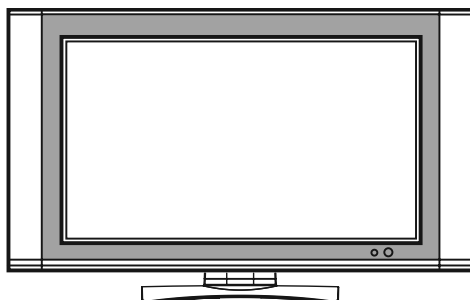


HITACHI

SERVICE MANUAL

YK**No.013-1E****32PD7800****42PD7800****(PW2)**

Caution

Be sure to read this manual before servicing. To assure safety from fire, electric shock, injury, harmful radiation and materials, various measures are provided in this HITACHI Plasma display.

Be sure to read cautionary items described in the manual to maintain safety before servicing.

Service Warning

1. Since Panel Module and front Filter are made of glass, handling the broken Module and Filter shall be taken care sufficiently in order not to be injured.
2. Replacing work shall be started after the Panel Module and the AC/DC Power supply become sufficiently cool.
3. Special care shall be taken to the display area in order not to damage its surface.
4. The Panel Module shall not be touched with bare hand to protect its surface from stains.
5. It is recommended to use clean soft gloves during the replacing work in order to protect not only the display area of the Panel Module but also a serviceman himself.
6. The Chip Tube of Panel Module (located upper left of the back and surrounded by frame) and flexible cables connecting Panel glasses to drive circuit PWBs are very weak, so shall be taken care sufficiently not to break. If you break Chip Tube, the Panel doesn't display anything forever.

Contents

1. Features -----	3	9. Basic circuit diagram-----	41
2. Specifications-----	4	10. Printed wiring board diagram-----	54
3. Service point-----	5	11. Block diagram -----	61
4. Component names-----	6	12. Connection diagram -----	62
5. New adoption technology-----	7	13. Wiring diagram -----	63
6. Adjustment -----	11	14. Disassembly diagram-----	67
7. Troubleshooting-----	29	15. Replacement parts list-----	73
8. Self-diagnosis function -----	39		

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT.

Plasma Display

December 2004 Digital Media Division

- **Block diagram**



6. Adjustment

• How to get to Adjustment mode

Using the front control buttons with the set turned off (standby) can activate it.

Press the SUB-POWER(⏻) button, INPUT SELECT(↔) button and ▼ button at the same time, and hold for more than 5 seconds.

The set turns on in adjustment mode with OSD.

• Changing data and Selecting Adjustment code

When the set is in adjustment mode, the cursor ◀, ▶, ▲, ▼ and OK buttons of the remote control or front panel may be used as the adjustment keys.

▲, ▼ buttons are used for selecting adjustment code.

◀, ▶ buttons are used for changing data values.

OK button is used for confirming the data.

After finishing the necessary adjustment press MENU button. Adjustment mode is released and the set returns to normal condition.

• Memory Initialize operation

NOTE: The execution of this function returns the adjustment codes to the preset values, therefore, adjustment data will be lost.

Procedure

- (1) Enter Adjustment Mode.
- (2) Select MEMORY INIT adjustment code (No.658) and change the data value from 0 to 1.
- (3) Activate MEMORY INIT by pressing OK button.
- (4) Select No.525 and change data value from 1 to 0.
- (5) Check that the receiving channel goes to P1. Unit is set to preset values.

7. Troubleshooting

● How to get to Burn-in mode

This mode displays the test patterns of some single color raster in turn. These signals are from built-in generator of PDP panel. So it can be presumed that maybe the panel has some trouble when the screen of Burn-in mode is abnormal.

Using the front control buttons with the set turned off (standby) can activate this mode.

Press the SUB-POWER(⏻) button, INPUT SELECT(↔) button and VOLUME DOWN(⏮) button at the same time, and hold for more than 5 seconds.

The set turns on with single color raster and the OSD of [BURN IN: ON].

To escape from this mode, press the SUB-POWER(⏻) button, INPUT SELECT(↔) button and ▲ button at the same time, and hold for more than 5 seconds. Burn-in mode will be released.

● How to recover the remote and front key function

If remote and front key cannot operate after miss set special function by front keys, these functions can recover by below method.

Press the SUB-POWER(⏻) button, INPUT SELECT(↔) button and ▼ button at the same time, and hold for more than 5 seconds.

The set turns on the service menu mode.

Select No.535 and No.536 then each data set from [0] to [1].

Or

Press the SUB-POWER(⏻) button and ▼ button at the same time, and hold for more than 5 seconds

● How to check method of the use accumulation time for panel.

Select No.518 of Service Adjustment Menu.

32PD7800/42PD7800 (PW2)

● Signal circuit self-diagnosis function

This function is for the failure of the signal circuit, for example the phenomenon as below:

"Sometimes power turns off abnormally." "Sometimes picture disappears abnormally."

