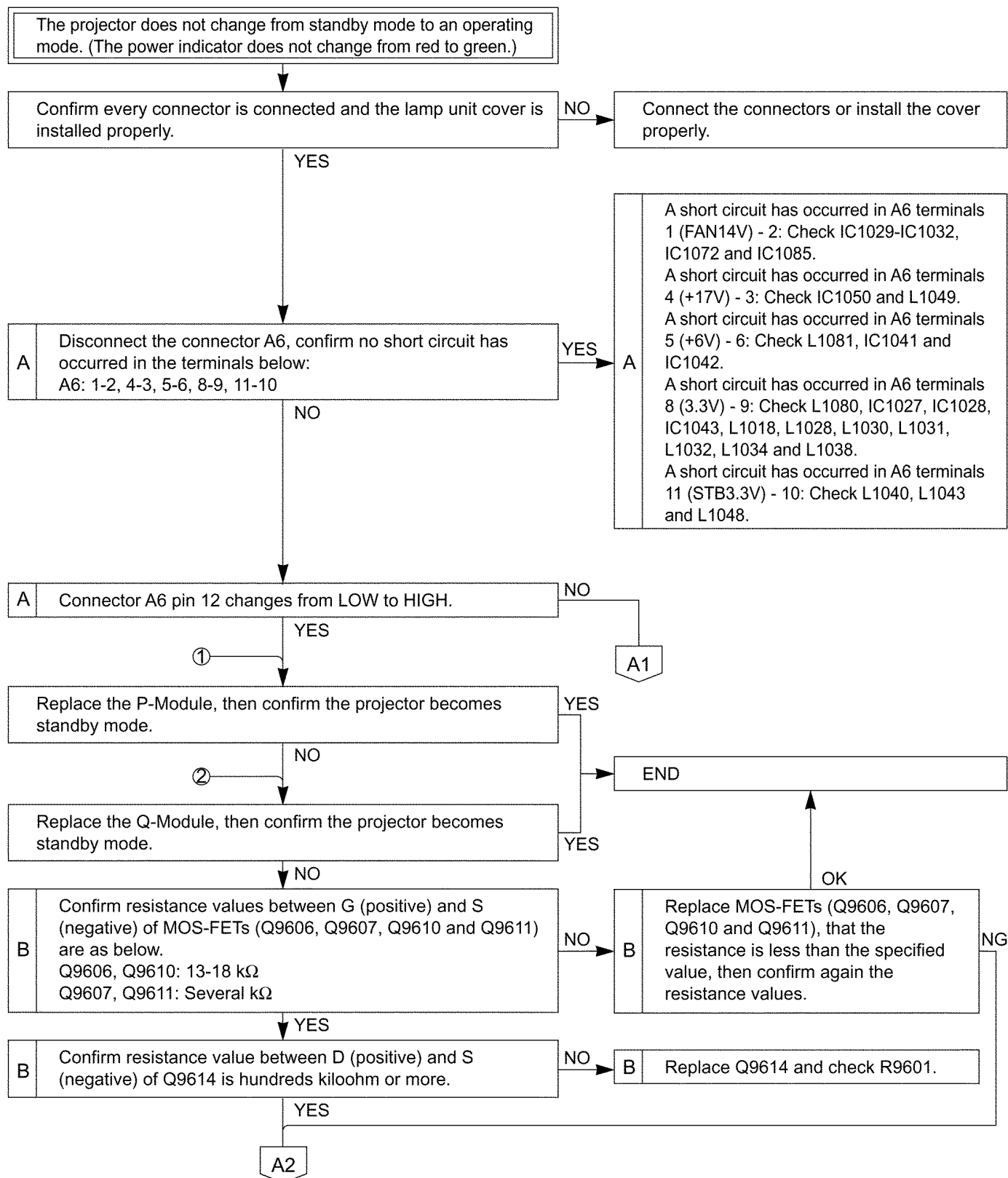
If replacing A-P.C.Board (assembly), read the ROM data from the old P.C.Board and write it in the new one according to the section 8.6. "Software for Adjustment". At this time, if the readout from the old P.C.Board does not succeed, remove IC1011 and IC1017 from the old P.C.Board and install them on the new one. Then, execute the self-check according to the chapter 3. "Self-Check Mode", and confirm "G SAVED" and "U-SAVED" display "OK".

If replacing A-P.C.Board (assembly), minimize the flicker according to the chapter 5. "Flicker Adjustment Mode".

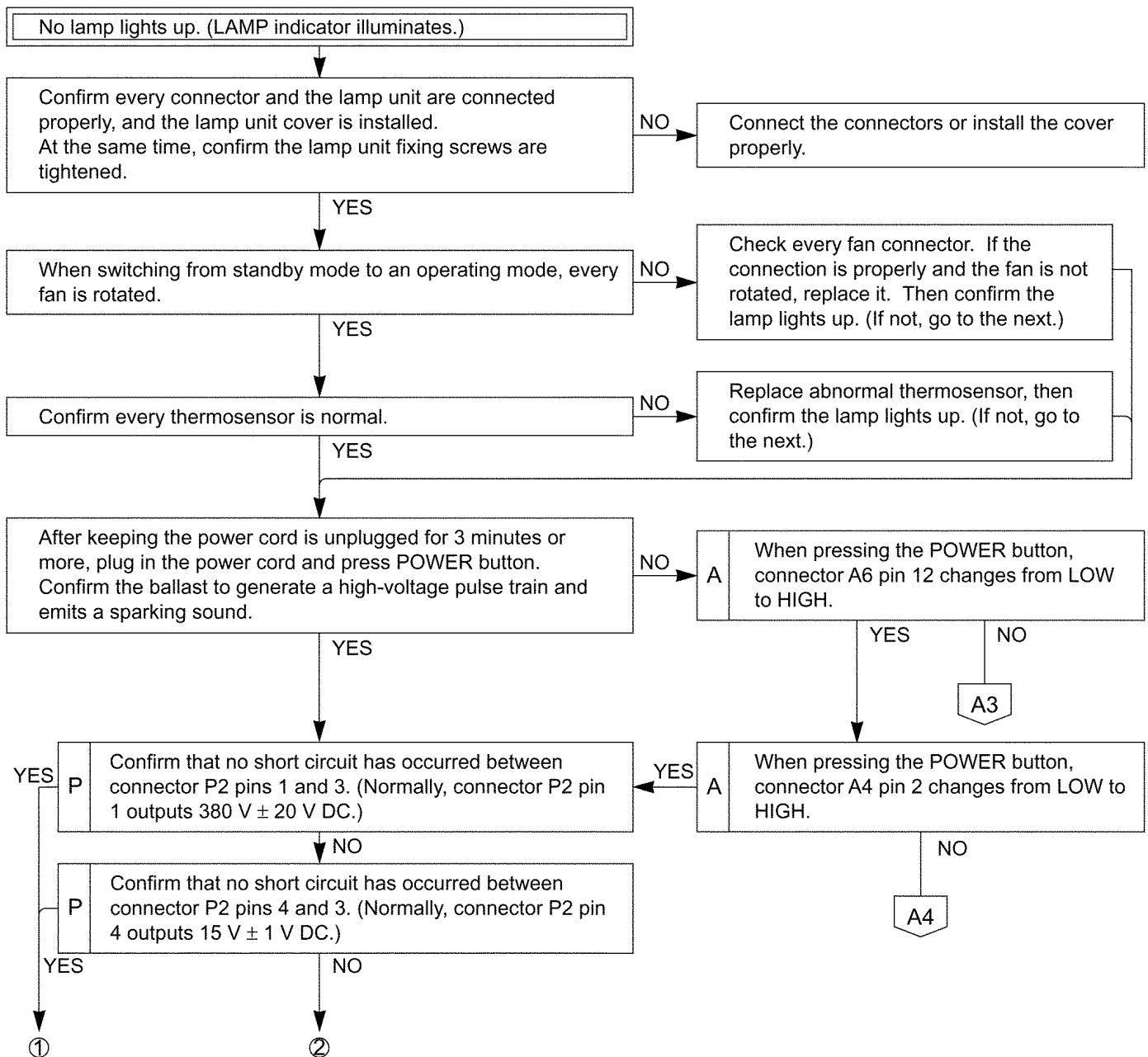
If replacing A-P.C.Board (assembly), adjust the RGB Input Level according to the chapter 8.8. "Input Level Adjustment".

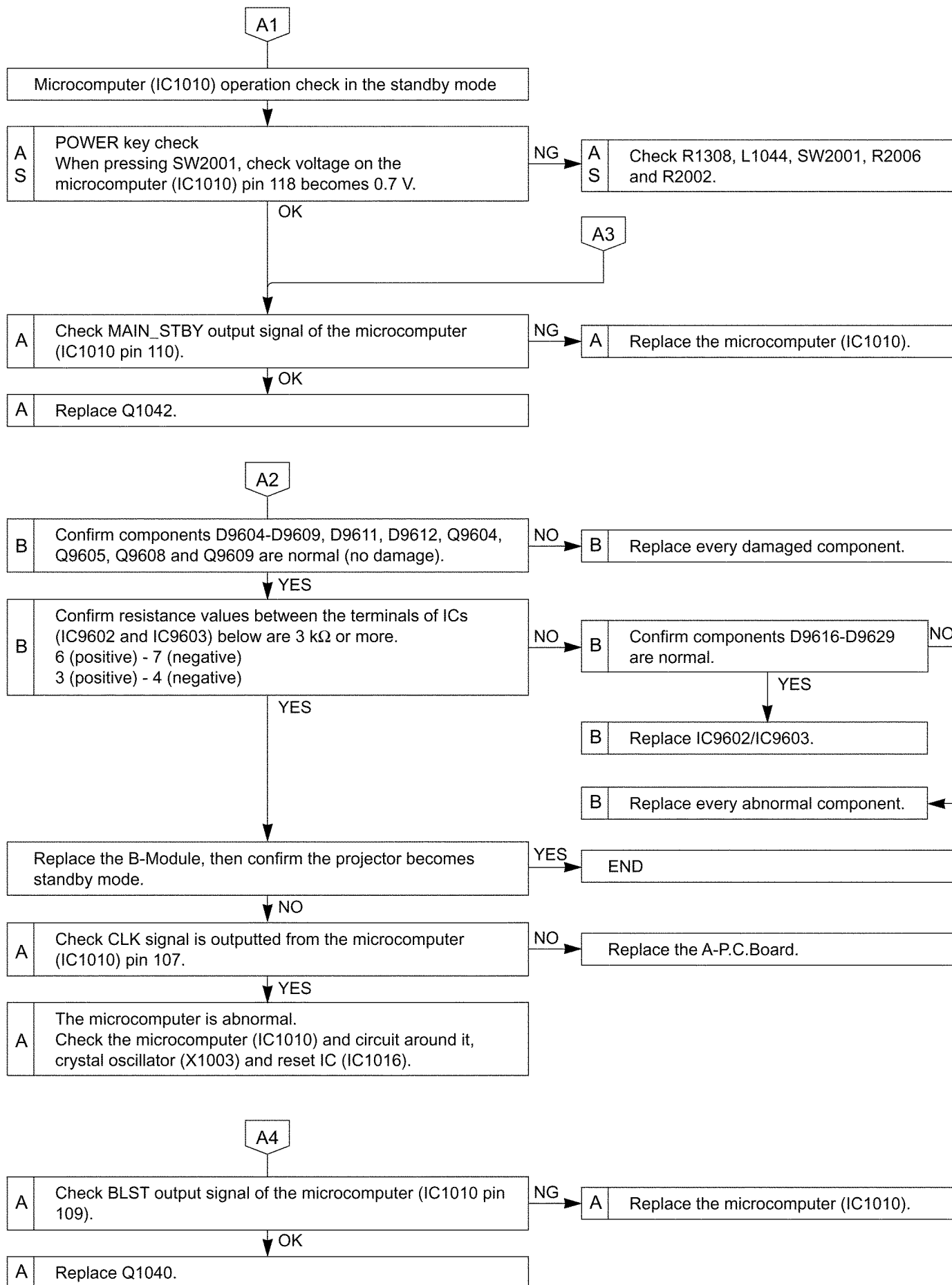
If replacing A-P.C.Board (assembly), set Model Information according to the chapter 8.9. "Model Information Setup".

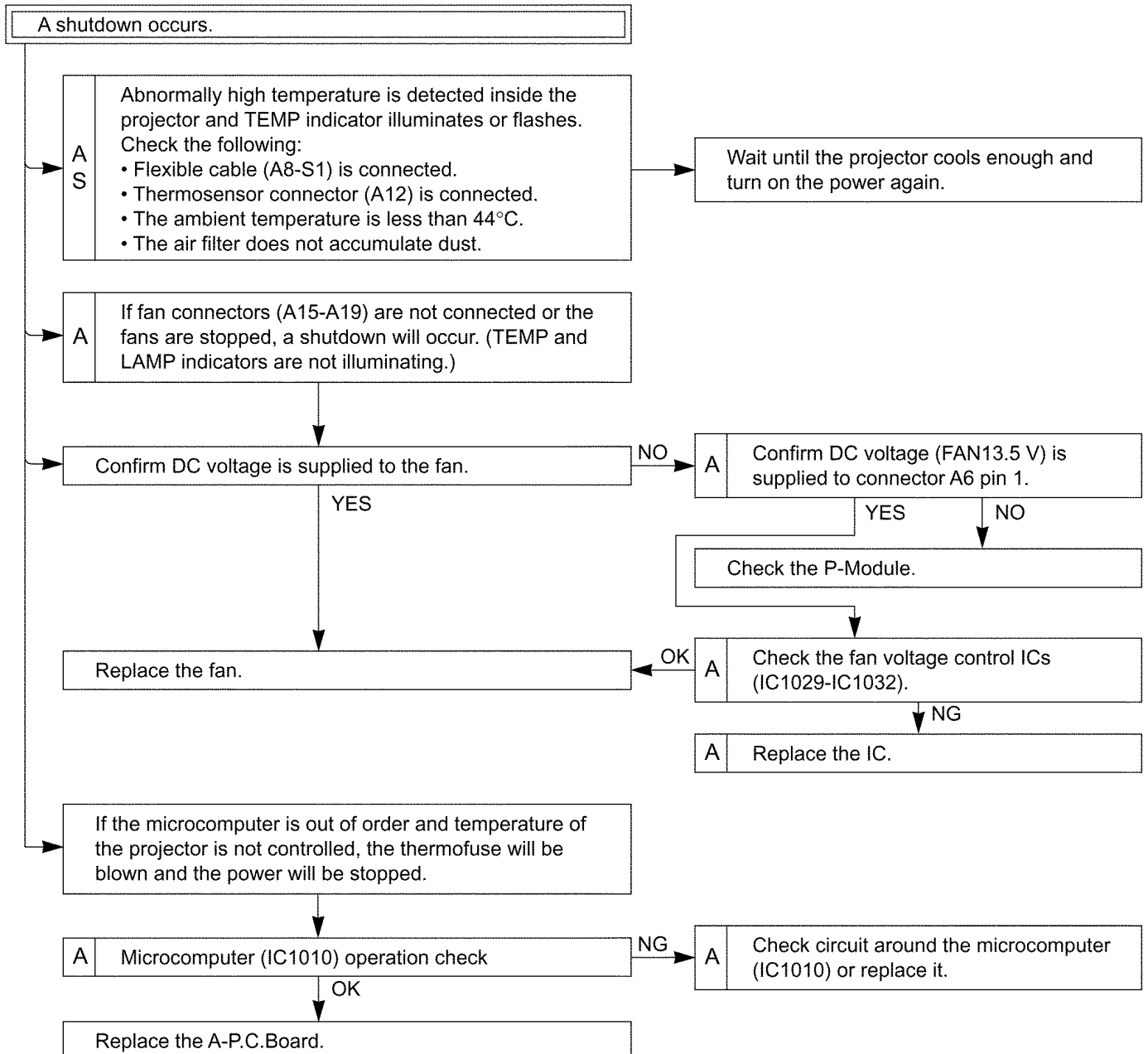
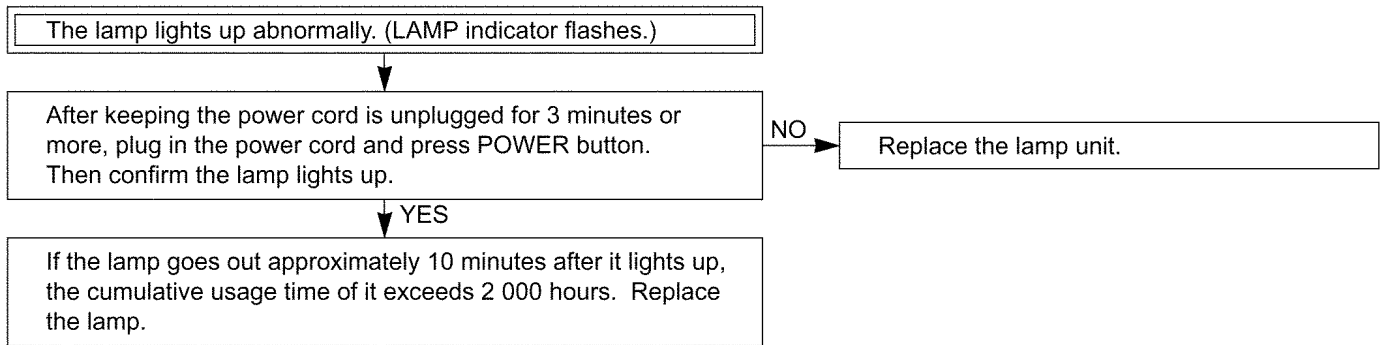


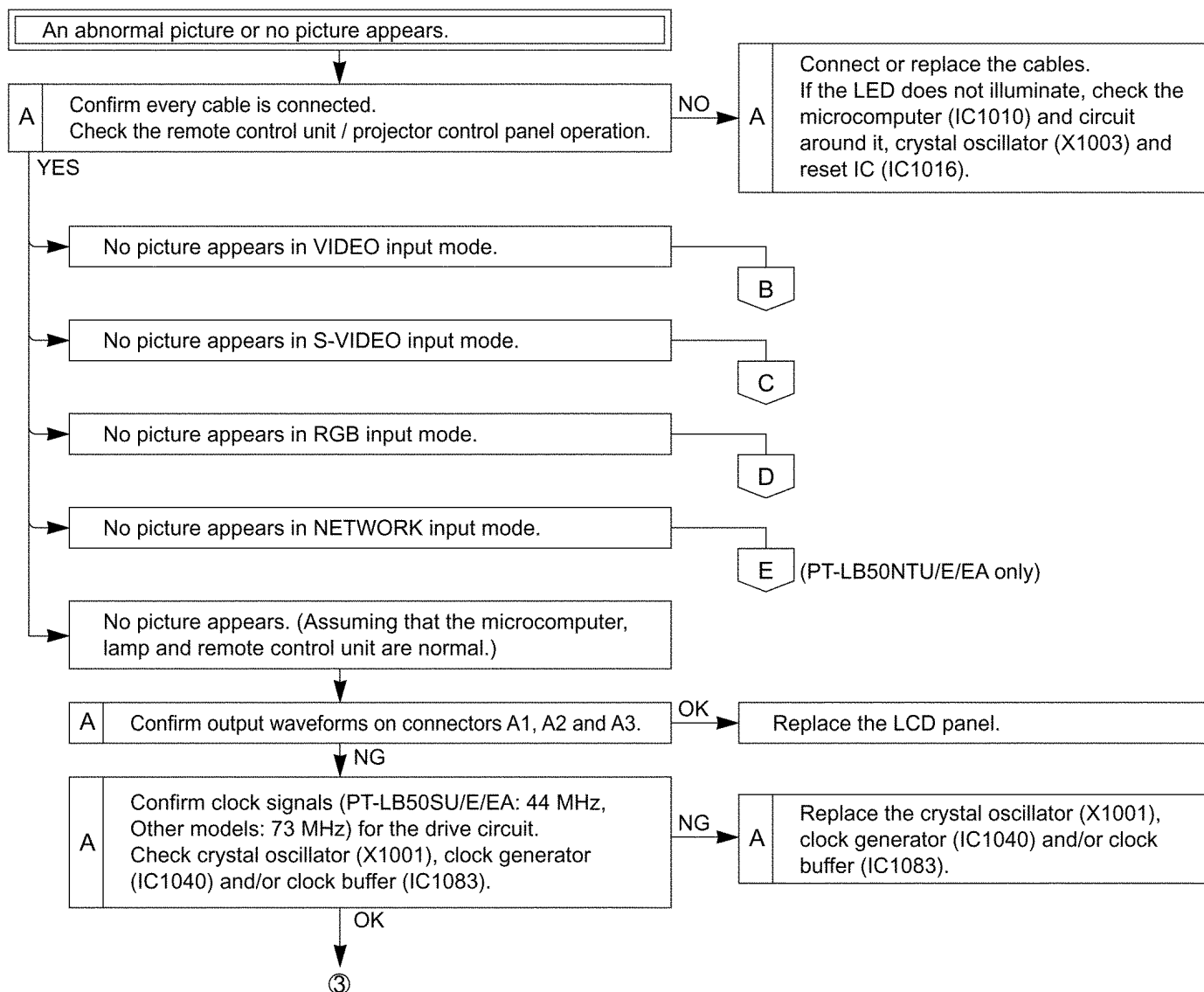


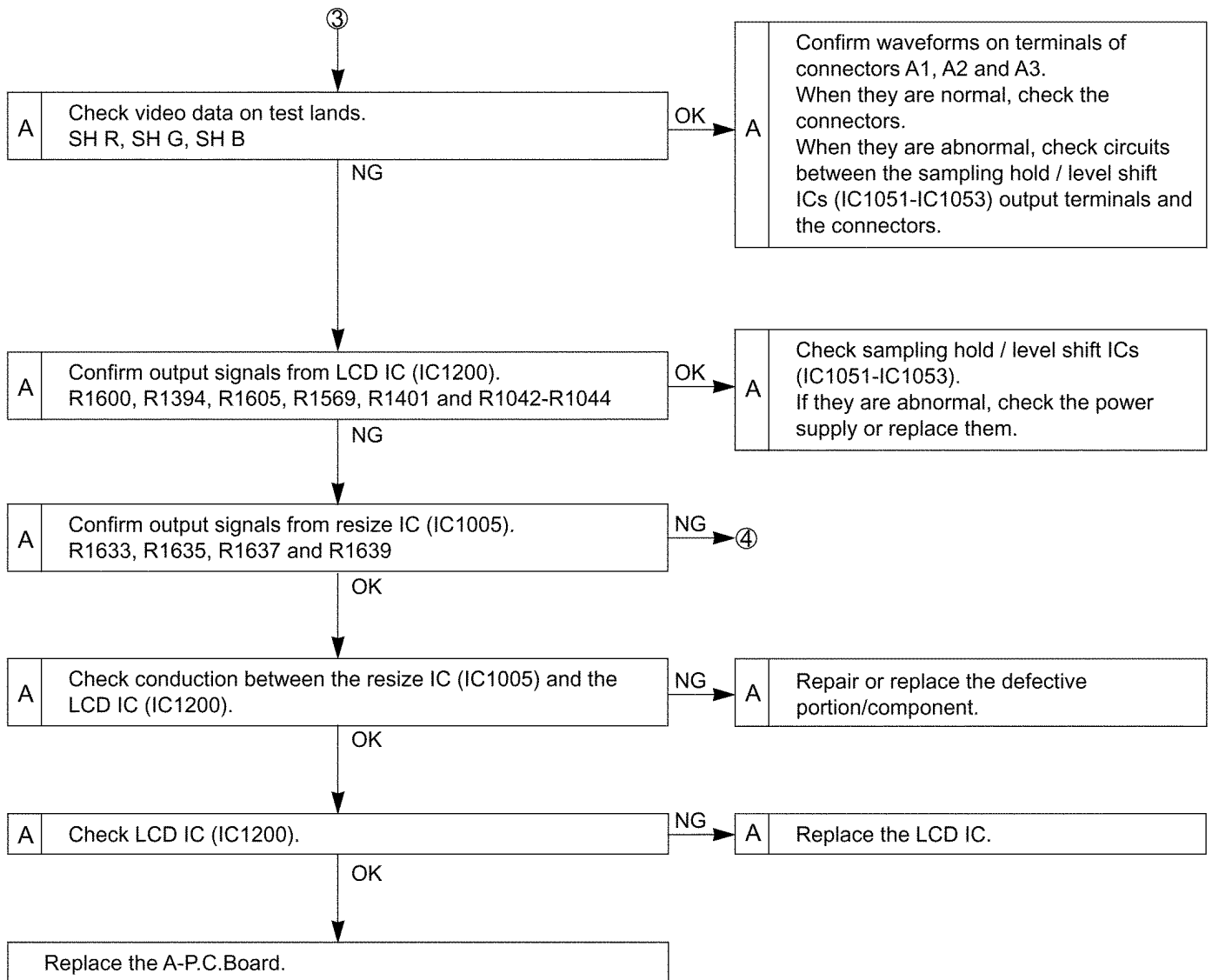


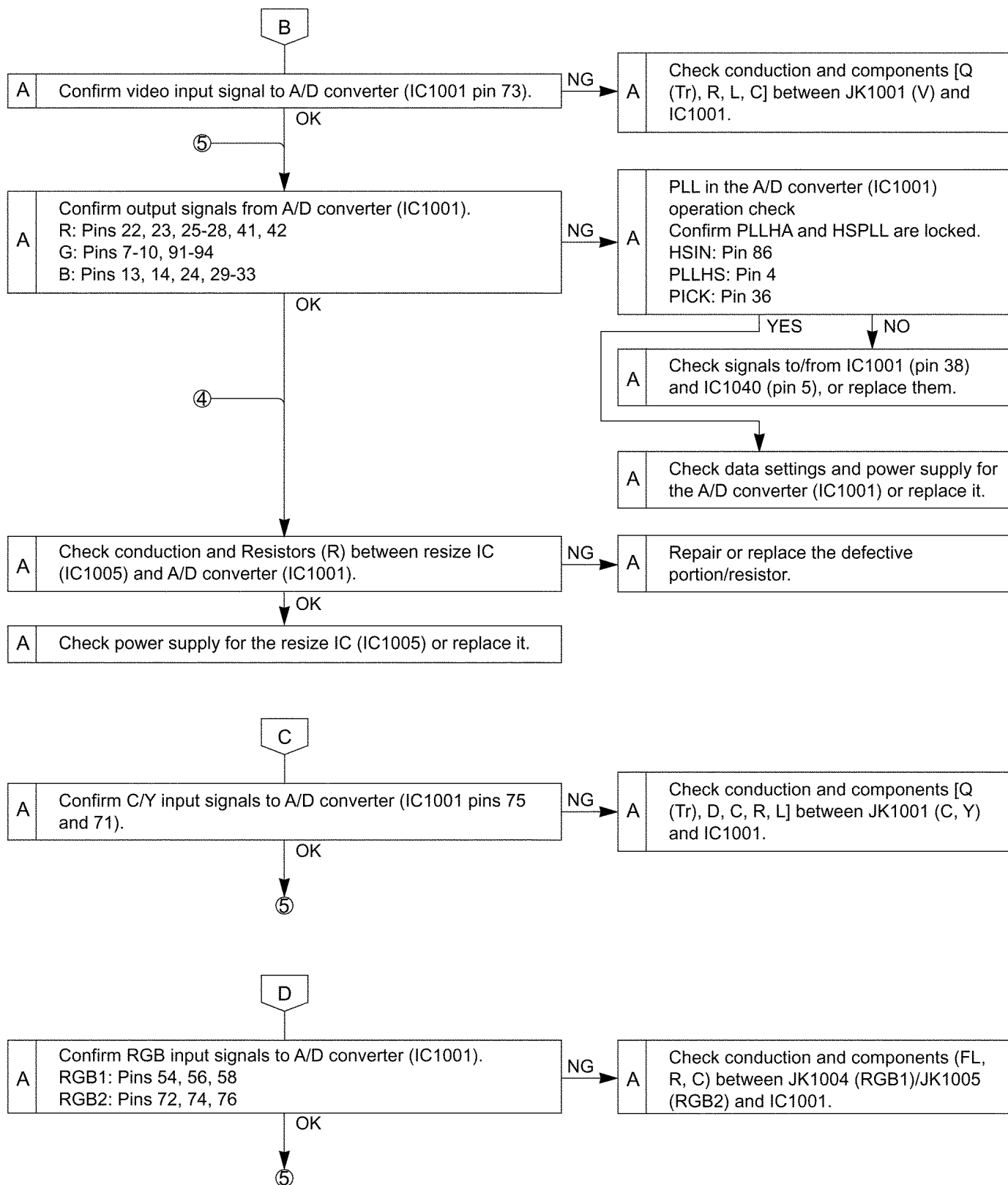


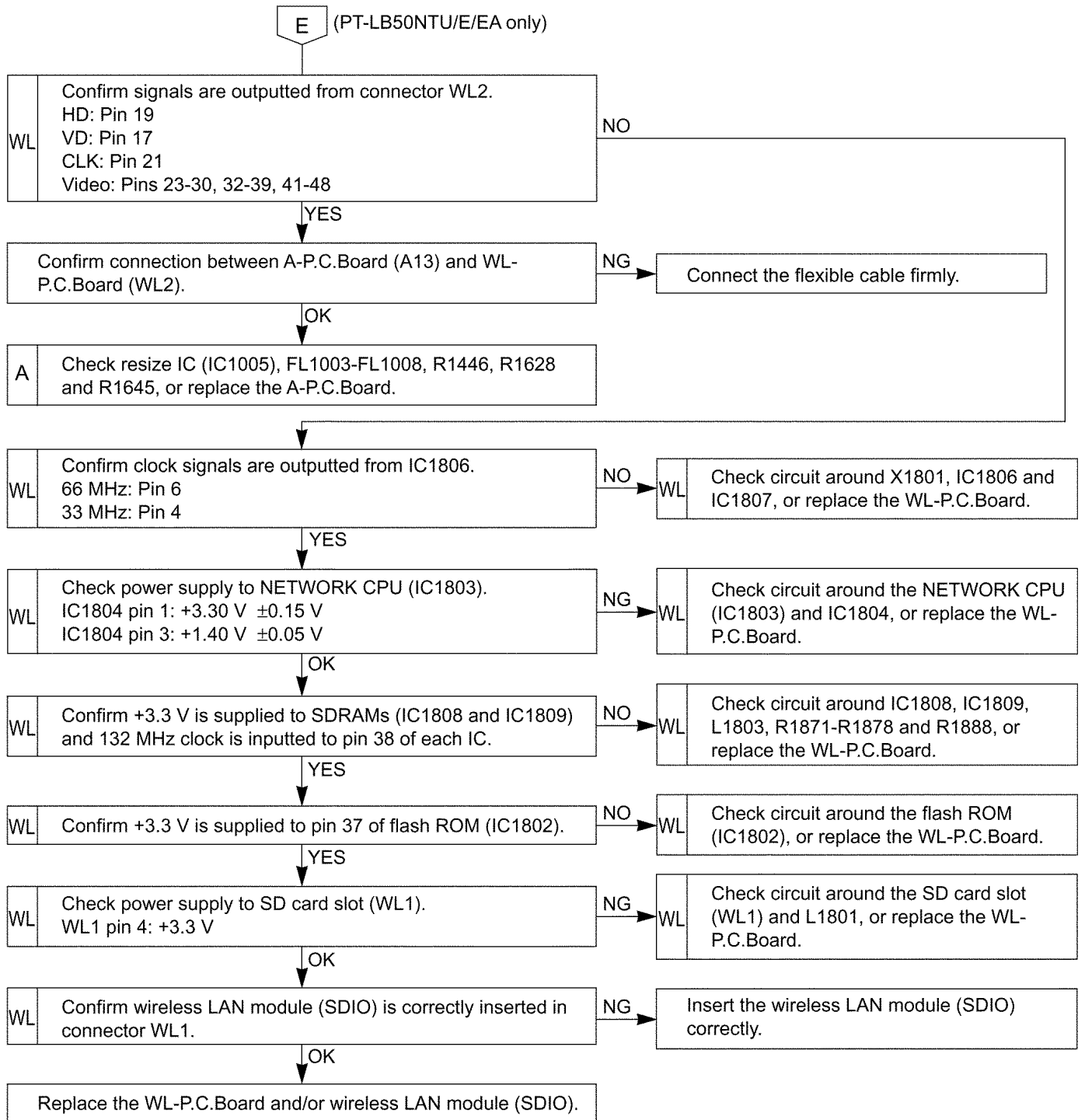


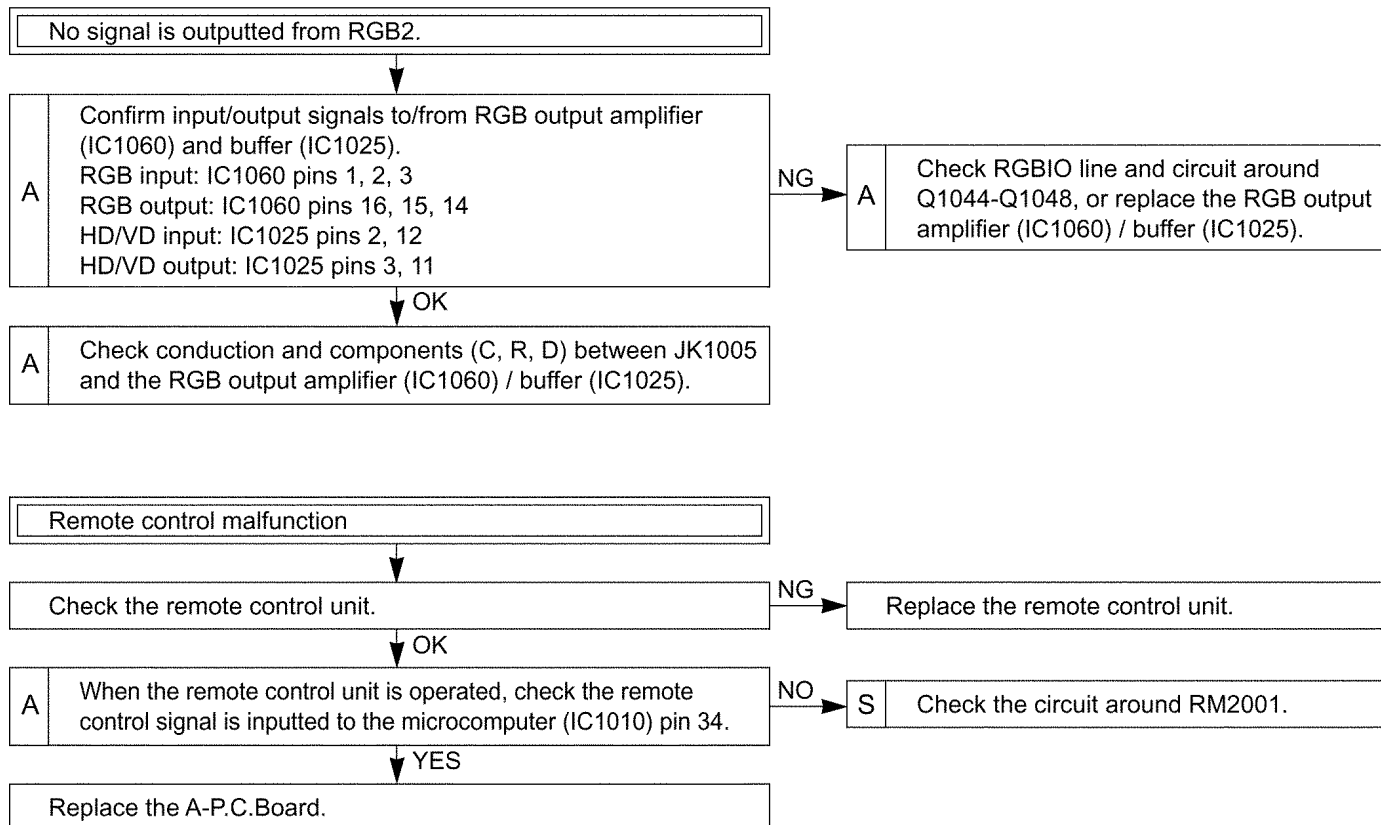




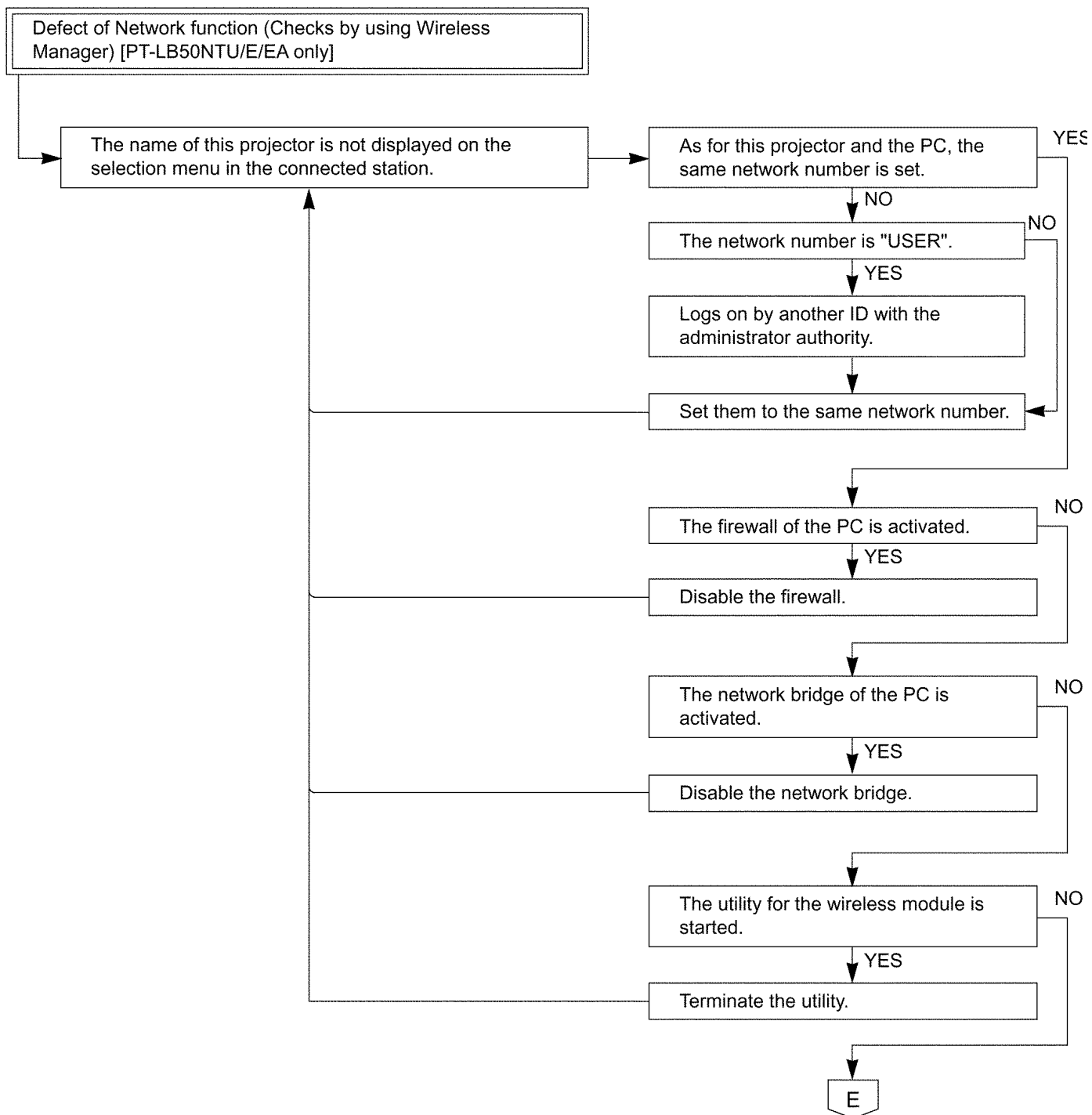










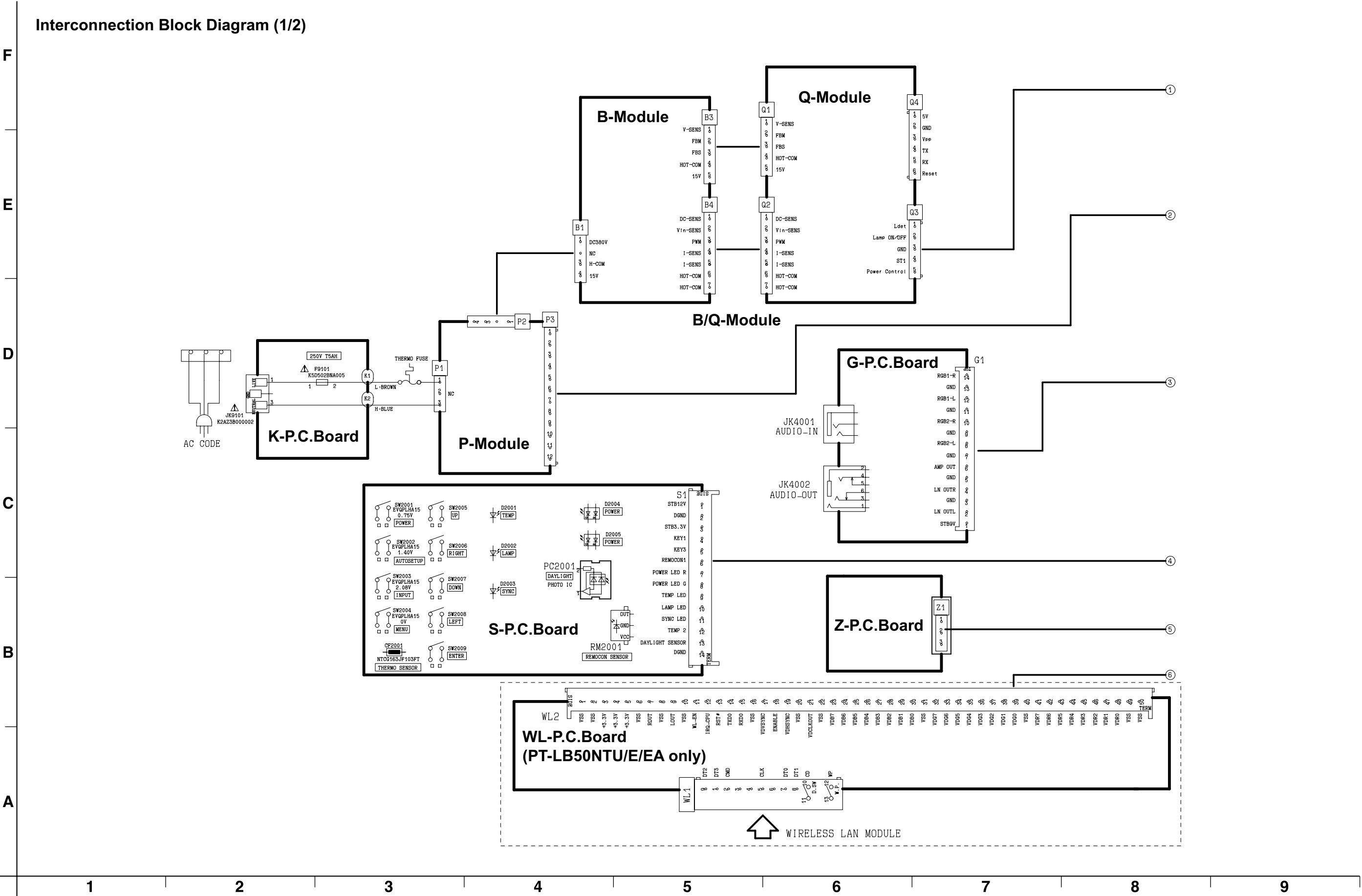




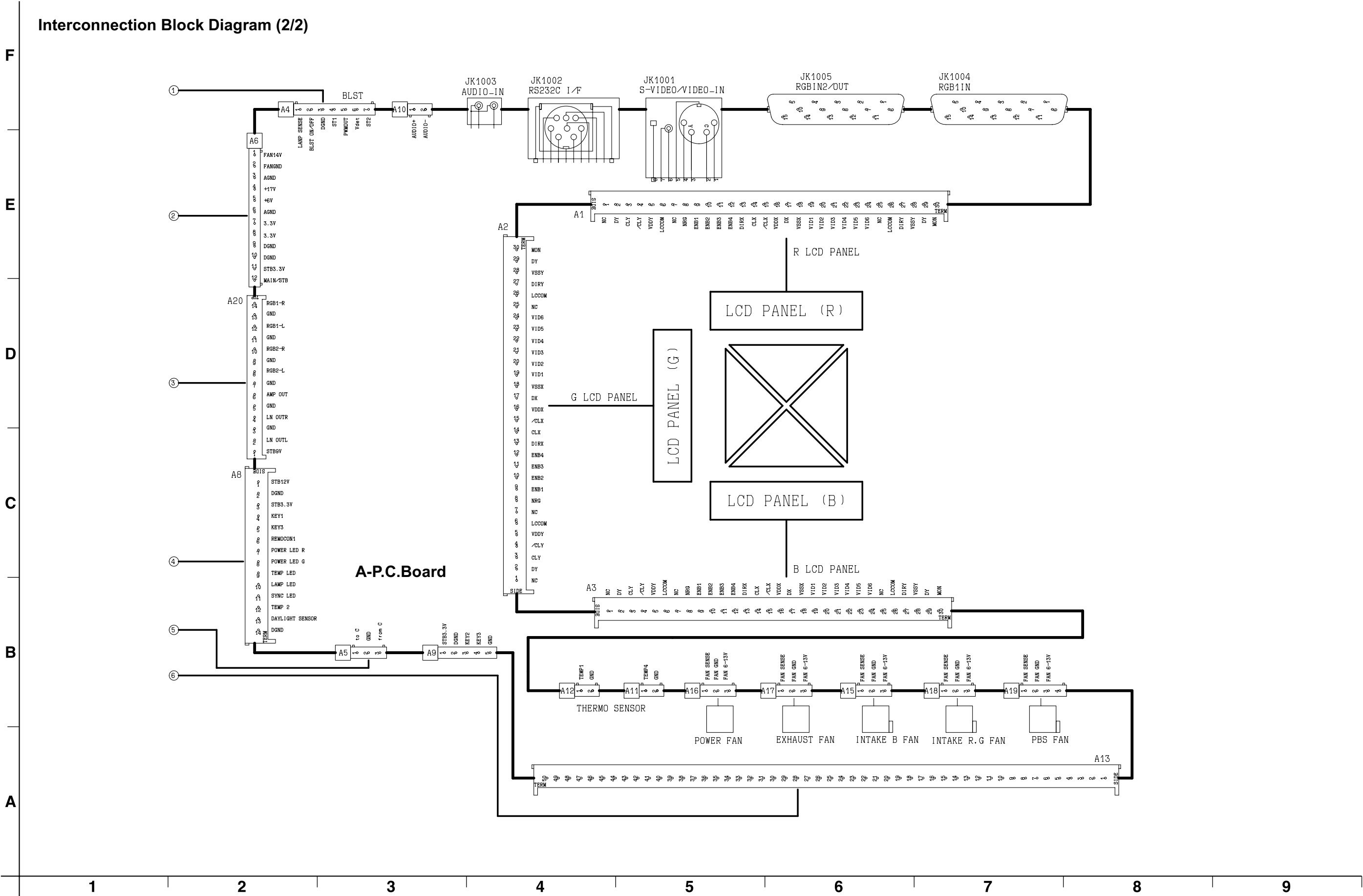
# 10 Interconnection Block Diagram

## 10.1. Interconnection Block Diagram (1/2)

Interconnection Block Diagram (1/2)

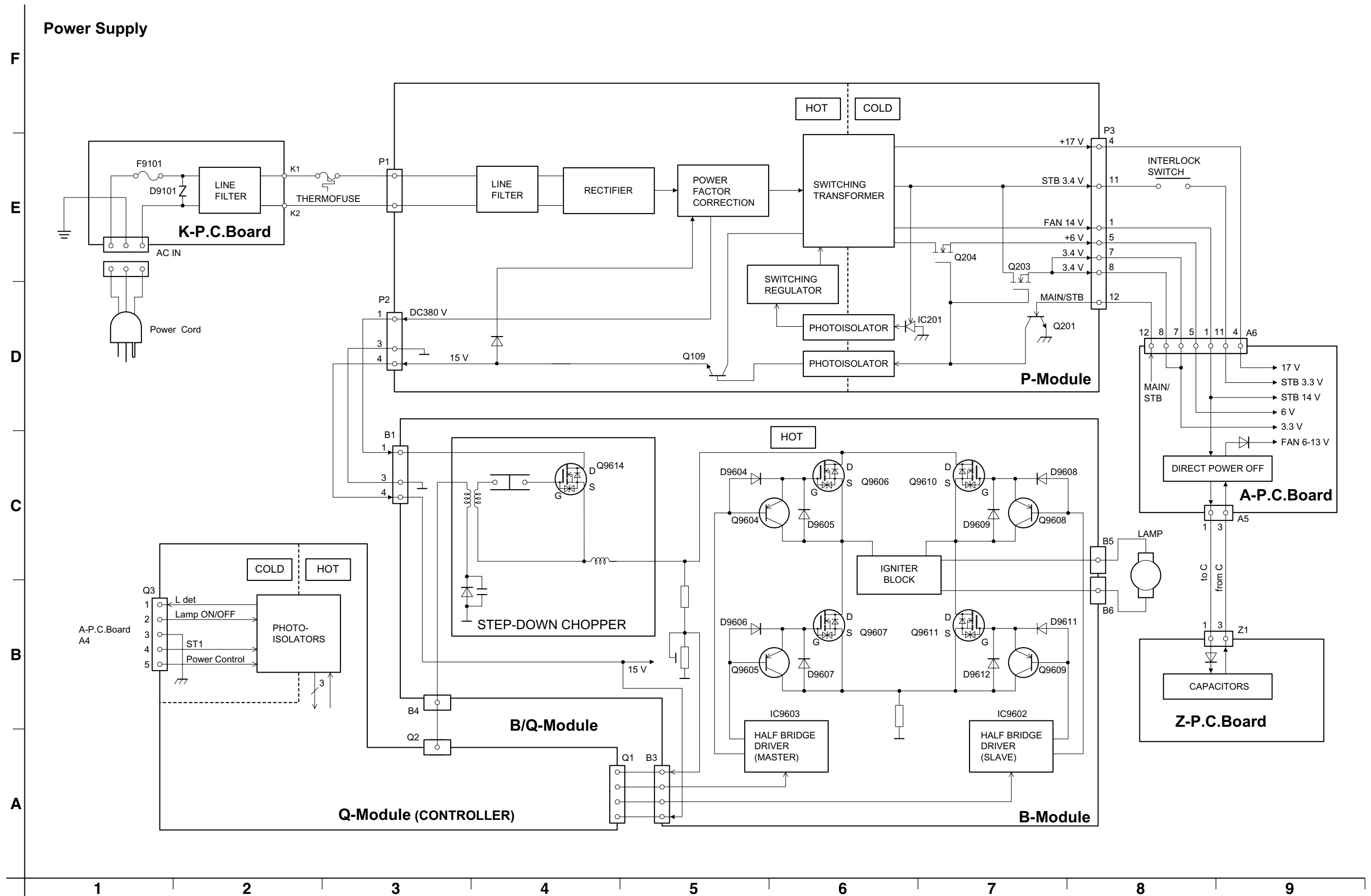


10.2. Interconnection Block Diagram (2/2)

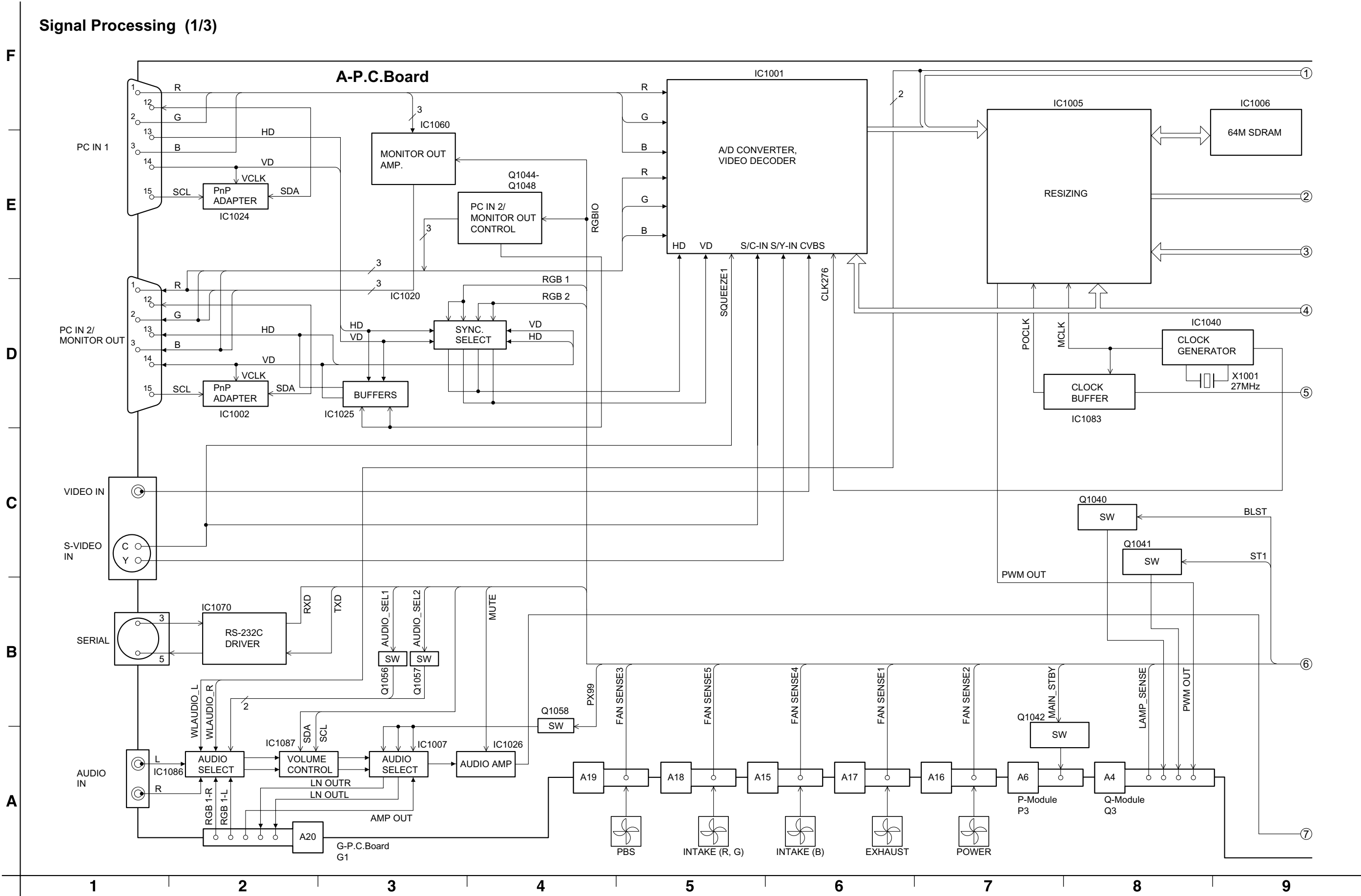


# 11 Block Diagram

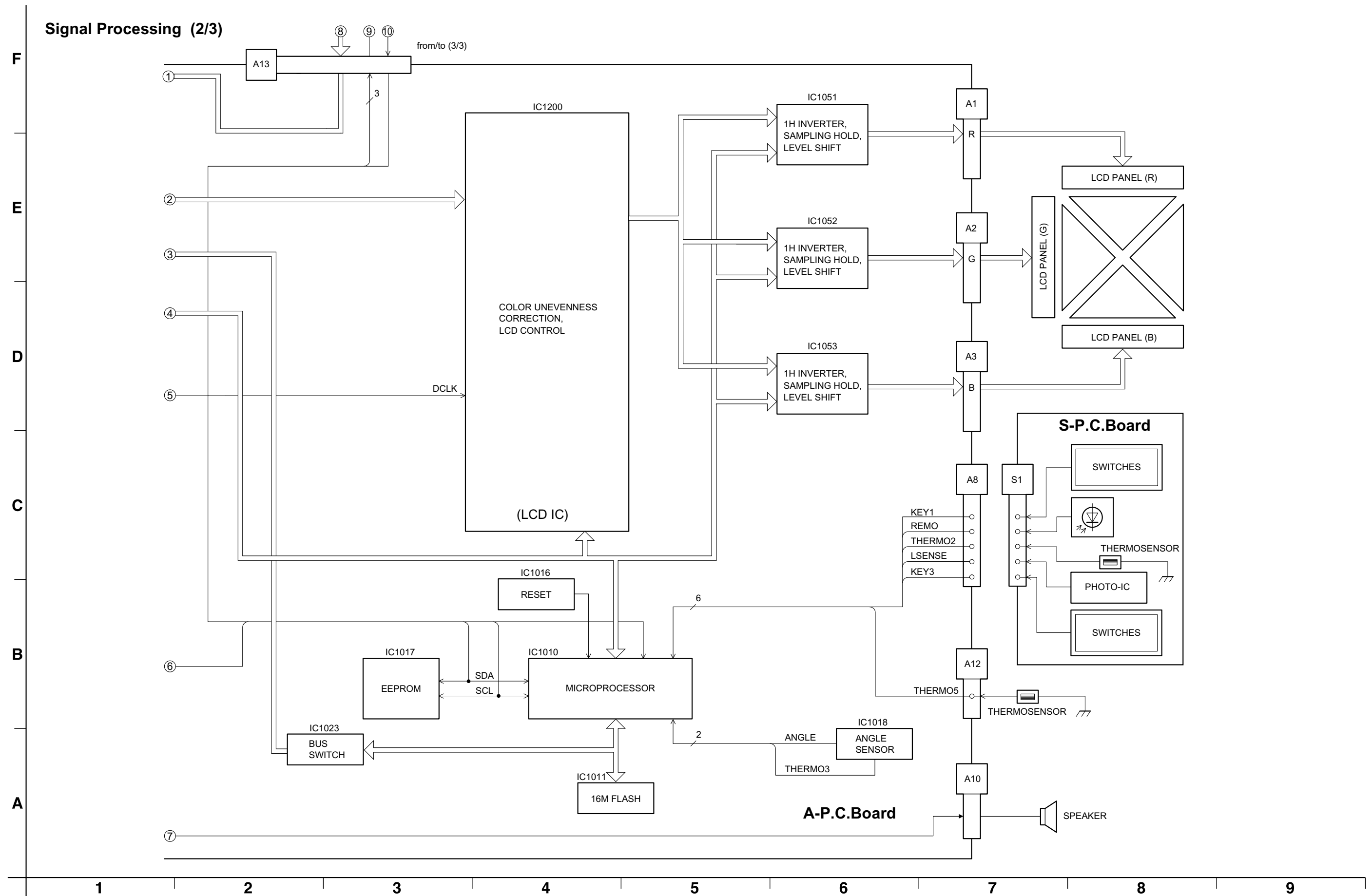
## 11.1. Power Supply



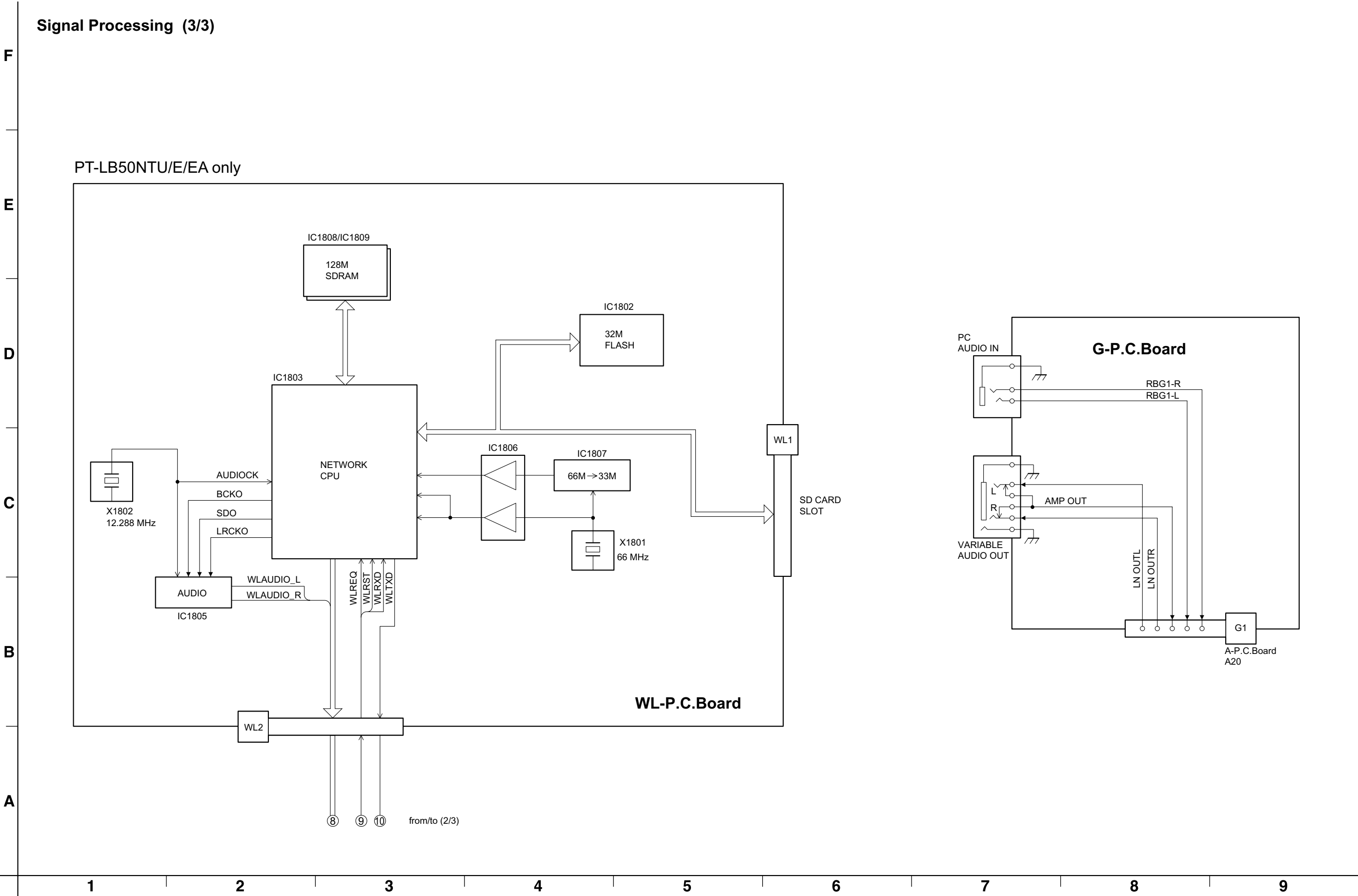
11.2. Signal Processing (1/3)



### 11.3. Signal Processing (2/3)



11.4. Signal Processing (3/3)






# 12 Schematic Diagram

## Schematic Diagram for Model PT-LB50NTU/LB50U/LB50SU

**IMPORTANT SAFETY NOTICE**  
THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM FIRE AND ELECTRICAL SHOCK HAZARDS. WHEN SERVICING, IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREAS OF THE SCHEMATIC.


## Schematic Diagram for Model PT-LB50NTE/EA, LB50E/EA, LB50SE/EA

**Important Safety Notice**  
Components identified by the international symbol  have special characteristics important for safety. When replacing any of these components, use only the manufacturer's specified ones.





Notes:

1. **Resistor**

All the resistors are carbon 1/4W resistors, unless marked as follows: The unit of resistance is an OHM [ $\Omega$ ] (K=1 000 M=1 000 000).

-  : Nonflammable
-  : Metal Oxide
-  : Solid
-  : Metal Film
-  : Wire Wound
-  : Fuse

2. **Capacitor**

-  : Temperature Compensation
-  : Electrolytic
-  : Polyester
-  : Bipolar
-  : Metalized Polyester
-  : Dipped Tantalum
-  : Polypropylene
-  : Z-Type

3. **Coil**

The unit of inductance is a H, unless otherwise noted.





4. **Test Point**

-  : Test Point

5. **Voltage Measurement**

The voltage is measured by an electronic voltmeter receiving the colorbar signal when all the customer's controls are set to the standard condition.

6. **Color code for the links between diagrams and circuit boards**

From/To		To/From	Color code
Block diagram		Schematic diagram	Magenta
Schematic diagram		Schematic diagram	Green
Schematic diagram		Circuit boards	Yellow
Schematic diagram		Waveforms	Cyan (Light blue)

7. **HOT and COLD indications**

The power circuit board contains a circuit area using a separate power supply to isolate the ground connection. The circuit is defined by HOT and COLD indications in the schematic diagram. Take the precautions below:

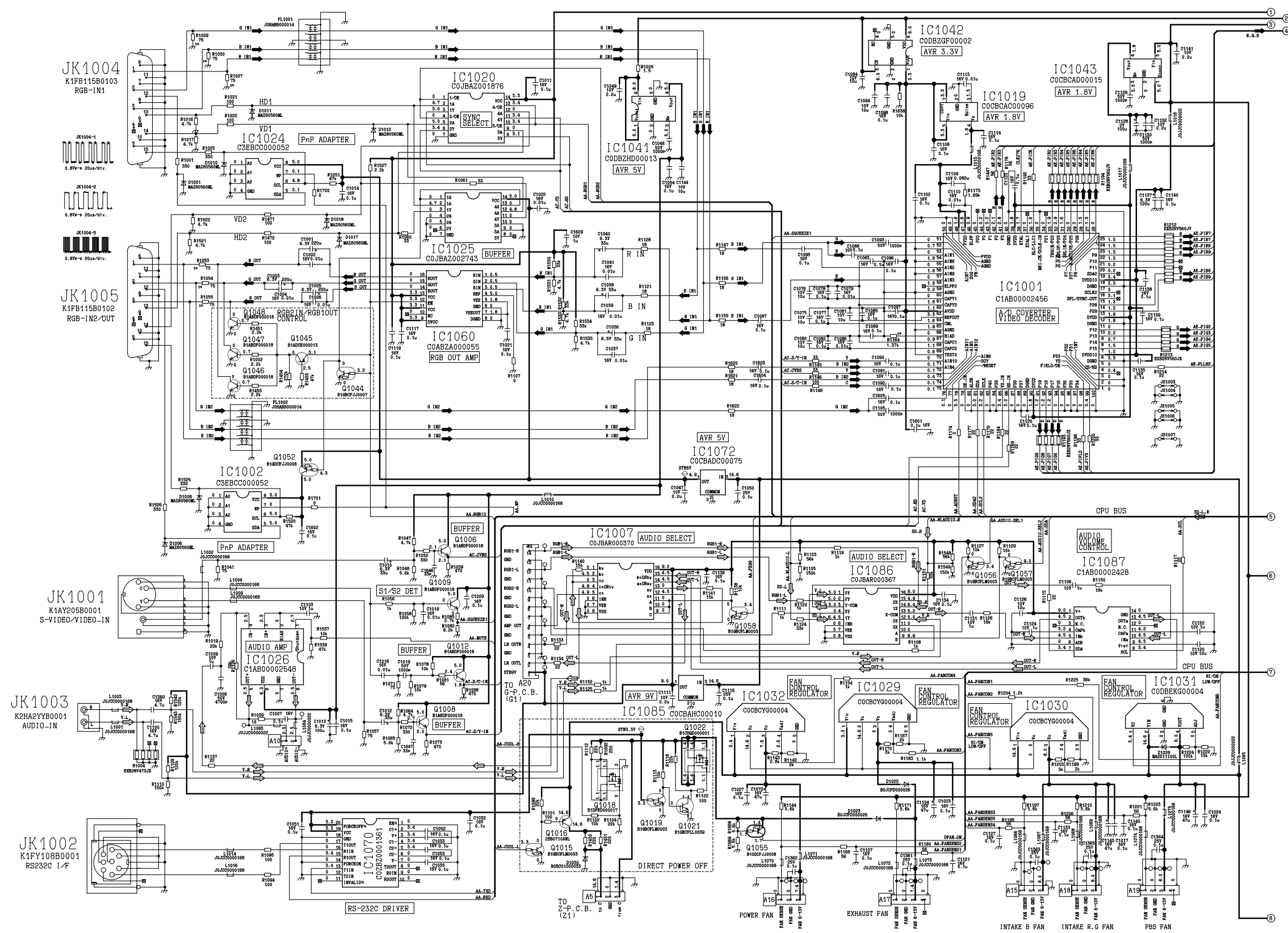
8. **This schematic diagram is the latest at the time of printing and the subject to change without notice.**

Precautions:

1. NEVER touch the HOT part or the HOT and COLD parts at the same time, or you may get an electric shock.
2. NEVER short-circuit the HOT and COLD circuits, or the fuse may blow and the parts may break.
3. NEVER connect an instrument such oscilloscope to the HOT and COLD circuit simultaneously, or the fuse may blow. Connect the ground of instruments to the ground of the circuit being measured.
4. MAKE SURE to unplug the power cord from the power outlet before removing the chassis.

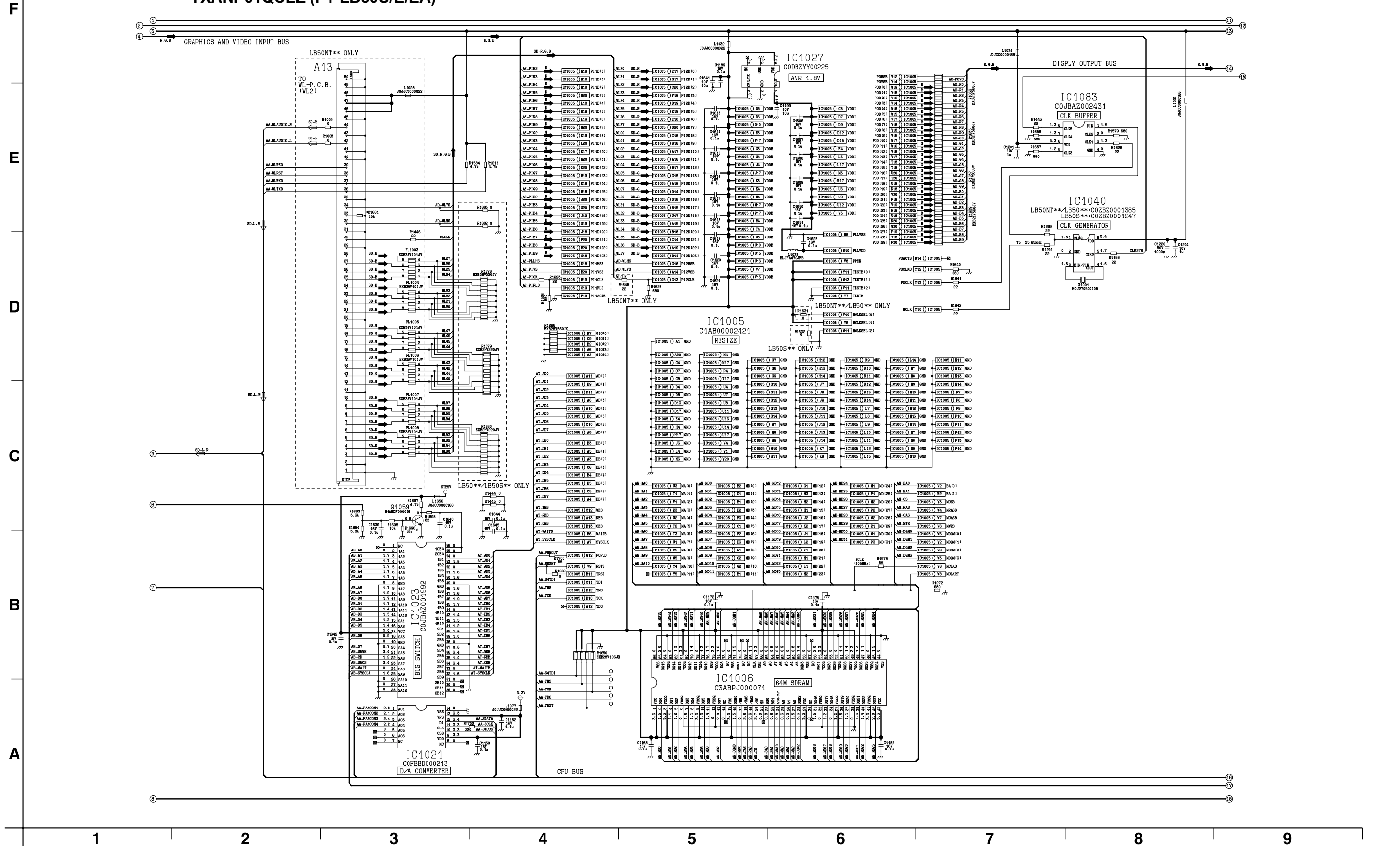
### 12.1. A-P.C.Board (1/4)

**A-P.C.Board (1/4) TXANP01VKB9 (PT-LB50NTU/E/EA) TXANP01QCHZ (PT-LB50SU/E/EA)  
TXANP01QCEZ (PT-LB50U/E/EA)**



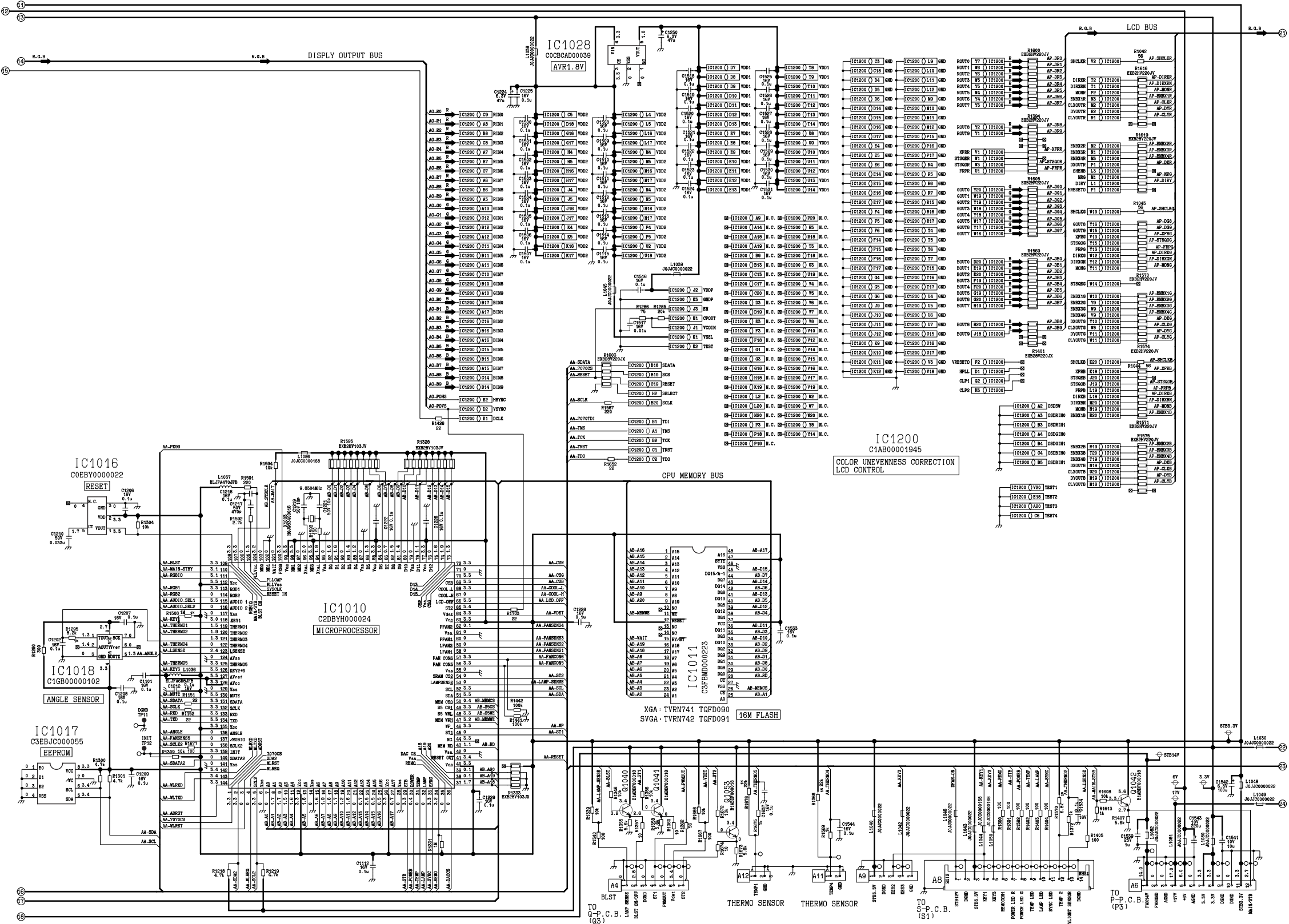
## 12.2. A-P.C.Board (2/4)

A-P.C.Board (2/4) TXANP01VKB9 (PT-LB50NTU/E/EA) TXANP01QCHZ (PT-LB50SU/E/EA)  
TXANP01QCEZ (PT-LB50U/E/EA)



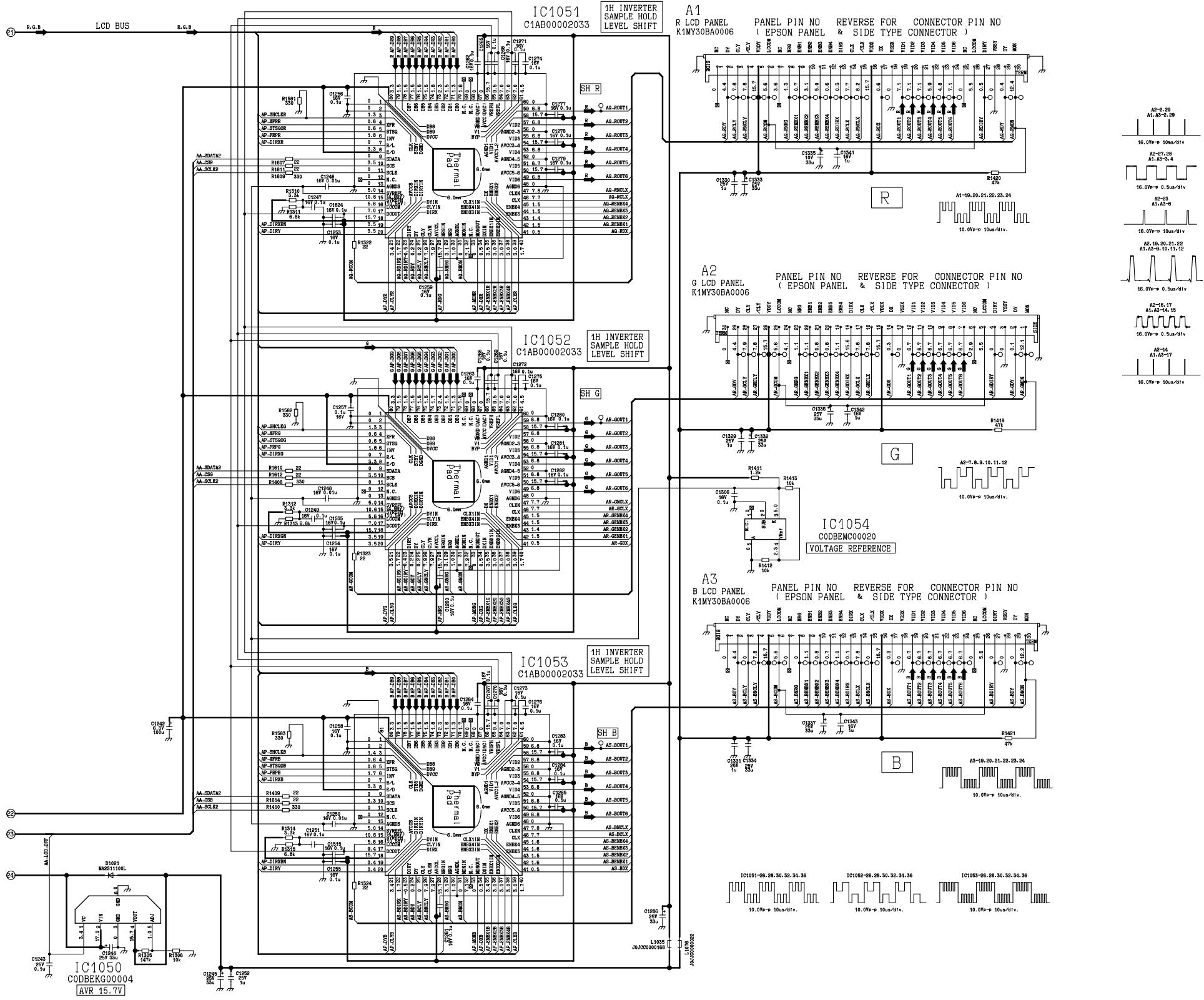
12.3. A-P.C.Board (3/4)

A-P.C.Board (3/4) TXANP01VKB9 (PT-LB50NTU/E/EA) TXANP01QCHZ (PT-LB50SU/E/EA)  
TXANP01QCEZ (PT-LB50U/E/EA)

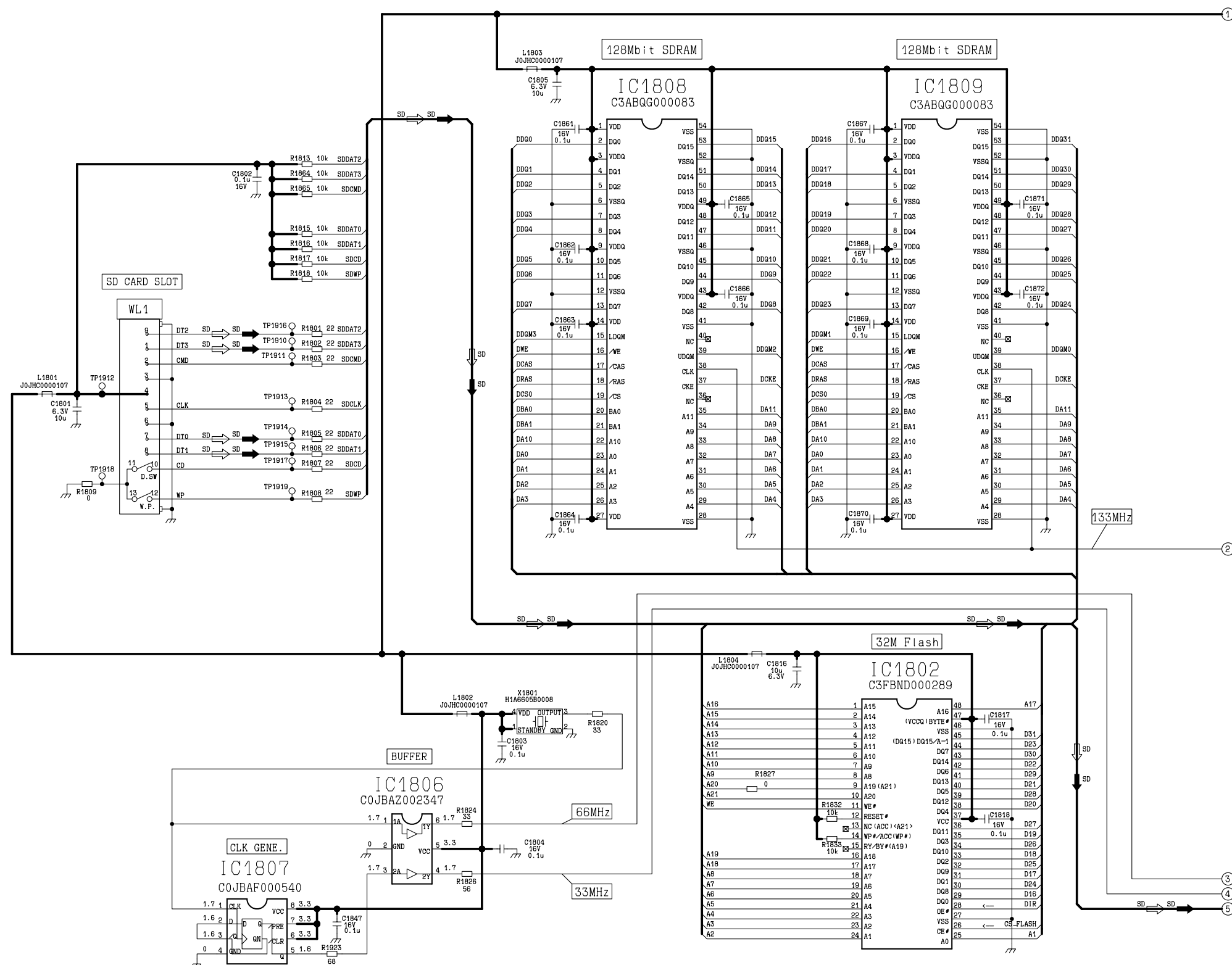


12.4. A-P.C.Board (4/4)

A-P.C.Board (4/4) TXANP01VKB9 (PT-LB50NTU/E/EA) TXANP01QCHZ (PT-LB50SU/E/EA)  
TXANP01QCEZ (PT-LB50U/E/EA)



## 12.5. WL-P.C.Board (1/3)

**WL-P.C.Board (1/3) TNPA3876 (PT-LB50NTU/E/EA)**



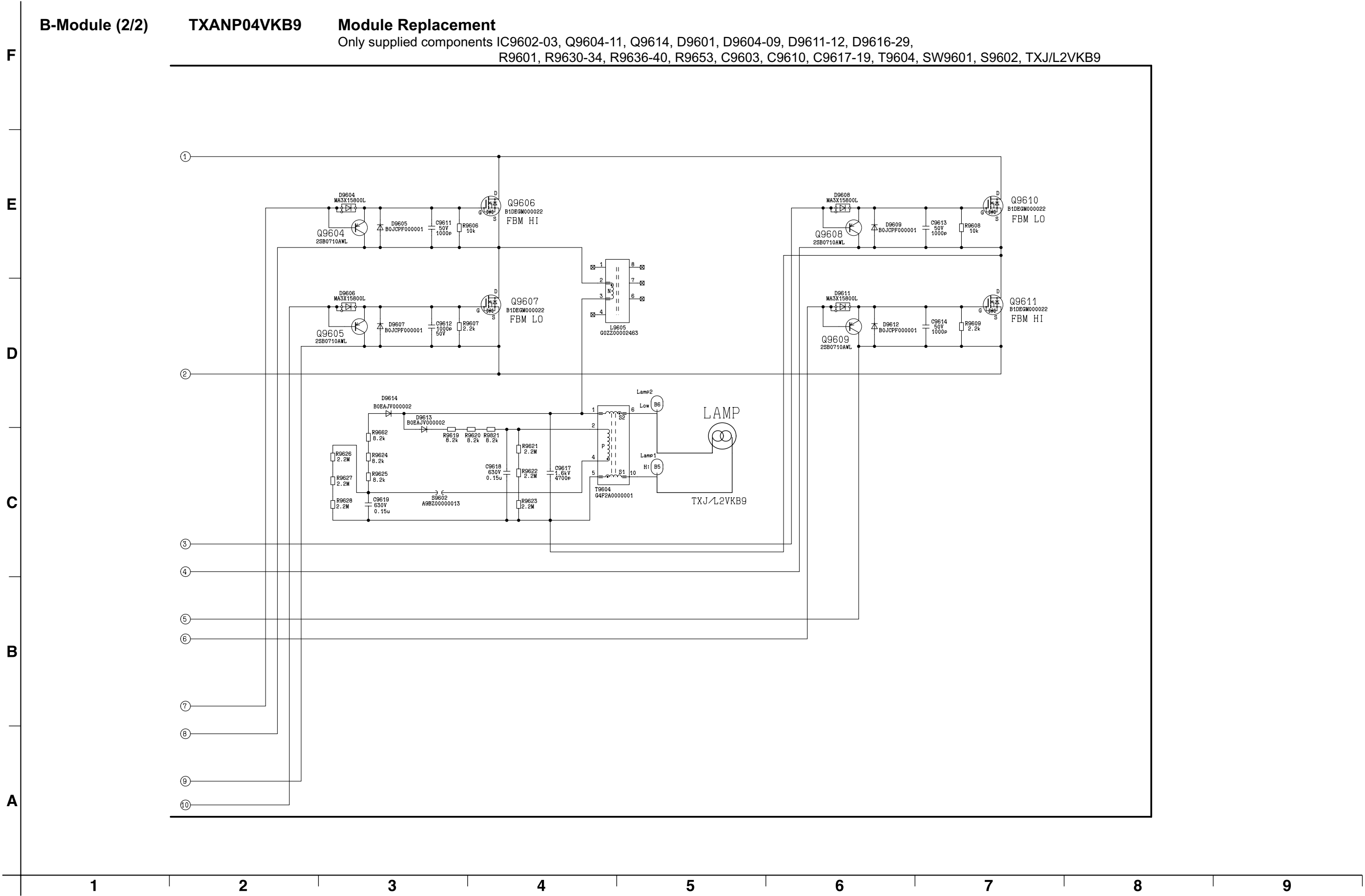








12.9. B-Module (2/2)









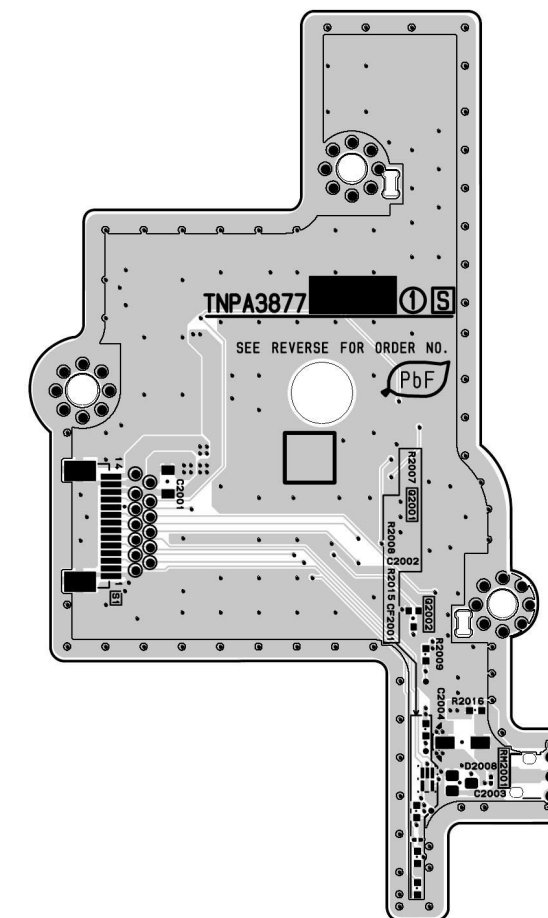
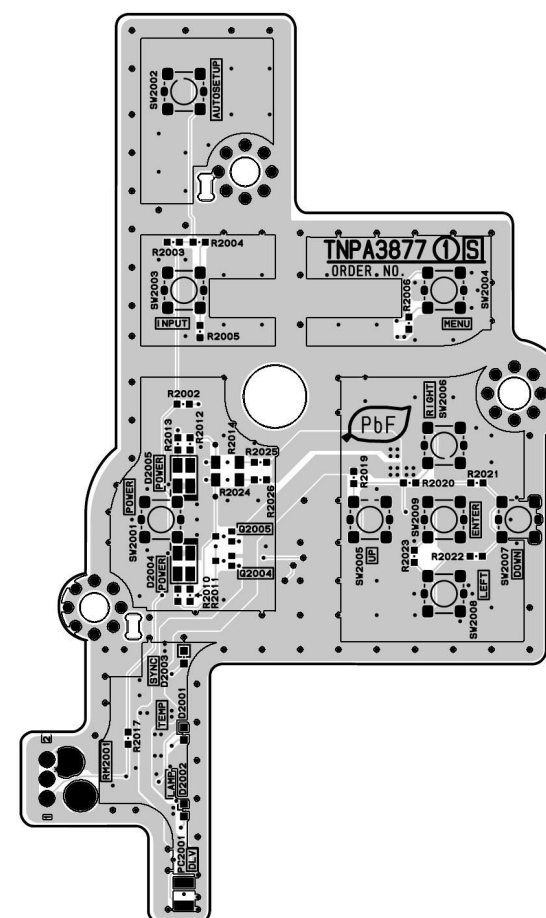
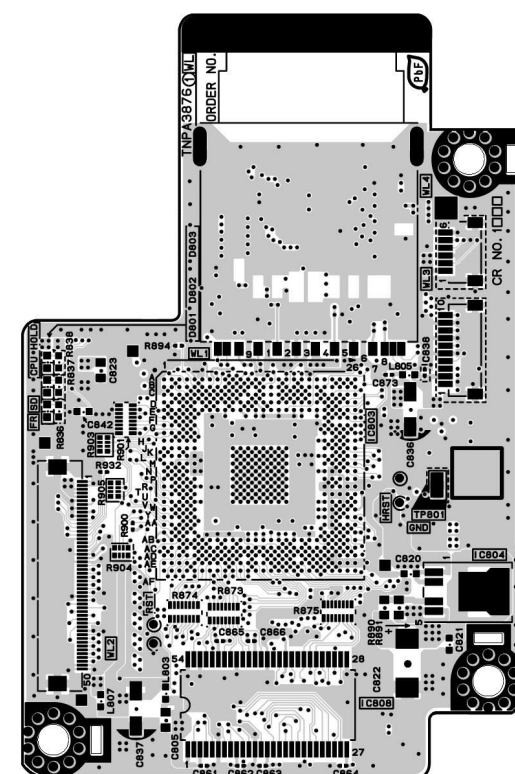
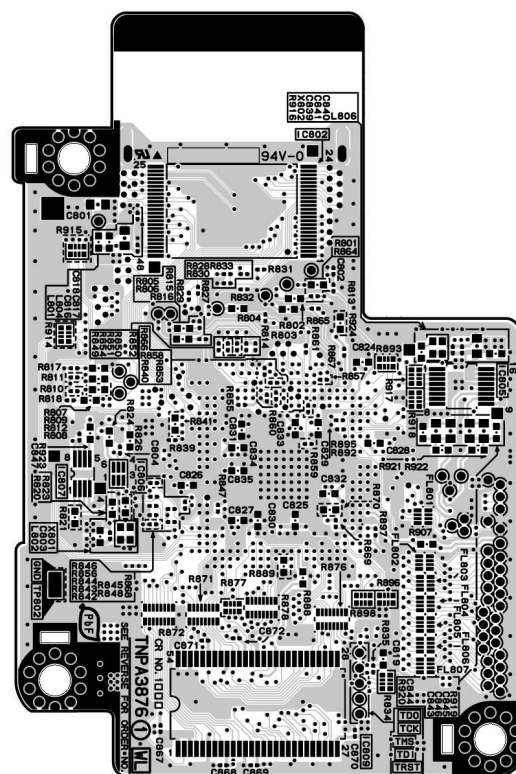
### 13.2. WL-P.C.Board, S-P.C.Board

ADDRESS INFORMATION

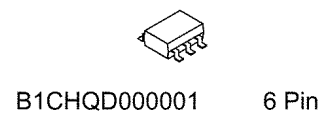
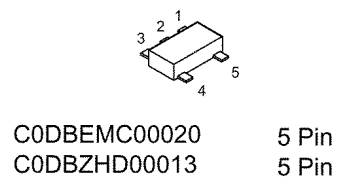
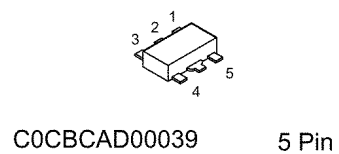
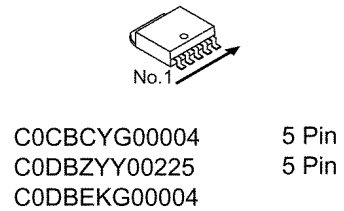
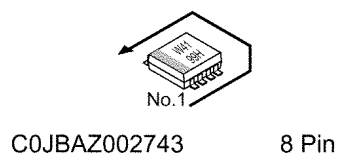
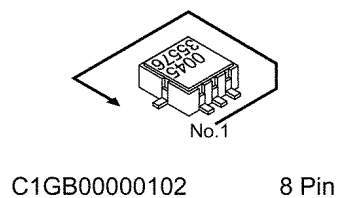
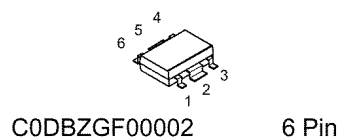
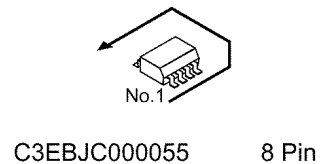
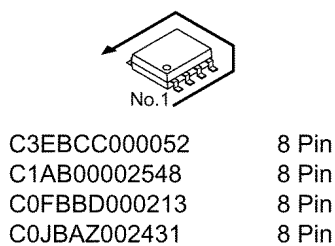
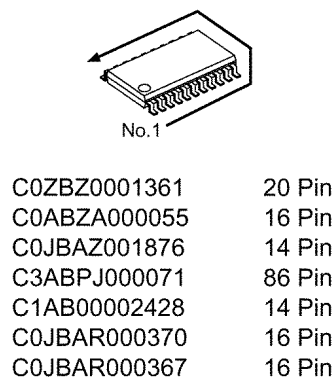
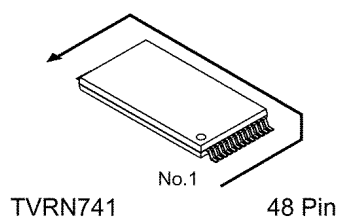
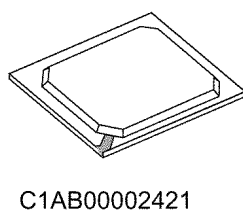
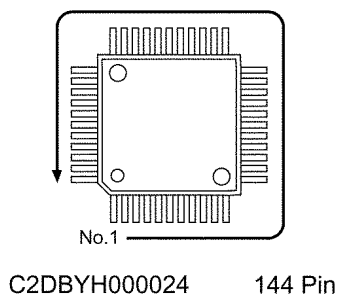
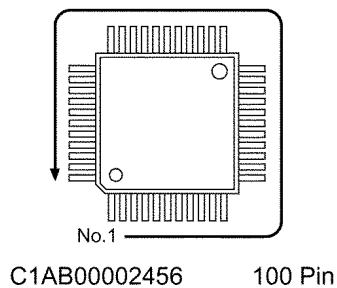
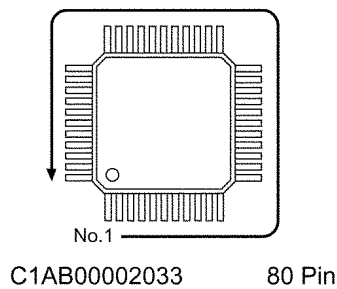
#### ADDRESS INFORMATION

ADDRESS INFORMATION

ADDRESS INFORMATION

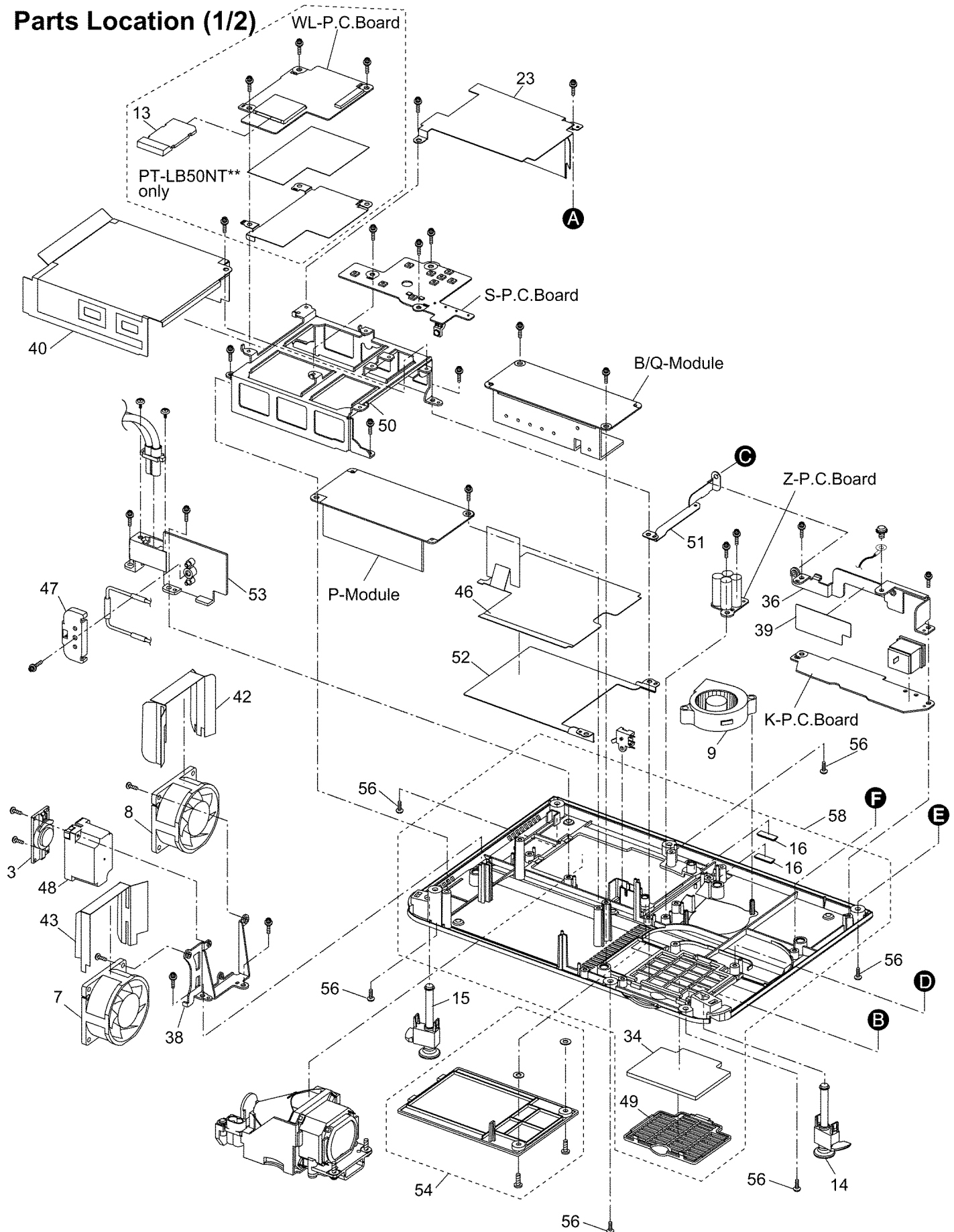


# 14 Terminal guide of ICs and transistors



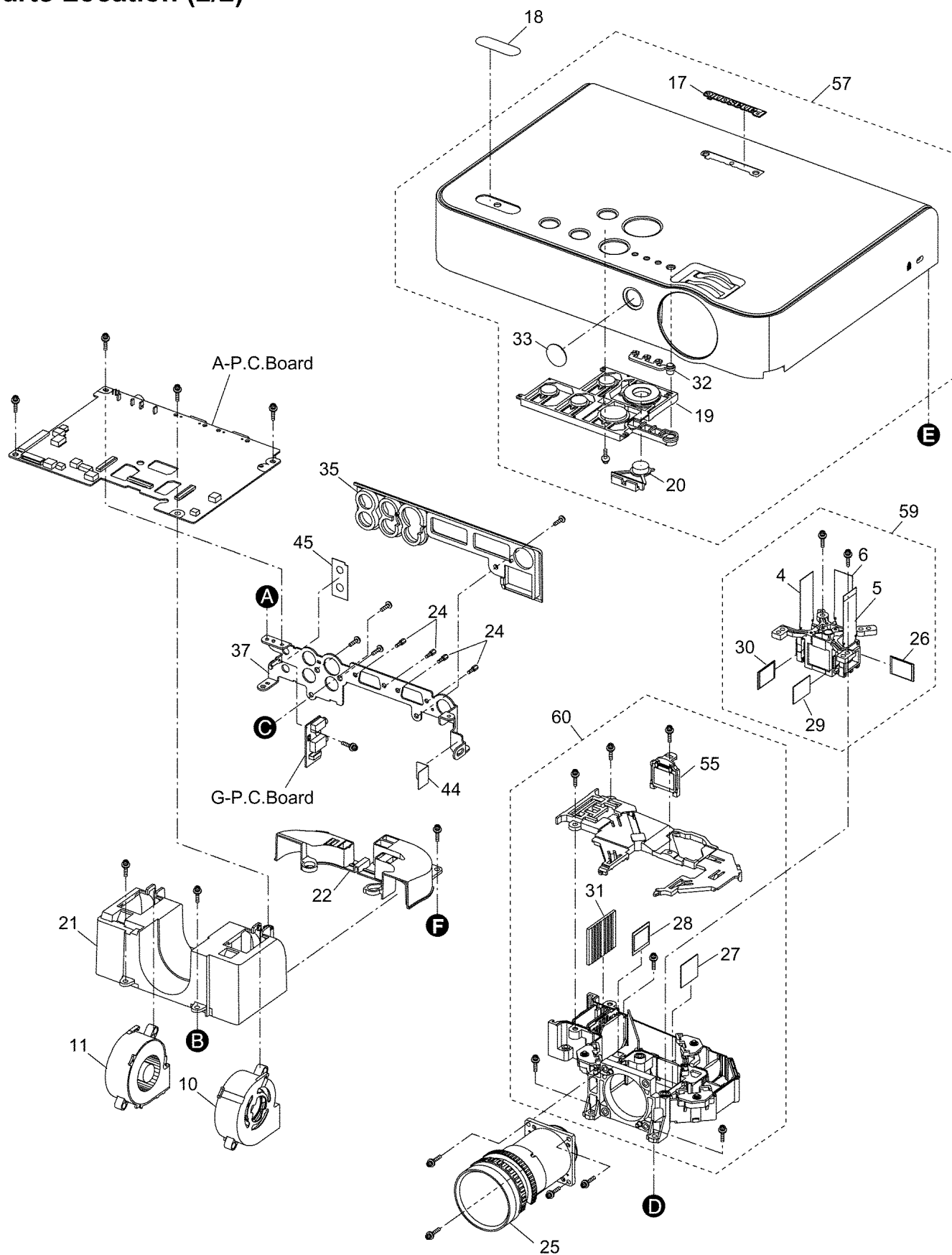
## 15 Exploded Views

## Parts Location (1/2)

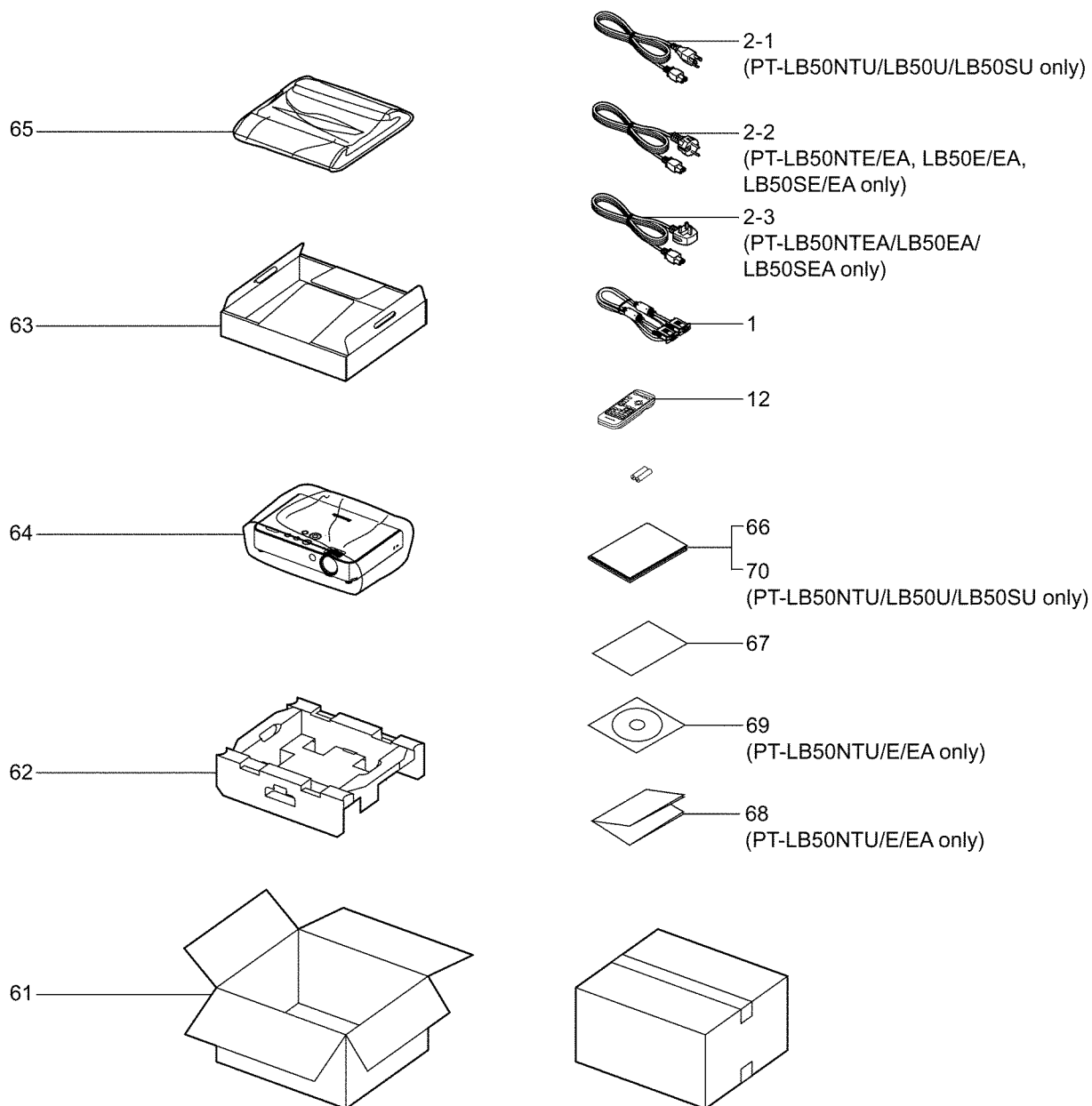




## Parts Location (2/2)



## Packing Parts



# 16 Replacement Parts List

## Important Safety Notice

Components identified by the International symbol  $\triangle$  have special characteristics important for safety.  
When replacing any of these components, use only the manufacturer's specified parts.

### Abbreviation of part name and description

#### 1. Resistor

Example:

ERD25TJ104 C 100KOHM, J, 1/4W

TYPE	ALLOWANCE
C : Carbon	F : $\pm 1\%$
F : Fuse	G : $\pm 2\%$
M : Metal Oxide	J : $\pm 5\%$
Metal Film	K : $\pm 10\%$
S : Solid	M : $\pm 20\%$
W : Wire Wound	

#### 2. Capacitor

Example:

ECKF1H103ZF C 0.01PF, Z, 50V

TYPE	ALLOWANCE
C : Ceramic	C : $\pm 0.25\text{ pF}$
E : Electrolytic	D : $\pm 0.5\text{ pF}$
P : Polyester	F : $\pm 1\text{ pF}$
PP : Polypropylene	J : $\pm 5\%$
S : Polystyrol	K : $\pm 10\%$
T : Tantalum	L : $\pm 15\%$
	M : $\pm 20\%$
	P : $+100\%, -0\%$
	Z : $+80\%, -20\%$

### Notes:

Printed circuit board assembly with mark (RTL) is no longer available after production discontinuation of the complete set.

Ref. No.	Part No.	Part Name & Description	Remarks
[MECHANICAL PARTS]			
	J0KG00000036	CORE	$\triangle$
1	K1HA15DA0002	VGA CABLE	
2-1	K2CG3DR00006	POWER CORD	$\triangle$ LB50NTU, LB50U, LB50SU
2-2	K2CM3DR00002	POWER CORD (EUROPE)	$\triangle$ LB50NTE/EA, LB50E/EA, LB50SE/EA
2-3	K2CT3DR00005	POWER CORD (UK)	$\triangle$ LB50NTEA, LB50EA, LB50SEA
3	L0AA04C00010	SPEAKER	
4	L5BDAYY00001	LIQUID CRYSTAL DISPLAY (B)	LB50NTU/E/EA, LB50U/E/EA
5	L5BDAYY00003	LIQUID CRYSTAL DISPLAY (R)	LB50NTU/E/EA, LB50U/E/EA
6	L5BDAYY00004	LIQUID CRYSTAL DISPLAY (G)	LB50NTU/E/EA, LB50U/E/EA
5	L5BDAXN00079	LIQUID CRYSTAL DISPLAY (R)	LB50SU/E/EA
4	L5BDAXN00081	LIQUID CRYSTAL DISPLAY (B)	LB50SU/E/EA
6	L5BDAXN00083	LIQUID CRYSTAL DISPLAY (G)	LB50SU/E/EA
7	L6FAYYYH0009	POWER FAN	$\triangle$
8	L6FAYYYH0010	LAMP FAN	$\triangle$
9	L6FCYYYH0006	PBS FAN	$\triangle$
10	L6FCYYYH0007	SIROCCO FAN (GR)	$\triangle$
11	L6FCYYYH0008	SIROCCO FAN (B)	$\triangle$
12	N2QAYA000001	REMOTE CONTROLLER	LB50NTU/E/EA
	N2QAYA000002	REMOTE CONTROLLER	LB50U/E/EA, LB50SU/E/EA
13	N5HZZ0000042	LAN MODULE	$\triangle$ LB50NTU/E/EA
14	TBLB0058	ADJUST LEG (L)	
15	TBLB0059	ADJUST LEG (R)	
16	TBLG3076	RUBBER LEG	
17	TBMA190	PANASONIC BADGE	
18	TBMA191	LOGO BADGE (WIRELESS)	LB50NTU/E/EA
	TBMA192	LOGO BADGE (XGA)	LB50U/E/EA
	TBMA193	LOGO BADGE (SVGA)	LB50SU/E/EA

Ref. No.	Part No.	Part Name & Description	Remarks
	TBMG174	MODEL NAME PLATE	LB50NTU
	TBMG175	MODEL NAME PLATE	LB50NTE
	TBMG176	MODEL NAME PLATE	LB50NTEA
	TBMG177	MODEL NAME PLATE	LB50U
	TBMG178	MODEL NAME PLATE	LB50E
	TBMG179	MODEL NAME PLATE	LB50EA
	TBMG180	MODEL NAME PLATE	LB50SU
	TBMG181	MODEL NAME PLATE	LB50SE
	TBMG182	MODEL NAME PLATE	LB50SEA
	TBMG183	MODEL NO. LABEL	LB50NTU
	TBMG184	MODEL NO. LABEL	LB50NTE
	TBMG185	MODEL NO. LABEL	LB50NTEA
	TBMG186	MODEL NO. LABEL	LB50U
	TBMG187	MODEL NO. LABEL	LB50E
	TBMG188	MODEL NO. LABEL	LB50EA
	TBMG189	MODEL NO. LABEL	LB50SU
	TBMG190	MODEL NO. LABEL	LB50SE
	TBMG191	MODEL NO. LABEL	LB50SEA
19	TBXA48901	CONTROL BUTTON A	
20	TBXA49001	CONTROL BUTTON B	
21	TEEC5219	DUCT 1	
22	TEEC5220	DUCT 2	
23	TENC5350	LAMP HOUSE	
24	THEC084N	SCREW	
25	TKGF0129	LENS	
26	TKGP0032	POLARIZING PLATE/OUT (G)	LB50NTU/E/EA, LB50U/E/EA
	TKGP0033	POLARIZING PLATE/OUT (G)	LB50SU/E/EA
27	TKGP5288	POLARIZING PLATE/IN (R)	
28	TKGP5290	POLARIZING PLATE/IN (B)	
29	TKGP5291	POLARIZING PLATE/OUT (R)	
30	TKGP5301	POLARIZING PLATE/OUT (B)	
31	TKGP5302	PBS	
32	TKKC5242	LED PLATE	
33	TKKC5243	REMOTE RECEIVER PLATE	
34	TKNE061	FILTER	
35	TKPB01901	TERMINAL COVER	
36	TKZF5045	AC INLET PLATE	
37	TKZF5046	TERMINAL METAL	
38	TKZJ5064	VENTILATION FAN METAL	

Ref. No.	Part No.	Part Name & Description	Remarks
	TMKG389	FAN SPONGE	
	TMKG674	VENTILATION FAN SPONGE	
	TMKG702	SHEET	
	TMKG703	SHEET	
	TMKG704	SHEET	
	TMKG707	SHEET	
	TMKX100	WASHER	
39	TMKY022	INSULATION SHEET (K-PCB)	
40	TMKY023	POWER INSULATION COVER	
	TMKY024	POWER INSULATION SHEET	
42	TMKY025	VENTILATION FAN COVER	
43	TMKY026	POWER FAN COVER	
	TMKY027	LEAD WIRE COVER	
44	TMKY028	SHIELD SHEET	
45	TMKY044	TERMINAL COVER SHEET	
46	TMKY045	POWER INSULATION SHEET	
	TMKY046	LEAD WIRE COVER 2	
	TMKY047	LEAD WIRE COVER 3	
	TMKY062	LED SHIELD SHEET	
	TMKY063	S TERMINAL SHIELD SHEET	
47	TMXC020-1	TEMP FUSE METAL	
48	TMZK5023	SPEAKER BOX	
49	TMZX5068	FILTER COVER	
61	TPCB94302	CARTON	LB50NTU
	TPCB94303	CARTON	LB50NTE
	TPCB94304	CARTON	LB50NTEA
	TPCB94305	CARTON	LB50U
	TPCB94306	CARTON	LB50E
	TPCB94307	CARTON	LB50EA
	TPCB94308	CARTON	LB50SU
	TPCB94309	CARTON	LB50SE
	TPCB94310	CARTON	LB50SEA
62	TPDF1617	CUSHION 1	
	TPDF1618	CUSHION 2	
63	TPDF1619	ACCESSORY CARTON	
64	TPEH124-1	SET COVER	
65	TPEP018	CARRING CASE	
	TQB817002-1	SAFETY SHEET	LB50NTU, LB50U, LB50SU
67	TQBH7017	SHEET (PASSWORD)	
66	TQBJ0192	INSTRUCTION BOOK	△ LB50NTU, LB50U, LB50SU
	TQBJ0194	INSTRUCTION BOOK	△ LB50NTE, LB50E, LB50SE
	TQBJ0196	INSTRUCTION BOOK	△ LB50NTEA, LB50EA, LB50SEA
	TQBJ7008	HIGH GROUND SHEET	LB50NTU, LB50U, LB50SU
	TQD1712010	SHEET	
	TQDJ18004-1	GUARANTEE CARD (CANADA)	LB50NTU, LB50U, LB50SU
	TQDJ18015-9	GUARANTEE CARD (USA)	LB50NTU, LB50U, LB50SU
68	TQDJ19029	INSTALL GUIDE	LB50NTU
	TQDJ19030	INSTALL GUIDE (GERMANY/ITALY)	LB50NTE
	TQDJ19031	INSTALL GUIDE (FRANCE/SPAIN)	LB50NTE
	TQDJ19032	INSTALL GUIDE (UK/KOREA)	LB50NTE/EA
	TSXL541	FLEX CABLE (A-PCB)	△
	TSXL547	FLEX CABLE (S)	△
	TSXL548	FLEX CABLE (WL)	△ LB50NTU/E/EA
	TUCB5023	ALUMINUM SHEET 2 (A-PCB)	
	TUCB5056	ALUMINUM SHEET 1	
	TUCB5057	ALUMINUM SHEET 2	
50	TUCC6123	POWER BOX	
51	TUCX5210	EARTH PLATE	
52	TUCX5217	EARTH PLATE 2	
53	TXFEE02VKB9	SOCKET HOLDER ASSY	
54	TXFKL01VKB9	LAMP COVER ASSY	

Ref. No.	Part No.	Part Name & Description	Remarks
69	TXFQH01VKB9A	CD-ROM	△ LB50NTU/E/EA
	TXJ/B1VKB9	LEAD WIRE	△
	TXJ/K1VKB9	LEAD WIRE	△
	TXJ/L2VKB9	CONNECTOR	
	TXJ/P3VKB9	LEAD WIRE	△
	TXJ/Q3VKB9	LEAD WIRE	△
	TXJ/Z1VKB9	LEAD WIRE	△
55	TXZKG02VKB9	POLARIZING PLATE/IN(G)	
	XSB3+8FN	SCREW	
56	XTBT969FJK	SCREW	
	XTN3+6GFJ	SCREW	
	XTW3+8PFJ	SCREW	
	XYN2+F10FJ	SCREW	
	XYN2+F6FJ	SCREW	
	XYN3+F6FJ	SCREW	
	XYN3+F8FJK	SCREW	
	XYN3+J8FJ	SCREW	
	XYN4+E8FJ	SCREW	
70	XZBT6532	POLY BAG	LB50NTU, LB50U, LB50SU
57	TXFKF99QCBZ	UPPER COVER	LB50NTU
	TXFKF99QCCZ	UPPER COVER	LB50NTE
	TXFKF99QCDZ	UPPER COVER	LB50NTEA
	TXFKF99QCEZ	UPPER COVER	LB50U
	TXFKF99QCFZ	UPPER COVER	LB50E
	TXFKF99QCGZ	UPPER COVER	LB50EA
	TXFKF99QCHZ	UPPER COVER	LB50SU
	TXFKF99QCJZ	UPPER COVER	LB50SE
	TXFKF99QCKZ	UPPER COVER	LB50SEA
58	TXFKF98QCBZ	BOTTOM COVER	LB50NTU
	TXFKF98QCCZ	BOTTOM COVER	LB50NTE
	TXFKF98QCDZ	BOTTOM COVER	LB50NTEA
	TXFKF98QCEZ	BOTTOM COVER	LB50U
	TXFKF98QCFZ	BOTTOM COVER	LB50E
	TXFKF98QCGZ	BOTTOM COVER	LB50EA
	TXFKF98QCHZ	BOTTOM COVER	LB50SU
	TXFKF98QCJZ	BOTTOM COVER	LB50SE
	TXFKF98QCKZ	BOTTOM COVER	LB50SEA
60	TXFEC98VKB9	ANALYSIS BLOCK	
59	TXFEC99VKB9	OPTICAL BLOCK	LB50NTU/E/EA, LB50U/E/EA
	TXFEC99QCHZA	OPTICAL BLOCK A	LB50SU/E/EA
	TXFEC99QCHZB	OPTICAL BLOCK B	LB50SU/E/EA
[INTEGRATED CIRCUIT]			
IC1001	C1AB00002456	I.C	
IC1002	C3EBCC000052	I.C	
IC1005	C1AB00002421	I.C	
IC1006	C3ABPJ000071	I.C	
IC1007	C0JBAR000370	I.C	
IC1010	C2DBYH000024	I.C	
IC1011	TVRN741	I.C	LB50NTU/E/EA, LB50U/E/EA
	TVRN742	I.C	LB50SU/E/EA
IC1016	C0EBY0000022	I.C	
IC1017	C3EBJC000055	I.C	
IC1018	C1GB00000102	I.C	
IC1019	C0CBCAC00096	I.C	
IC1020	C0JBAZ001876	I.C	
IC1021	C0FBBD000213	I.C	
IC1023	C0JBAZ001992	I.C	
IC1024	C3EBCC000052	I.C	
IC1025	C0JBAZ002743	I.C	
IC1026	C1AB00002548	I.C	
IC1027	C0DBZY000225	I.C	
IC1028	C0CBCAD00039	I.C	
IC1029	C0CBCYG00004	I.C	
IC1030	C0CBCYG00004	I.C	
IC1031	C0DBEK000004	I.C	
IC1032	C0CBCYG00004	I.C	
IC1040	C0ZBZ0001385	I.C	LB50NTU/E/EA, LB50U/E/EA

Ref. No.	Part No.	Part Name & Description	Remarks
IC1040	C0ZBZ0001247	I.C	LB50SU/E/EA
IC1041	C0DBZHD00013	I.C	
IC1042	C0DBZGF00002	I.C	
IC1043	C0CBCAD00015	I.C	
IC1050	C0DBEKG00004	I.C	
IC1051	C1AB00002033	I.C	
IC1052	C1AB00002033	I.C	
IC1053	C1AB00002033	I.C	
IC1054	C0DBEMC00020	I.C	
IC1060	C0ABZA000055	I.C	
IC1070	C0ZBZ0001361	I.C	
IC1072	C0CBADC00075	I.C	
IC1083	C0JBAZ002431	I.C	
IC1085	C0CBAHC00010	I.C	
IC1086	C0JBAR000367	I.C	
IC1087	C1AB00002428	I.C	
IC1200	C1AB00001945	I.C	
IC1802	TVRN743	I.C	LB50NTU/E/EA
IC1803	C2GBC0000205	I.C	LB50NTU/E/EA
IC1804	C0DBEFG00003	I.C	LB50NTU/E/EA
IC1805	C0FBBK000051	I.C	LB50NTU/E/EA
IC1806	C0JBAZ002347	I.C	LB50NTU/E/EA
IC1807	C0JBAF000540	I.C	LB50NTU/E/EA
IC1808	C3ABQG000083	I.C	LB50NTU/E/EA
IC1809	C3ABQG000083	I.C	LB50NTU/E/EA
IC9602	C0ZBZ0000943	I.C	
IC9603	C0ZBZ0000943	I.C	
[TRANSISTOR]			
Q1006	B1ABDF000018	TRANSISTOR	
Q1008	B1ABDF000018	TRANSISTOR	
Q1009	B1ABDF000018	TRANSISTOR	
Q1012	B1ABDF000018	TRANSISTOR	
Q1015	B1GBCFLM0003	TRANSISTOR	
Q1016	B1CHQD000001	TRANSISTOR	
Q1018	B1DFED000017	TRANSISTOR	
Q1019	B1GBCFLM0003	TRANSISTOR	
Q1021	B1GBCFLM0039	TRANSISTOR	
Q1022	B1CHQD000001	TRANSISTOR	
Q1040	B1ABDF000018	TRANSISTOR	
Q1041	B1ABDF000018	TRANSISTOR	
Q1042	B1ABDF000018	TRANSISTOR	
Q1044	B1GBCFJJ0007	TRANSISTOR	
Q1045	B1ADCE000013	TRANSISTOR	
Q1046	B1ABDF000018	TRANSISTOR	
Q1047	B1ABDF000018	TRANSISTOR	
Q1048	B1ABDF000018	TRANSISTOR	
Q1052	B1ADCE000013	TRANSISTOR	
Q1053	B1ABDF000018	TRANSISTOR	
Q1055	B1ADCE000013	TRANSISTOR	
Q1056	B1GBCFLM0003	TRANSISTOR	
Q1057	B1GBCFLM0003	TRANSISTOR	
Q1058	B1GBCFLM0003	TRANSISTOR	
Q1059	B1ABDF000018	TRANSISTOR	
Q2001	B1GFCFJJ0009	TRANSISTOR	
Q2002	B1GBCFJJ0007	TRANSISTOR	
Q2004	B1GDCFJJ0008	TRANSISTOR	
Q2005	B1GDCFJJ0008	TRANSISTOR	
Q9604	2SB0710AWL	TRANSISTOR	
Q9605	2SB0710AWL	TRANSISTOR	
Q9606	B1DEGM000022	TRANSISTOR	
Q9607	B1DEGM000022	TRANSISTOR	
Q9608	2SB0710AWL	TRANSISTOR	
Q9609	2SB0710AWL	TRANSISTOR	
Q9610	B1DEGM000022	TRANSISTOR	
Q9611	B1DEGM000022	TRANSISTOR	
Q9614	B1CERQ000032	TRANSISTOR	
[DIODES]			
D1001	MA8056M	DIODE	
D1006	MA8056M	DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks
D1007	MA8056M	DIODE	
D1008	MA8056M	DIODE	
D1009	MA8056M	DIODE	
D1010	MA8056M	DIODE	
D1011	MA8056M	DIODE	
D1012	MA8056M	DIODE	
D1017	MA8056M	DIODE	
D1018	MA8056M	DIODE	
D1021	MA2S11100L	DIODE	
D1022	B0JCPD000026	DIODE	
D1023	B0JCPD000026	DIODE	
D1028	MA2S11100L	DIODE	
D1030	B0BC01000033	DIODE	
D1801	LNJ308G8TRA	LED	
D1802	LNJ308G8TRA	LED	
D1803	LNJ208R8ARA	LED	
D2001	B3AAB0000038	DIODE (TEMP LED)	
D2002	B3AAB0000038	DIODE (LAMP LED)	
D2003	B3ABB0000035	DIODE (SYNC LED)	
D2004	B3AGB0000033	DIODE (POWER LED)	
D2005	B3AGB0000033	DIODE (POWER LED)	
D2008	MA157A	DIODE	
D5002	B0HCMM000013	DIODE	
D9101	ERZV10D471	VARISTOR	△
D9601	B0FALR000001	DIODE	
D9604	MA158TX	DIODE	
D9605	B0JCPF000001	DIODE	
D9606	MA158TX	DIODE	
D9607	B0JCPF000001	DIODE	
D9608	MA158TX	DIODE	
D9609	B0JCPF000001	DIODE	
D9611	MA158TX	DIODE	
D9612	B0JCPF000001	DIODE	
D9616	B0ECHP000003	DIODE	
D9617	B0JCPF000001	DIODE	
D9618	B0JCPF000001	DIODE	
D9619	B0JCPF000001	DIODE	
D9620	B0JCPF000001	DIODE	
D9621	B0JCPF000001	DIODE	
D9622	B0ECHP000003	DIODE	
D9623	B0ECHP000003	DIODE	
D9624	MA2Z72000L	DIODE	
D9625	MA2Z72000L	DIODE	
D9626	B0JCPF000001	DIODE	
D9627	B0JCPF000001	DIODE	
D9628	B0JCPF000001	DIODE	
D9629	B0ECHP000003	DIODE	
[COILS]			
L1001	J0JCC0000168	FILTER	
L1002	J0JCC0000168	FILTER	
L1003	J0JCC0000168	FILTER	
L1004	J0JCC0000168	FILTER	
L1009	J0JCC0000168	FILTER	
L1010	J0JJC0000022	EMI FILTER	
L1014	J0JCC0000168	FILTER	
L1015	J0JJC0000022	EMI FILTER	
L1016	J0JCC0000168	EMI FILTER	
L1017	J0JJC0000022	EMI FILTER	
L1018	J0JJC0000022	EMI FILTER	
L1028	J0JJC0000022	EMI FILTER	LB50NTU/E/EA
L1030	J0JJC0000022	EMI FILTER	
L1031	J0JJC0000022	EMI FILTER	
L1032	J0JJC0000022	EMI FILTER	
L1033	ELJFA470JFB	COIL	
L1034	J0JJC0000022	EMI FILTER	
L1035	J0JCC0000168	EMI FILTER	
L1036	ELJFA6R8JFB	COIL	
L1037	ELJFA470JFB	COIL	
L1038	J0JJC0000022	EMI FILTER	
L1039	J0JJC0000022	EMI FILTER	
L1040	J0JJC0000022	EMI FILTER	

Ref. No.	Part No.	Part Name & Description	Remarks
L1042	J0JJC0000022	EMI FILTER	
L1043	J0JJC0000022	EMI FILTER	
L1044	J0JJC0000022	EMI FILTER	
L1045	J0JJC0000022	EMI FILTER	
L1046	J0JJC0000022	EMI FILTER	
L1048	J0JJC0000022	EMI FILTER	
L1049	J0JJC0000022	EMI FILTER	
L1050	J0JJC0000022	EMI FILTER	
L1066	J0JCC0000168	EMI FILTER	
L1067	J0JCC0000168	EMI FILTER	
L1068	J0JCC0000168	EMI FILTER	
L1069	J0JCC0000168	EMI FILTER	
L1070	J0JCC0000168	EMI FILTER	
L1071	J0JCC0000168	EMI FILTER	
L1072	J0JCC0000168	EMI FILTER	
L1073	J0JCC0000168	EMI FILTER	
L1074	J0JCC0000168	EMI FILTER	
L1075	J0JCC0000168	EMI FILTER	
L1076	J0JJC0000022	EMI FILTER	
L1077	J0JJC0000022	EMI FILTER	
L1656	J0JJC0000022	EMI FILTER	
L1801	J0JHC0000107	CORE	LB50NTU/E/EA
L1802	J0JHC0000107	CORE	LB50NTU/E/EA
L1803	J0JHC0000107	CORE	LB50NTU/E/EA
L1804	J0JHC0000107	CORE	LB50NTU/E/EA
L1805	J0JHC0000107	CORE	LB50NTU/E/EA
L1806	J0JHC0000107	CORE	LB50NTU/E/EA
L1807	J0JHC0000107	CORE	LB50NTU/E/EA
L4001	J0JCC0000168	EMI FILTER	
L4002	J0JCC0000168	EMI FILTER	
L4003	J0JCC0000168	EMI FILTER	
L4004	J0JCC0000168	EMI FILTER	
LF9101	G0B173H00001	COIL	△
FL1001	J0HABB000014	FILTER	
FL1002	J0HABB000014	FILTER	
FL1003	EXB38V101J	RESISTOR ARRAY	LB50NTU/E/EA
FL1004	EXB38V101J	RESISTOR ARRAY	LB50NTU/E/EA
FL1005	EXB38V101J	RESISTOR ARRAY	LB50NTU/E/EA
FL1006	EXB38V101J	RESISTOR ARRAY	LB50NTU/E/EA
FL1007	EXB38V101J	RESISTOR ARRAY	LB50NTU/E/EA
FL1008	EXB38V101J	RESISTOR ARRAY	LB50NTU/E/EA
FL1801	J0JAD0000012	CORE	LB50NTU/E/EA
FL1802	J0JAD0000012	CORE	LB50NTU/E/EA
FL1803	J0JAD0000012	CORE	LB50NTU/E/EA
FL1804	J0JAD0000012	CORE	LB50NTU/E/EA
FL1805	J0JAD0000012	CORE	LB50NTU/E/EA
FL1806	J0JAD0000012	CORE	LB50NTU/E/EA
FL1807	J0JAD0000012	CORE	LB50NTU/E/EA
[RESISTORS]			
R1001	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1002	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R1004	EXB28V473JX	RESISTOR	
R1005	ERJ3GEYJ1R5V	RESISTOR	
R1008	ERJ2GEOR00X	M 0 OHM, 0.063W	LB50NTU/E/EA
R1009	ERJ2GEOR00X	M 0 OHM, 0.063W	LB50NTU/E/EA
R1016	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R1017	ERJ6GEYJ472	M 4.7KOHM,J,1/10W	
R1019	ERJ3GEYJ203V	RESISTOR	
R1021	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1022	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1024	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1025	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1027	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1029	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1030	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1039	ERJ2GEJ100	M 10 OHM, 0.063W	
R1041	ERJ6GEYJ750	M 75 OHM,J,1/10W	
R1042	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1043	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1044	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1045	ERJ3GEYJ331	M 330 OHM,J,1/16W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1047	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1048	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1051	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1052	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1053	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1054	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1055	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1056	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1057	ERJ6GEYJ750	M 75 OHM,J,1/10W	
R1058	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1059	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1060	ERJ3GEYJ330	M 33 OHM,J,1/16W	
R1061	ERJ3GEYJ330	M 33 OHM,J,1/16W	
R1064	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1065	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1071	ERJ6GEYJ750	M 75 OHM,J,1/10W	
R1072	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1073	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1078	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1079	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1081	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1082	ERJ3GEYJ822V	RESISTOR	
R1085	ERJ3GEYJ122	M 1.2KOHM,J,1/16W	
R1088	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1094	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1095	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1099	ERJ3GEYJ223	M 22K OHM,J,1/16W	
R1101	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1102	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1103	ERJ3GEYJ563	M 56KOHM,J,1/16W	
R1104	ERJ3GEYJ223	M 22K OHM,J,1/16W	
R1105	ERJ3GEYJ154	M 150 OHM,J,1/16W	
R1106	ERJ3GEYJ393V	RESISTOR	
R1107	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1108	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1109	ERJ3GEYJ124	M 120KOHM,J,1/16W	
R1110	ERJ3GEYJ154	M 150 OHM,J,1/16W	
R1111	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1112	ERJ1TYJ221	M 220 OHM, 1W	
R1113	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1115	ERJ2GEJ220	M 22 OHM, 0.063W	
R1117	ERJ2GEJ220	M 22 OHM, 0.063W	
R1118	ERJ3GEYJ223	M 22K OHM,J,1/16W	
R1119	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1120	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1121	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1122	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1123	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1124	ERJ3GEYJ563	M 56KOHM,J,1/16W	
R1125	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1126	ERJ3GEYJ183	M 18K OHM,J,1/16W	
R1127	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1128	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1129	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1130	ERJ3GEYJ183	M 18K OHM,J,1/16W	
R1131	ERJ3GEYJ563	M 56KOHM,J,1/16W	
R1132	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1133	ERJ2GEJ220	M 22 OHM, 0.063W	
R1134	ERJ2GEJ220	M 22 OHM, 0.063W	
R1137	ERJ2GEJ220	M 22 OHM, 0.063W	
R1138	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1140	ERJ3GEYJ153	M 15K OHM,J,1/16W	
R1141	ERJ3GEYJ153	M 15K OHM,J,1/16W	
R1142	ERJ3EKF2001V	RESISTOR	
R1143	ERJ3EKF2801	RESISTOR	
R1144	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1145	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1146	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1147	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1148	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1151	ERJ2GEJ220	M 22 OHM, 0.063W	
R1152	ERJ2GEJ220	M 22 OHM, 0.063W	
R1154	ERJ3EKF1001	M 1K OHM, 0.063W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1155	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1156	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1164	ERJ3EKF1371	M 1.37KOHM, 0.063W	
R1167	ERJ3EKF2001V	RESISTOR	
R1168	ERJ3GEYJ560	M 56 OHM, J, 1/16W	
R1169	ERJ2GEJ220	M 22 OHM, 0.063W	
R1170	ERJ3EKF3001	RESISTOR	
R1171	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1173	ERJ3EKF1691	M 1.69KOHM, 1/16W	
R1174	ERJ2GE0R00X	M 0 OHM, 0.063W	
R1177	ERJ2GEJ220	M 22 OHM, 0.063W	
R1178	ERJ2GEJ560	M 56 OHM, 0.063W	
R1179	ERJ2GEJ220	M 22 OHM, 0.063W	
R1180	ERJ3GEYJ560	M 56 OHM, J, 1/16W	
R1183	ERJ3EKF1101	M 1.1KOHM, 1/16W	
R1184	ERJ2GEJ220	M 22 OHM, 0.063W	
R1188	ERJ3GEYJ220	M 22 OHM, J, 1/16W	
R1192	ERJ2GEJ330X	RESISTOR	
R1193	EXB28V560J	RESISTOR ARRAY	
R1194	EXB2HV560JV	RESISTOR	
R1195	ERJ3GEYJ560	M 56 OHM, J, 1/16W	
R1197	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1198	ERJ3GEYJ330	M 33 OHM, J, 1/16W	
R1199	ERJ6ENF2001	M 2KOHM, 1/10W	
R1200	ERJ3GEYJ330	M 33 OHM, J, 1/16W	
R1203	ERJ3EKF3001	RESISTOR	
R1204	ERJ3EKF1201	RESISTOR	
R1206	ERJ3GEYJ560	M 56 OHM, J, 1/16W	
R1210	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1211	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1212	EXB2HV560JV	RESISTOR	
R1213	EXB28V560J	RESISTOR ARRAY	
R1214	ERJ2GEJ220	M 22 OHM, 0.063W	
R1218	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1219	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1221	ERJ3GEYJ560	M 56 OHM, J, 1/16W	
R1222	ERJ6ENF1002	M 10KOHM, 1/10W	
R1223	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1224	ERJ3EKF1003	RESISTOR	
R1225	ERJ3EKF3602	RESISTOR	
R1266	EXB28V560J	RESISTOR ARRAY	
R1272	ERJ2GEJ681	M 680 OHM, 0.063W	
R1285	ERJ2GEJ203	RESISTOR	
R1286	ERJ2GEJ750	M 75 OHM, 0.063W	
R1290	ERJ3GEYJ301	M 300 OHM, J, 1/16W	
R1291	ERJ3GEYJ220	M 22 OHM, J, 1/16W	
R1295	ERJ6ENF8201	M 8.2KOHM, 1/10W	
R1299	ERJ3GEYJ220	M 22 OHM, J, 1/16W	
R1300	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1301	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1304	ERJ2GEJ103	M 10K OHM, 0.063W	
R1305	ERJ3EKF1473	M 147KOHM, 0.063W	
R1306	ERJ3EKF1002	M 10KOHM, 1/16W	
R1308	ERJ6ENF1004	M 1000KOHM, 1/10W	
R1309	ERJ2GEJ103	M 10K OHM, 0.063W	
R1310	ERJ3EKF3301	M 3.3KOHM, 0.063W	
R1311	ERJ3EKF6801	M 6.8KOHM, 1/16W	
R1312	ERJ3EKF3301	M 3.3KOHM, 0.063W	
R1313	ERJ3EKF6801	M 6.8KOHM, 1/16W	
R1314	ERJ3EKF3301	M 3.3KOHM, 0.063W	
R1315	ERJ3EKF6801	M 6.8KOHM, 1/16W	
R1322	ERJ3GEYJ220	M 22 OHM, J, 1/16W	
R1323	ERJ3GEYJ220	M 22 OHM, J, 1/16W	
R1324	ERJ3GEYJ220	M 22 OHM, J, 1/16W	
R1328	EXB2HV103JV	RESISTOR	
R1331	ERJ2GEJ105	M 1M OHM, 0.063W	
R1333	EXB28V103J	RESISTOR ARRAY	
R1339	ERJ2GEJ103	M 10K OHM, 0.063W	
R1340	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1346	ERJ2GEJ103	M 10K OHM, 0.063W	
R1355	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1356	ERJ2GEJ103	M 10K OHM, 0.063W	
R1357	ERJ6GEYJ100	M 10 OHM, J, 1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1358	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1360	ERJ6GEYJ100	M 10 OHM, J, 1/10W	
R1362	ERJ6GEYJ560	M 56 OHM, J, 1/10W	
R1365	ERJ6ENF6801	M 6.8KOHM, 1/10W	
R1367	ERJ3GEYJ102	M 1K OHM, J, 1/16W	
R1368	ERJ6ENF2202	M 2.2KOHM, 1/10W	
R1369	ERJ3GEYJ102	M 1K OHM, J, 1/16W	
R1370	ERJ6ENF6801	M 6.8KOHM, 1/10W	
R1372	ERJ3GEYJ102	M 1K OHM, J, 1/16W	
R1390	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1391	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1392	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1394	EXB2HV220JV	RESISTOR	
R1401	EXB28V220J	RESISTOR ARRAY	
R1402	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1403	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1404	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1405	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1407	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1408	ERJ2GEJ331	M 330 OHM, 0.063W	
R1409	ERJ2GEJ220	M 22 OHM, 0.063W	
R1410	ERJ2GEJ331	M 330 OHM, 0.063W	
R1411	ERJ6GEYJ122	M 1.2KOHM, J, 1/10W	
R1412	ERJ3EKF1002	M 10KOHM, 1/16W	
R1413	ERJ3EKF1002	M 10KOHM, 1/16W	
R1419	ERJ2GEJ473	M 47K OHM, 0.063W	
R1420	ERJ2GEJ473	M 47K OHM, 0.063W	
R1421	ERJ2GEJ473	M 47K OHM, 0.063W	
R1426	ERJ2GEJ220	M 22 OHM, 0.063W	
R1430	ERJ1TYJ221	M 220 OHM, 1W	
R1431	ERJ1TYJ221	M 220 OHM, 1W	
R1441	ERJ2GEJ104	M 100KOHM, 0.063W	
R1442	ERJ2GEJ104	M 100KOHM, 0.063W	
R1443	ERJ3GEYJ220	M 22 OHM, J, 1/16W	
R1444	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1445	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1446	ERJ3GEYJ220	M 22 OHM, J, 1/16W	LB50NTU/E/EA
R1447	ERJ2GEJ560	M 56 OHM, 0.063W	
R1451	ERJ3GEYJ222	M 2.2KOHM, J, 1/16W	
R1453	ERJ3GEYJ222	M 2.2KOHM, J, 1/16W	
R1454	ERJ3GEYJ274	M 270 OHM, J, 1/16W	
R1455	ERJ3GEYJ473	M 47K OHM, J, 1/16W	
R1471	ERJ3GEYJ101	M 100 OHM, J, 1/16W	
R1472	ERJ3GEYJ101	M 100 OHM, J, 1/16W	
R1516	ERJ3GEYJ103	M 10K OHM, J, 1/16W	
R1519	ERJ3GEYJ103	M 10K OHM, J, 1/16W	
R1520	ERJ3GEYJ473	M 47K OHM, J, 1/16W	
R1521	ERJ6GEYJ472	M 4.7KOHM, J, 1/10W	
R1522	ERJ6GEYJ472	M 4.7KOHM, J, 1/10W	
R1523	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R1524	ERJ3GEYJ331	M 330 OHM, J, 1/16W	
R1525	ERJ3GEYJ331	M 330 OHM, J, 1/16W	
R1526	ERJ3GEYJ331	M 330 OHM, J, 1/16W	
R1527	ERJ3GEYJ222	M 2.2KOHM, J, 1/16W	
R1528	ERJ2GEJ681	M 680 OHM, 0.063W	
R1530	ERJ3GEYJ333	M 33K OHM, J, 1/16W	
R1531	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R1532	ERJ3GEYJ333	M 33K OHM, J, 1/16W	
R1533	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R1534	ERJ3GEYJ333	M 33K OHM, J, 1/16W	
R1535	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R1537	ERJ3GEYJ103	M 10K OHM, J, 1/16W	
R1539	ERJ3GEYJ473	M 47K OHM, J, 1/16W	
R1542	ERJ3GEYJ124	M 120KOHM, J, 1/16W	
R1543	ERJ3GEYJ154	M 150 OHM, J, 1/16W	
R1548	ERJ3GEYJ563	M 56KOHM, J, 1/16W	
R1549	ERJ3GEYJ154	M 150 OHM, J, 1/16W	
R1569	EXB2HV220JV	RESISTOR	
R1570	EXB2HV220JV	RESISTOR	
R1571	EXB2HV220JV	RESISTOR	
R1574	EXB2HV220JV	RESISTOR	
R1575	EXB2HV220JV	RESISTOR	
R1578	ERJ2GEJ560	M 56 OHM, 0.063W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1579	ERJ2GEJ681	M 680 OHM, 0.063W	
R1581	ERJ2GEJ331	M 330 OHM, 0.063W	
R1582	ERJ2GEJ331	M 330 OHM, 0.063W	
R1583	ERJ2GEJ331	M 330 OHM, 0.063W	
R1584	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1587	ERJ2GEJ221	M 220 OHM, 0.063W	
R1591	ERJ2GEJ221	M 220 OHM, 0.063W	
R1592	ERJ2GEJ272	M 2.7KOHM, 0.063W	
R1593	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1594	ERJ2GEJ103	M 10K OHM, 0.063W	
R1595	EXB2HV103JV	RESISTOR	
R1600	EXB2HV220JV	RESISTOR	
R1603	EXB28V220J	RESISTOR ARRAY	
R1605	EXB2HV220JV	RESISTOR	
R1607	ERJ2GEJ220	M 22 OHM, 0.063W	
R1608	ERJ2GEJ103	M 10K OHM, 0.063W	
R1609	ERJ2GEJ331	M 330 OHM, 0.063W	
R1610	ERJ2GEJ220	M 22 OHM, 0.063W	
R1611	ERJ2GEJ220	M 22 OHM, 0.063W	
R1612	ERJ2GEJ220	M 22 OHM, 0.063W	
R1613	ERJ2GEJ102	M 1K OHM, 0.063W	
R1614	ERJ2GEJ220	M 22 OHM, 0.063W	
R1616	EXB2HV220JV	RESISTOR	
R1619	EXB2HV220JV	RESISTOR	
R1620	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1621	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1622	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1623	ERJ2GEJ220	M 22 OHM, 0.063W	
R1626	ERJ2GEJ220	M 22 OHM, 0.063W	
R1628	ERJ2GEJ681	M 680 OHM, 0.063W	
R1631	ERJ2GEOR00X	M 0 OHM, 0.063W	LB50NTU/E/EA, LB50U/E/EA
R1632	ERJ2GEOR00X	M 0 OHM, 0.063W	LB50SU/E/EA
R1633	EXB2HV560JV	RESISTOR	
R1635	EXB2HV560JV	RESISTOR	
R1637	EXB2HV560JV	RESISTOR	
R1639	EXB2HV560JV	RESISTOR	
R1640	ERJ2GEJ681	M 680 OHM, 0.063W	
R1641	ERJ2GEJ220	M 22 OHM, 0.063W	
R1642	ERJ2GEJ220	M 22 OHM, 0.063W	
R1645	ERJ2GEJ220	M 22 OHM, 0.063W	LB50NTU/E/EA
R1650	EXB28V103J	RESISTOR ARRAY	
R1652	ERJ2GEJ220	M 22 OHM, 0.063W	
R1656	ERJ2GEJ681	M 680 OHM, 0.063W	
R1657	ERJ2GEJ681	M 680 OHM, 0.063W	
R1666	ERJ2GEJ103	M 10K OHM, 0.063W	
R1667	ERJ2GEJ101X	M 100 OHM, 0.063W	
R1668	ERJ3GEYJ222	M 2.2KOHM, J, 1/16W	
R1669	ERJ3GEYJ562	M 5.6KOHM, J, 1/16W	
R1672	ERJ2GEJ103	M 10K OHM, 0.063W	
R1673	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1674	ERJ6GEYJ100	M 10 OHM, J, 1/10W	
R1675	ERJ2GEJ102	M 1K OHM, 0.063W	
R1676	ERJ6ENF2202	M 2.2KOHM, 1/10W	
R1677	ERJ2GEJ220	M 22 OHM, 0.063W	
R1678	EXB2HV220J	RESISTOR	LB50U/E/EA, LB50SU/E/EA
R1679	EXB2HV220J	RESISTOR	LB50U/E/EA, LB50SU/E/EA
R1680	EXB2HV220J	RESISTOR	LB50U/E/EA, LB50SU/E/EA
R1681	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1682	ERJ2GEOR00X	M 0 OHM, 0.063W	LB50U/E/EA, LB50SU/E/EA
R1683	ERJ2GEOR00X	M 0 OHM, 0.063W	LB50U/E/EA, LB50SU/E/EA
R1689	ERJ2GEOR00X	M 0 OHM, 0.063W	
R1692	ERJ1TYJ221	M 220 OHM, 1W	
R1693	ERJ3GEYJ332	M 3.3KOHM, J, 1/16W	
R1694	ERJ3GEYJ332	M 3.3KOHM, J, 1/16W	
R1695	ERJ3GEYJ103	M 10K OHM, J, 1/16W	
R1696	ERJ3GEYJ153	M 15K OHM, J, 1/16W	
R1697	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R1698	ERJ3GEYJ820V	RESISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
R1702	ERJ2GEJ220	M 22 OHM, 0.063W	
R1703	ERJ2GEJ220	M 22 OHM, 0.063W	
R1801	ERJ3GEYJ220	M 22 OHM, J, 1/16W	LB50NTU/E/EA
R1802	ERJ3GEYJ220	M 22 OHM, J, 1/16W	LB50NTU/E/EA
R1803	ERJ3GEYJ220	M 22 OHM, J, 1/16W	LB50NTU/E/EA
R1804	ERJ3GEYJ220	M 22 OHM, J, 1/16W	LB50NTU/E/EA
R1805	ERJ3GEYJ220	M 22 OHM, J, 1/16W	LB50NTU/E/EA
R1806	ERJ3GEYJ220	M 22 OHM, J, 1/16W	LB50NTU/E/EA
R1807	ERJ3GEYJ220	M 22 OHM, J, 1/16W	LB50NTU/E/EA
R1808	ERJ3GEYJ220	M 22 OHM, J, 1/16W	LB50NTU/E/EA
R1809	ERJ3GEYOR00	M 0 OHM, 1/16W	LB50NTU/E/EA
R1813	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1815	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1816	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1817	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1818	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1820	ERJ3GEYJ330	M 33 OHM, J, 1/16W	LB50NTU/E/EA
R1824	ERJ3GEYJ330	M 33 OHM, J, 1/16W	LB50NTU/E/EA
R1826	ERJ3GEYJ560	M 56 OHM, J, 1/16W	LB50NTU/E/EA
R1827	ERJ2GEOR00X	M 0 OHM, 0.063W	LB50NTU/E/EA
R1832	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1833	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1834	EXB28V103J	RESISTOR ARRAY	LB50NTU/E/EA
R1835	ERJ2GEJ680X	M 68 OHM, 0.063W	LB50NTU/E/EA
R1836	ERJ3GEYJ391V	M 390 OHM, J, 1/16W	LB50NTU/E/EA
R1837	ERJ3GEYJ391V	M 390 OHM, J, 1/16W	LB50NTU/E/EA
R1838	ERJ3GEYJ391V	M 390 OHM, J, 1/16W	LB50NTU/E/EA
R1839	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1840	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1843	ERJ2GEOR00X	M 0 OHM, 0.063W	LB50NTU/E/EA
R1844	ERJ2GEOR00X	M 0 OHM, 0.063W	LB50NTU/E/EA
R1845	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1847	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1848	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1849	ERJ2GEOR00X	M 0 OHM, 0.063W	LB50NTU/E/EA
R1850	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1852	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1855	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1856	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1861	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1864	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1865	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1866	ERJ2GEOR00X	M 0 OHM, 0.063W	LB50NTU/E/EA
R1867	ERJ2GEOR00X	M 0 OHM, 0.063W	LB50NTU/E/EA
R1868	ERJ2GEOR00X	M 0 OHM, 0.063W	LB50NTU/E/EA
R1869	ERJ2GEOR00X	M 0 OHM, 0.063W	LB50NTU/E/EA
R1871	EXB2HV100JV	RESISTOR	LB50NTU/E/EA
R1872	EXB2HV100JV	RESISTOR	LB50NTU/E/EA
R1873	EXB2HV100JV	RESISTOR	LB50NTU/E/EA
R1874	EXB2HV100JV	RESISTOR	LB50NTU/E/EA
R1875	EXB2HV220JV	RESISTOR	LB50NTU/E/EA
R1876	EXB2HV220JV	RESISTOR	LB50NTU/E/EA
R1877	EXB28V100J	RESISTOR ARRAY	LB50NTU/E/EA
R1878	EXB2HV220JV	RESISTOR	LB50NTU/E/EA
R1888	ERJ3GEYOR00	M 0 OHM, 1/16W	LB50NTU/E/EA
R1890	ERJ6ENF4020	M 402 OHM, 1/10W	LB50NTU/E/EA
R1891	ERJ6ENF1001	M 1KOHM, 1/10W	LB50NTU/E/EA
R1892	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1893	EXB28V104J	RESISTOR ARRAY	LB50NTU/E/EA
R1894	ERJ2GEOR00X	M 0 OHM, 0.063W	LB50NTU/E/EA
R1895	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1896	EXB28V103J	RESISTOR ARRAY	LB50NTU/E/EA
R1897	ERJ2GEJ103	M 10K OHM, 0.063W	LB50NTU/E/EA
R1898	EXB28V472J	RESISTOR ARRAY	LB50NTU/E/EA
R1900	ERJ2GEOR00X	M 0 OHM, 0.063W	LB50NTU/E/EA
R1901	EXB2HV220JV	RESISTOR	LB50NTU/E/EA
R1903	EXB28V220J	RESISTOR ARRAY	LB50NTU/E/EA
R1904	EXB28V103J	RESISTOR ARRAY	LB50NTU/E/EA
R1905	EXB28V220J	RESISTOR ARRAY	LB50NTU/E/EA
R1907	ERJ3GEYJ220	M 22 OHM, J, 1/16W	LB50NTU/E/EA
R1914	EXB28V220J	RESISTOR ARRAY	LB50NTU/E/EA
R1916	ERJ3GEYJ220	M 22 OHM, J, 1/16W	LB50NTU/E/EA
R1917	EXB28V220J	RESISTOR ARRAY	LB50NTU/E/EA



Ref. No.	Part No.	Part Name & Description	Remarks
R1918	EXB28V103J	RESISTOR ARRAY	LB50NTU/E/EA
R1919	ERJ3GEYJ473	M 47K OHM, J, 1/16W	LB50NTU/E/EA
R1920	ERJ3GEYJ473	M 47K OHM, J, 1/16W	LB50NTU/E/EA
R1921	ERJ3GEYJ220	M 22 OHM, J, 1/16W	LB50NTU/E/EA
R1922	ERJ3GEYJ220	M 22 OHM, J, 1/16W	LB50NTU/E/EA
R1923	ERJ3GEYJ680	M 68 OHM, J, 1/16W	LB50NTU/E/EA
R1932	ERJ2GE0R00X	M 0 OHM, 0.063W	LB50NTU/E/EA
R2002	ERJ3GEYJ102	M 1K OHM, J, 1/16W	
R2003	ERJ3GEYJ152	M 1.5KOHM, J, 1/16W	
R2004	ERJ3GEYJ332	M 3.3KOHM, J, 1/16W	
R2005	ERJ3GEYJ333	M 33K OHM, J, 1/16W	
R2006	ERJ3GEYJ332	M 3.3KOHM, J, 1/16W	
R2007	ERJ3GEYJ331	M 330 OHM, J, 1/16W	
R2008	ERJ3GEYJ331	M 330 OHM, J, 1/16W	
R2009	ERJ3GEYJ331	M 330 OHM, J, 1/16W	
R2010	ERJ3GEYJ121	M 120 OHM, J, 1/16W	
R2011	ERJ3GEYJ151	M 150 OHM, J, 1/16W	
R2012	ERJ3GEYJ121	M 120 OHM, J, 1/16W	
R2013	ERJ3GEYJ151	M 150 OHM, J, 1/16W	
R2014	ERJ8GEYJ751	M 750 OHM, J, 1/4W	
R2015	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	
R2016	ERJ3GEYJ470	M 47 OHM, J, 1/16W	
R2017	ERJ3GEYJ102	M 1K OHM, J, 1/16W	
R2019	ERJ3GEYJ392	M 3.9KOHM, J, 1/16W	
R2020	ERJ3GEYJ102	M 1K OHM, J, 1/16W	
R2021	ERJ3GEYJ162	RESISTOR	
R2022	ERJ3GEYJ332	M 3.3KOHM, J, 1/16W	
R2023	ERJ3GEYJ103	M 10K OHM, J, 1/16W	
R2024	ERJ8GEYJ751	M 750 OHM, J, 1/4W	
R2025	ERJ3GEY0R00	M 0 OHM, 1/16W	
R2026	ERJ3GEY0R00	M 0 OHM, 1/16W	
R4001	EXB28V124JX	RESISTOR	
R4002	EXB28V154JX	RESISTOR	
R4003	EXB28V473JX	RESISTOR	
R4005	EXB28V102J	RESISTOR ARRAY	
R4007	ERJ3GEYJ153	M 15K OHM, J, 1/16W	
R4008	ERJ3GEYJ153	M 15K OHM, J, 1/16W	
R4009	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R4010	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R4011	ERJ3GEYJ561	M 560 OHM, J, 1/16W	
R5001	ERJ3EKF2701	M 2.7KOHM, 1/16W	
R5002	ERJ3EKF2701	M 2.7KOHM, 1/16W	
R5003	ERJ3EKF2701	M 2.7KOHM, 1/16W	
R5004	ERJ3EKF2701	M 2.7KOHM, 1/16W	
R9101	ERDS1TJ474	C 4.7KOHM, J, 1/2W	△
R9601	ERX2SJR47E	M 0.47OHM, J, 2W	
R9630	ERJ14YJ3R3U	M 3.3 OHM, J, 1/4W	
R9631	ERJ8GEYJ220	M 68 OHM, J, 1/4W	
R9632	ERJ14YJ5R6U	M 5.6 OHM, J, 1/4W	
R9633	ERJ8GEYJ100	M 10 OHM, J, 1/4W	
R9634	ERJ8GEYJ120	M 12 OHM, J, 1/4W	
R9636	ERJ14YJ3R3U	M 3.3 OHM, J, 1/4W	
R9637	ERJ8GEYJ220	M 68 OHM, J, 1/4W	
R9638	ERJ14YJ5R6U	M 5.6 OHM, J, 1/4W	
R9639	ERJ8GEYJ100	M 10 OHM, J, 1/4W	
R9640	ERJ8GEYJ120	M 12 OHM, J, 1/4W	
R9653	DOXGR22J0004	RESISTOR	
[CAPACITORS]			
C1001	EEH0B0J221UP	E 330UF, 6.3V	
C1002	ECJ0EB1C103K	C 0.01UF, 16V	
C1003	EEH0B0J221UP	E 330UF, 6.3V	
C1004	ECJ0EB1C103K	C 0.01UF, 16V	
C1005	EEH0B0J221UP	E 330UF, 6.3V	
C1006	ECJ0EB1C103K	C 0.01UF, 16V	
C1007	ECJ0EF1C104Z	C 0.1UF, 16V	
C1008	ECJ1VB1H472K	C 4700PF, K, 50V	
C1009	ECJ1VF1C105Z	C 0.01UF, Z, 16V	
C1010	EEH0B0J330R	E 33UF, 6.3V	
C1011	ECJ0EF1C104Z	C 0.1UF, 16V	
C1012	EEH0B0J330R	E 33UF, 6.3V	
C1013	F2G1A4700011	CAPACITOR	

Ref. No.	Part No.	Part Name & Description	Remarks
C1014	ECJ0EF1C104Z	C 0.1UF, 16V	
C1015	ECJ0EF1C104Z	C 0.1UF, 16V	
C1016	ECJ0EB1C103K	C 0.01UF, 16V	
C1017	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1018	ECJ0EB1C103K	C 0.01UF, 16V	
C1019	ECJ0EB1H102K	C 1000PF, 50V	
C1021	ECJ0EF1C104Z	C 0.1UF, 16V	
C1022	ECJ0EB1C103K	C 0.01UF, 16V	
C1023	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1024	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1027	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1029	ECJ0EF1C104Z	C 0.1UF, 16V	
C1032	ECJ0EF1C104Z	C 0.1UF, 16V	
C1033	ECJ0EF1C104Z	C 0.1UF, 16V	
C1035	ECJ0EF1C104Z	C 0.1UF, 16V	
C1036	EEH0B0J330R	E 33UF, 6.3V	
C1037	ECJ0EB1C103K	C 0.01UF, 16V	
C1038	EEH0B0J330R	E 33UF, 6.3V	
C1039	ECJ0EB1C103K	C 0.01UF, 16V	
C1040	EEH0B0J330R	E 33UF, 6.3V	
C1041	ECJ0EB1C103K	C 0.01UF, 16V	
C1047	ECJ2YF1C225Z	C 2.2UF, Z, 16V	
C1048	ECJ1VB1H102K	C 1000PF, K, 50V	
C1049	ECJ2YF1C225Z	C 2.2UF, Z, 16V	
C1050	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1051	ECJ0EF1C104Z	C 0.1UF, 16V	
C1052	ECJ0EF1C104Z	C 0.1UF, 16V	
C1053	ECJ0EF1C104Z	C 0.1UF, 16V	
C1054	ECJ0EF1C104Z	C 0.1UF, 16V	
C1058	F2G0J4700024	CAPACITOR	
C1072	F2G1C4700014	CAPACITOR	
C1075	ECJ2FF1A106Z	C 10UF, 10V	
C1076	ECJ2FF1A106Z	C 10UF, 10V	
C1077	ECJ0EF1C104Z	C 0.1UF, 16V	
C1078	ECJ0EF1C104Z	C 0.1UF, 16V	
C1079	ECJ0EB1C103K	C 0.01UF, 16V	
C1080	ECJ2FF1A106Z	C 10UF, 10V	
C1081	ECJ2FF1A106Z	C 10UF, 10V	
C1082	ECJ0EF1C104Z	C 0.1UF, 16V	
C1083	ECJ0EF1C104Z	C 0.1UF, 16V	
C1084	ECJ2FF1A106Z	C 10UF, 10V	
C1085	ECJ0EF1C104Z	C 0.1UF, 16V	
C1086	ECJ0EB1C103K	C 0.01UF, 16V	
C1087	ECJ0EF1C104Z	C 0.1UF, 16V	
C1088	ECJ0EF1C104Z	C 0.1UF, 16V	
C1089	ECJ0EF1C104Z	C 0.1UF, 16V	
C1090	ECJ0EF1C104Z	C 0.1UF, 16V	
C1091	ECJ0EF1C104Z	C 0.1UF, 16V	
C1092	ECJ0EF1C104Z	C 0.1UF, 16V	
C1093	ECJ0EB1H102K	C 1000PF, 50V	
C1094	ECJ2FF1A106Z	C 10UF, 10V	
C1095	ECJ0EF1C104Z	C 0.1UF, 16V	
C1096	ECJ0EF1C104Z	C 0.1UF, 16V	
C1097	ECJ0EF1C104Z	C 0.1UF, 16V	
C1098	ECJ0EF1C104Z	C 0.1UF, 16V	
C1100	ECJ3YF1C475Z	C 4.7UF, Z, 16V	
C1101	ECJ0EF1C104Z	C 0.1UF, 16V	
C1102	ECJ0EF1C104Z	C 0.1UF, 16V	
C1103	ECJ1VF1C105Z	C 0.01UF, Z, 16V	
C1104	F2G1C4700014	CAPACITOR	
C1105	ECJ0EB1H102K	C 1000PF, 50V	
C1106	ECJ1VF1C105Z	C 0.01UF, Z, 16V	
C1107	ECJ0EF1C104Z	C 0.1UF, 16V	
C1108	ECJ0EF1C104Z	C 0.1UF, 16V	
C1109	ECJ1VB1C823K	C 0.82UF, 16V	
C1110	ECJ0EB1C103K	C 0.01UF, 16V	
C1111	ECJ2YF1C225Z	C 2.2UF, Z, 16V	
C1112	ECJ0EF1C104Z	C 0.1UF, 16V	
C1113	ECJ0EB1C103K	C 0.01UF, 16V	
C1114	ECJ0EF1C104Z	C 0.1UF, 16V	
C1115	ECJ0EF1C104Z	C 0.1UF, 16V	
C1116	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1117	ECJ0EF1C104Z	C 0.1UF, 16V	

Ref. No.	Part No.	Part Name & Description	Remarks
C1119	ECJ0EF1C104Z	C 0.1UF, 16V	
C1120	ECJ2FF1A106Z	C 10UF, 10V	
C1121	ECJ0EF1C104Z	C 0.1UF, 16V	
C1122	ECJ1VF1C105Z	C 0.01UF, Z, 16V	
C1123	ECJ0EF1C104Z	C 0.1UF, 16V	
C1124	ECJ1VF1C105Z	C 0.01UF, Z, 16V	
C1125	ECJ0EF1C104Z	C 0.1UF, 16V	
C1126	ECJ2FF1A106Z	C 10UF, 10V	
C1127	ECJ0EF1C104Z	C 0.1UF, 16V	
C1128	EEFCD0D101R	CAPACITOR	
C1129	ECJ1VB1H102K	C 1000PF, K, 50V	
C1130	ECJ1VB1H102K	C 1000PF, K, 50V	
C1131	ECJ1VF1C105Z	C 0.01UF, Z, 16V	
C1132	ECJ2YF1C225Z	C 2.2UF, Z, 16V	
C1133	ECJ0EF1C104Z	C 0.1UF, 16V	
C1134	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1135	ECJ0EF1C104Z	C 0.1UF, 16V	
C1136	ECJ0EF1C104Z	C 0.1UF, 16V	
C1137	F2G0J1010031	CAPACITOR	
C1138	ECJ0EF1C104Z	C 0.1UF, 16V	
C1139	ECJ0EF1C104Z	C 0.1UF, 16V	
C1140	ECJ0EF1C104Z	C 0.1UF, 16V	
C1141	ECJ2YF1C225Z	C 2.2UF, Z, 16V	
C1143	F2G1C4700014	CAPACITOR	
C1145	ECJ0EF1C104Z	C 0.1UF, 16V	
C1146	F2G1C4700014	CAPACITOR	
C1150	ECJ0EF1C104Z	C 0.1UF, 16V	
C1152	ECJ0EF1C104Z	C 0.1UF, 16V	
C1168	ECJ0EF1C104Z	C 0.1UF, 16V	
C1172	ECJ0EF1C104Z	C 0.1UF, 16V	
C1178	ECJ0EF1C104Z	C 0.1UF, 16V	
C1185	ECJ0EF1C104Z	C 0.1UF, 16V	
C1189	ECJ0EF1C104Z	C 0.1UF, 16V	
C1199	ECJ2FF1A106Z	C 10UF, 10V	
C1201	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1202	ECJ0EF1C104Z	C 0.1UF, 16V	
C1204	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1206	ECJ0EF1C104Z	C 0.1UF, 16V	
C1207	ECJ0EF1C104Z	C 0.1UF, 16V	
C1208	ECJ0EF1C104Z	C 0.1UF, 16V	
C1209	ECJ0EF1C104Z	C 0.1UF, 16V	
C1210	ECJ1VF1H333Z	C 0.033UF, 50V	
C1212	ECJ0EF1C104Z	C 0.1UF, 16V	
C1216	ECJ0EF1C104Z	C 0.1UF, 16V	
C1217	ECJ1VCLH471J	C 470PF, J, 50V	
C1219	ECJ1VCLH100C	C 10PF, 50V	
C1220	ECJ0EB1H102K	C 1000PF, 50V	
C1221	ECJ1VCLH100C	C 10PF, 50V	
C1222	ECJ0EF1C104Z	C 0.1UF, 16V	
C1224	F2G0J4700024	CAPACITOR	
C1225	ECJ0EF1C104Z	C 0.1UF, 16V	
C1226	ECJ0EF1C104Z	C 0.1UF, 16V	
C1228	ECJ0EF1C104Z	C 0.1UF, 16V	
C1229	ECJ0EF1C104Z	C 0.1UF, 16V	
C1230	F2G0J4700010	CAPACITOR	
C1242	F2G0J1010031	CAPACITOR	
C1243	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1244	F2G1E3300010	CAPACITOR	
C1245	F2G1E3300010	CAPACITOR	
C1246	ECJ0EB1C103K	C 0.01UF, 16V	
C1247	ECJ0EF1C104Z	C 0.1UF, 16V	
C1248	ECJ0EB1C103K	C 0.01UF, 16V	
C1249	ECJ0EF1C104Z	C 0.1UF, 16V	
C1250	ECJ0EB1C103K	C 0.01UF, 16V	
C1251	ECJ0EF1C104Z	C 0.1UF, 16V	
C1252	F1J1E105A197	CAPACITOR	
C1253	ECJ0EF1C104Z	C 0.1UF, 16V	
C1254	ECJ0EF1C104Z	C 0.1UF, 16V	
C1255	ECJ0EF1C104Z	C 0.1UF, 16V	
C1256	ECJ0EF1C104Z	C 0.1UF, 16V	
C1257	ECJ0EF1C104Z	C 0.1UF, 16V	
C1258	ECJ0EF1C104Z	C 0.1UF, 16V	
C1259	ECJ0EF1C104Z	C 0.1UF, 16V	

Ref. No.	Part No.	Part Name & Description	Remarks
C1260	ECJ0EF1C104Z	C 0.1UF, 16V	
C1261	ECJ0EF1C104Z	C 0.1UF, 16V	
C1262	ECJ0EF1C104Z	C 0.1UF, 16V	
C1263	ECJ0EF1C104Z	C 0.1UF, 16V	
C1264	ECJ0EF1C104Z	C 0.1UF, 16V	
C1265	ECJ0EF1C104Z	C 0.1UF, 16V	
C1266	ECJ0EF1C104Z	C 0.1UF, 16V	
C1267	ECJ0EF1C104Z	C 0.1UF, 16V	
C1268	ECJ0EF1C104Z	C 0.1UF, 16V	
C1269	ECJ0EF1C104Z	C 0.1UF, 16V	
C1270	ECJ0EF1C104Z	C 0.1UF, 16V	
C1271	ECJ0EF1C104Z	C 0.1UF, 16V	
C1272	ECJ0EF1C104Z	C 0.1UF, 16V	
C1273	ECJ0EF1C104Z	C 0.1UF, 16V	
C1274	ECJ0EF1C104Z	C 0.1UF, 16V	
C1275	ECJ0EF1C104Z	C 0.1UF, 16V	
C1276	ECJ0EF1C104Z	C 0.1UF, 16V	
C1277	ECJ0EF1C104Z	C 0.1UF, 16V	
C1278	ECJ0EF1C104Z	C 0.1UF, 16V	
C1279	ECJ0EF1C104Z	C 0.1UF, 16V	
C1280	ECJ0EF1C104Z	C 0.1UF, 16V	
C1281	ECJ0EF1C104Z	C 0.1UF, 16V	
C1282	ECJ0EF1C104Z	C 0.1UF, 16V	
C1283	ECJ0EF1C104Z	C 0.1UF, 16V	
C1284	ECJ0EF1C104Z	C 0.1UF, 16V	
C1285	ECJ0EF1C104Z	C 0.1UF, 16V	
C1286	F2G1E3300022	CAPACITOR	
C1306	ECJ0EF1C104Z	C 0.1UF, 16V	
C1329	F1J1E105A197	CAPACITOR	
C1330	F1J1E105A197	CAPACITOR	
C1331	F1J1E105A197	CAPACITOR	
C1332	F2G1E3300022	CAPACITOR	
C1333	F2G1E3300010	CAPACITOR	
C1334	F2G1E3300022	CAPACITOR	
C1335	F2G1A3300007	CAPACITOR	
C1336	F2G1A3300022	CAPACITOR	
C1337	F2G1A3300022	CAPACITOR	
C1341	ECJ1VF1C105Z	C 0.01UF, Z, 16V	
C1342	ECJ1VF1C105Z	C 0.01UF, Z, 16V	
C1343	ECJ1VF1C105Z	C 0.01UF, Z, 16V	
C1360	ECJ3YF1C475Z	C 4.7UF, Z, 16V	
C1500	ECJ0EF1C104Z	C 0.1UF, 16V	
C1501	ECJ0EF1C104Z	C 0.1UF, 16V	
C1502	ECJ0EF1C104Z	C 0.1UF, 16V	
C1503	ECJ0EF1C104Z	C 0.1UF, 16V	
C1504	ECJ0EF1C104Z	C 0.1UF, 16V	
C1505	ECJ0EF1C104Z	C 0.1UF, 16V	
C1506	ECJ0EF1C104Z	C 0.1UF, 16V	
C1507	ECJ0EF1C104Z	C 0.1UF, 16V	
C1508	ECJ0EF1C104Z	C 0.1UF, 16V	
C1509	ECJ0EF1C104Z	C 0.1UF, 16V	
C1510	ECJ0EF1C104Z	C 0.1UF, 16V	
C1511	ECJ0EF1C104Z	C 0.1UF, 16V	
C1512	ECJ0EF1C104Z	C 0.1UF, 16V	
C1513	ECJ0EF1C104Z	C 0.1UF, 16V	
C1514	ECJ0EF1C104Z	C 0.1UF, 16V	
C1515	ECJ0EF1C104Z	C 0.1UF, 16V	
C1516	ECJ0EF1C104Z	C 0.1UF, 16V	
C1517	ECJ0EB1C103K	C 0.01UF, 16V	
C1518	ECJ0EF1C104Z	C 0.1UF, 16V	
C1519	ECJ0EF1C104Z	C 0.1UF, 16V	
C1520	ECJ0EF1C104Z	C 0.1UF, 16V	
C1521	ECJ0EF1C104Z	C 0.1UF, 16V	
C1522	ECJ0EF1C104Z	C 0.1UF, 16V	
C1523	ECJ0EF1C104Z	C 0.1UF, 16V	
C1524	ECJ0EF1C104Z	C 0.1UF, 16V	
C1525	ECJ0EF1C104Z	C 0.1UF, 16V	
C1526	ECJ0EF1C104Z	C 0.1UF, 16V	
C1527	ECJ0EF1C104Z	C 0.1UF, 16V	
C1528	ECJ0EF1C104Z	C 0.1UF, 16V	
C1529	ECJ0EF1C104Z	C 0.1UF, 16V	
C1530	ECJ0EF1C104Z	C 0.1UF, 16V	
C1531	ECJ0EF1C104Z	C 0.1UF, 16V	

Ref. No.	Part No.	Part Name & Description	Remarks
C1532	ECJ0EF1C104Z	C 0.1UF, 16V	
C1533	ECJ0EF1C104Z	C 0.1UF, 16V	
C1534	ECJ0EF1C104Z	C 0.1UF, 16V	
C1535	ECJ0EF1C104Z	C 0.1UF, 16V	
C1539	FIJ0J105A197	CAPACITOR	
C1541	FIJ0J106A013	CAPACITOR	
C1542	F2G0J4700024	CAPACITOR	
C1543	F2G1A221A030	CAPACITOR	
C1544	ECJ0EF1C104Z	C 0.1UF, 16V	
C1601	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1602	ECJ0EF1C104Z	C 0.1UF, 16V	
C1603	ECJ0EF1C104Z	C 0.1UF, 16V	
C1604	ECJ0EF1C104Z	C 0.1UF, 16V	
C1605	ECJ0EF1C104Z	C 0.1UF, 16V	
C1606	ECJ0EF1C104Z	C 0.1UF, 16V	
C1607	ECJ0EF1C104Z	C 0.1UF, 16V	
C1608	ECJ0EF1C104Z	C 0.1UF, 16V	
C1609	ECJ0EF1C104Z	C 0.1UF, 16V	
C1610	ECJ0EF1C104Z	C 0.1UF, 16V	
C1611	ECJ0EF1C104Z	C 0.1UF, 16V	
C1613	ECJ0EF1C104Z	C 0.1UF, 16V	
C1614	ECJ0EF1C104Z	C 0.1UF, 16V	
C1615	ECJ0EF1C104Z	C 0.1UF, 16V	
C1616	ECJ0EF1C104Z	C 0.1UF, 16V	
C1617	ECJ0EF1C104Z	C 0.1UF, 16V	
C1618	ECJ0EF1C104Z	C 0.1UF, 16V	
C1619	ECJ0EF1C104Z	C 0.1UF, 16V	
C1620	ECJ0EF1C104Z	C 0.1UF, 16V	
C1621	ECJ0EF1C104Z	C 0.1UF, 16V	
C1623	ECJ0EF1C104Z	C 0.1UF, 16V	
C1624	ECJ0EF1C104Z	C 0.1UF, 16V	
C1629	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1637	ECJ0EF1C104Z	C 0.1UF, 16V	
C1638	ERJ3GEYJ103	M 10K OHM, J, 1/16W	
C1639	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C1640	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C1641	ECJ2FF1A106Z	C 10UF, 10V	
C1801	FIJ0J106A013	CAPACITOR	LB50NTU/E/EA
C1802	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1803	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1804	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1805	FIJ0J106A013	CAPACITOR	LB50NTU/E/EA
C1816	FIJ0J106A013	CAPACITOR	LB50NTU/E/EA
C1817	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1818	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1819	ECJ1VC1H101J	C 100PF, J, 50V	LB50NTU/E/EA
C1820	ECJ1VB0J105K	C 1UF, Z, 6.3V	LB50NTU/E/EA
C1821	ECJ1VB1C104K	CAPACITOR	LB50NTU/E/EA
C1822	EEEFK1C101P	CAPACITOR	LB50NTU/E/EA
C1823	EEEFK1C101P	CAPACITOR	LB50NTU/E/EA
C1824	ECJ1VB0J105K	C 1UF, Z, 6.3V	LB50NTU/E/EA
C1825	ECJ1VB0J105K	C 1UF, Z, 6.3V	LB50NTU/E/EA
C1826	ECJ1VB0J105K	C 1UF, Z, 6.3V	LB50NTU/E/EA
C1827	ECJ1VB0J105K	C 1UF, Z, 6.3V	LB50NTU/E/EA
C1828	ECJ1VB0J105K	C 1UF, Z, 6.3V	LB50NTU/E/EA
C1829	ECJ1VB0J105K	C 1UF, Z, 6.3V	LB50NTU/E/EA
C1830	ECJ1VB0J105K	C 1UF, Z, 6.3V	LB50NTU/E/EA
C1831	ECJ1VB0J105K	C 1UF, Z, 6.3V	LB50NTU/E/EA
C1832	ECJ1VB0J105K	C 1UF, Z, 6.3V	LB50NTU/E/EA
C1833	ECJ1VB0J105K	C 1UF, Z, 6.3V	LB50NTU/E/EA
C1834	ECJ1VB0J105K	C 1UF, Z, 6.3V	LB50NTU/E/EA
C1835	ECJ1VB0J105K	C 1UF, Z, 6.3V	LB50NTU/E/EA
C1836	F2G0J4700010	CAPACITOR	LB50NTU/E/EA
C1837	F2G0J4700010	CAPACITOR	LB50NTU/E/EA
C1838	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1839	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1840	FIJ0J106A013	CAPACITOR	LB50NTU/E/EA
C1841	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1842	ECJ1VB0J474K	CAPACITOR	LB50NTU/E/EA
C1843	FIJ0J106A013	CAPACITOR	LB50NTU/E/EA
C1844	FIJ0J106A013	CAPACITOR	LB50NTU/E/EA
C1845	FIJ0J106A013	CAPACITOR	LB50NTU/E/EA
C1846	FIJ0J106A013	CAPACITOR	LB50NTU/E/EA

Ref. No.	Part No.	Part Name & Description	Remarks
C1847	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1861	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1862	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1863	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1864	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1865	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1866	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1867	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1868	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1869	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1870	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1871	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1872	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C1873	ECJ0EF1C104Z	C 0.1UF, 16V	LB50NTU/E/EA
C2001	ECJ3YF1C475Z	C 4.7UF, Z, 16V	
C2002	ECJ0EF1C104Z	C 0.1UF, 16V	
C2003	ECJ0EF1C104Z	C 0.1UF, 16V	
C2004	F2G0J4700010	CAPACITOR	
C4001	ECJ3YF1C475Z	C 4.7UF, Z, 16V	
C4002	ECJ3YF1C475Z	C 4.7UF, Z, 16V	
C4003	ECJ2FF1A106Z	C 10UF, 10V	
C4004	ECJ1VB1H472K	C 4700PF, K, 50V	
C4005	ECJ2FF1A106Z	C 10UF, 10V	
C4006	ECJ1VF1C105Z	C 0.01UF, Z, 16V	
C5001	F4D272750005	CAPACITOR	
C5002	F4D272750005	CAPACITOR	
C5003	F4D272750005	CAPACITOR	
C5004	F4D272750005	CAPACITOR	
C9101	ECQU2A105MLA	P 1UF, M, 250V	△
C9102	F1BAH102A024	CAPACITOR	△
C9103	F1BAH102A024	CAPACITOR	△
C9603	F1K2J333A013	CAPACITOR	
C9610	F0C2E1050002	CAPACITOR	
C9617	F0C3C4720003	CAPACITOR	
C9618	F0C2J1540004	CAPACITOR	
C9619	F0C2J1540004	CAPACITOR	
[OTHERS]			
A1	K1MY30BA0006	CONNECTOR	
A2	K1MY30BA0006	CONNECTOR	
A3	K1MY30BA0006	CONNECTOR	
A4	K1KA07BA0014	7P CONNECTOR	
A5	K1KA03BA0014	3P CONNECTOR	
A6	K1KA12BA0059	12P CONNECTOR	
A8	K1MY14BA0008	14P CONNECTOR	
A9	K1KB05AA0065	5P CONNECTOR	
A10	K1KA02BA0047	2P CONNECTOR	
A11	K1KA02BA0047	2P CONNECTOR	
A12	K1KA02BA0047	2P CONNECTOR	
A13	K1MY50BA0106	CONNECTOR	LB50NTU/E/EA
A15	K1KA03BA0047	3P CONNECTOR	
A16	K1KA03BA0014	3P CONNECTOR	
A17	K1KA03BA0047	3P CONNECTOR	
A18	K1KA03BA0014	3P CONNECTOR	
A19	K1KA04BA0047	4P CONNECTOR	
A20	K1MN14AA0041	14P CONNECTOR	
G1	K1MN14AA0041	CONNECTOR	
S1	K1MN14BA0116	CONNECTOR	
WL1	K1NA09E00062	SD CARD SLOT	LB50NTU/E/EA
WL2	K1MY50BA0106	CONNECTOR	LB50NTU/E/EA
WL3	K1KA10BA0014	10P CONNECTOR	LB50NTU/E/EA
Z1	K1YA03000032	CONNECTOR	
CF1001	D4CC1103A037	THERMISTOR	
CF2001	D4CC1103A037	THERMISTOR	
F9101-1	EYF52BCY	FUSE HOLDER	
F9101-2	EYF52BCY	FUSE HOLDER	
F9101	K5D502BNA005	FUSE	△
JK1001	K1AY205B0001	S-VIDEO/VIDEO IN TERMINAL	
JK1002	K1FY108B0001	RS232C I/F TERMINAL	
JK1003	K2HA2YYB0001	AUDIO IN TERMINAL	
JK1004	K1FB115B0103	RGB IN 1 TERNINAL	

Ref. No.	Part No.	Part Name & Description	Remarks
JK1005	K1FB115B0102	RGB IN 2/OUT TERMINAL	
JK4001	K2HC1YYB0003	AUDIO TERMINAL	
JK4002	K2HC1YYB0004	AUDIO TERMINAL	
JK9101	K2AZ3B000002	AC INLET	△
JS1003	ERJ6GEY0R00V	RESISTOR	
JS1004	ERJ6GEY0R00V	RESISTOR	
JS1005	ERJ6GEY0R00V	RESISTOR	
JS1006	ERJ6GEY0R00V	RESISTOR	
JS1007	ERJ6GEY0R00V	RESISTOR	
PC2001	B3JB00000023	SENSO (DAYLIGHT SENSOR)	
RM2001	B3RAD0000126	REMOTE CONTROL RECEIVER	
S9602	A9BZ00000013	SPARK GAP	
SW2001	EVQPLHA15	SWITCH	
SW2002	EVQPLHA15	SWITCH	
SW2003	EVQPLHA15	SWITCH	
SW2004	EVQPLHA15	SWITCH	
SW2005	EVQPLHA15	SWITCH	
SW2006	EVQPLHA15	SWITCH	
SW2007	EVQPLHA15	SWITCH	
SW2008	EVQPLHA15	SWITCH	
SW2009	EVQPLHA15	SWITCH	
SW9601	T115AR3U3	SWITCH	△
T9604	G4F2A0000001	TRANS	△
X1001	H0J270500105	CRYSTAL	
X1003	H0J983400016	CRYSTAL	
X1801	H1A6605B0008	CRYSTAL	LB50NTU/E/EA
X1802	H1A1225B0015	CRYSTAL	LB50NTU/E/EA
ZA9101	K9ZZ00000424	CONNECTOR	
RTL	TNPA3876	CIRCUIT BOARD WL	LB50NTU/E/EA
RTL	TNPA3877	CIRCUIT BOARD S	
RTL	TNPA3878	CIRCUIT BOARD G	
RTL	TNPA3887	CIRCUIT BOARD Z	
RTL	TXANP01VKB9	CIRCUIT BOARD A	LB50NTU/E/EA
	TXANP01QCEZ	CIRCUIT BOARD A	LB50U/E/EA
	TXANP01QCHZ	CIRCUIT BOARD A	LB50SU/E/EA
RTL	TXANP02VKB9	CIRCUIT BOARD K	
	TXANP03VKB9	POWER UNIT ASSY	
	TXANP04VKB9	BALLAST UNIT ASSY	