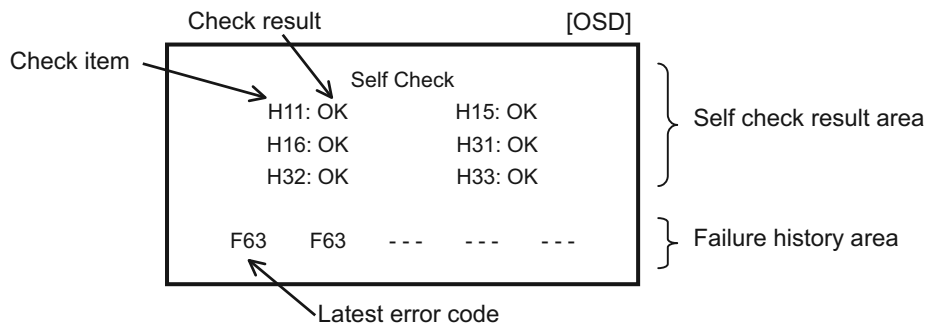
To enter to this Self-Diagnosis mode, follow the next steps:

Preparation:

- 1) The Power Cord should be connected to AC line and the Main Power switch should be turned on.
- 2) Turn the power off by the SUB-POWER(⏻) button of the monitor or the remote control.

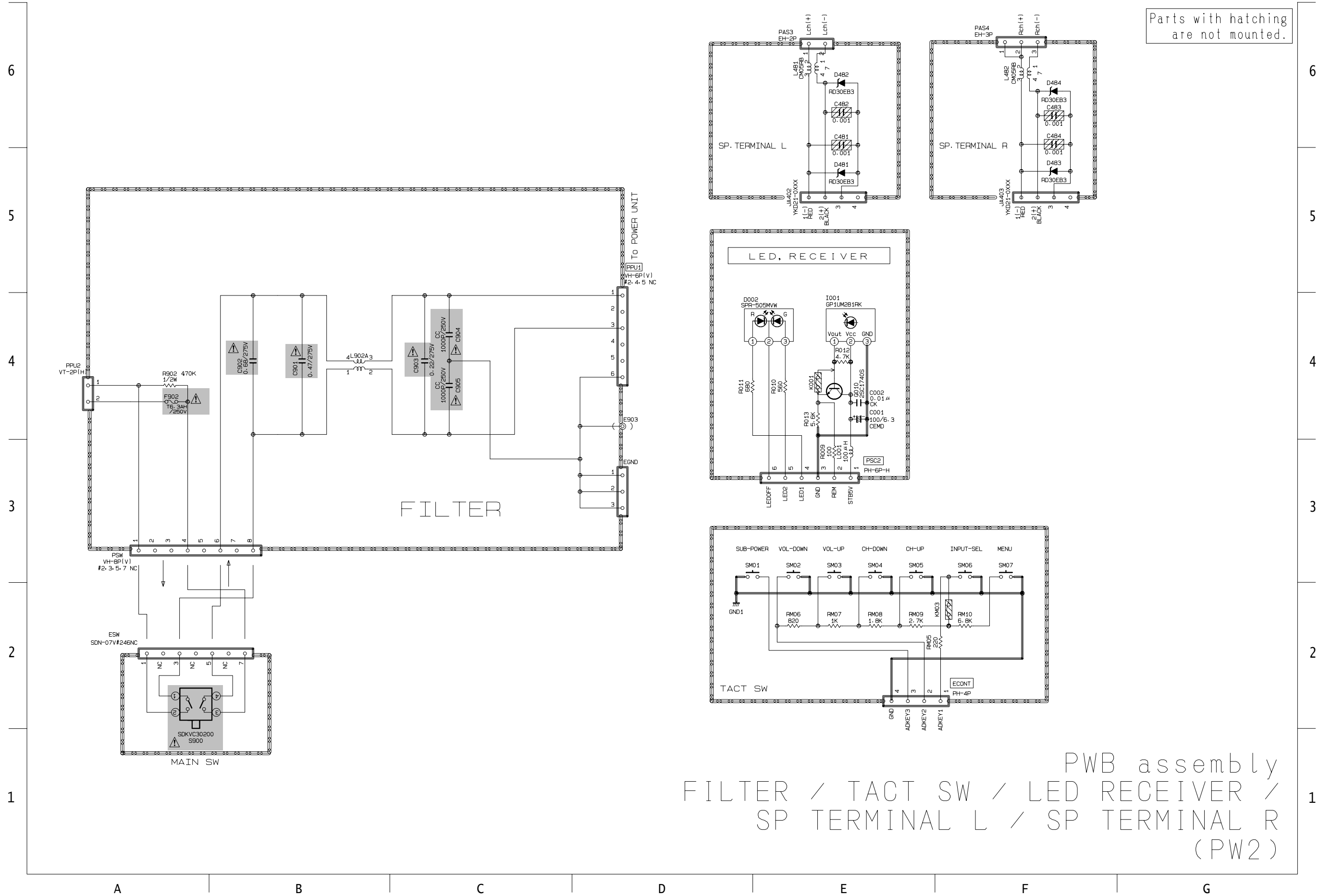
Procedure:

- 1) Press the SUB-POWER(⏻) button and ▲ button on the bottom of the monitor at the same time, and keep it for more than 5 seconds after the power turned on.
- 2) The monitor will be turned on, and it will display On-Screen Display of the Self-check result and the failure history as below.
- 3) Any operation would cancel the Self -Diagnosis mode.
- 4) The following table shows the OSD symbols and contents of failure PWB in which failure most probably would be allocated according to the number of blinks.

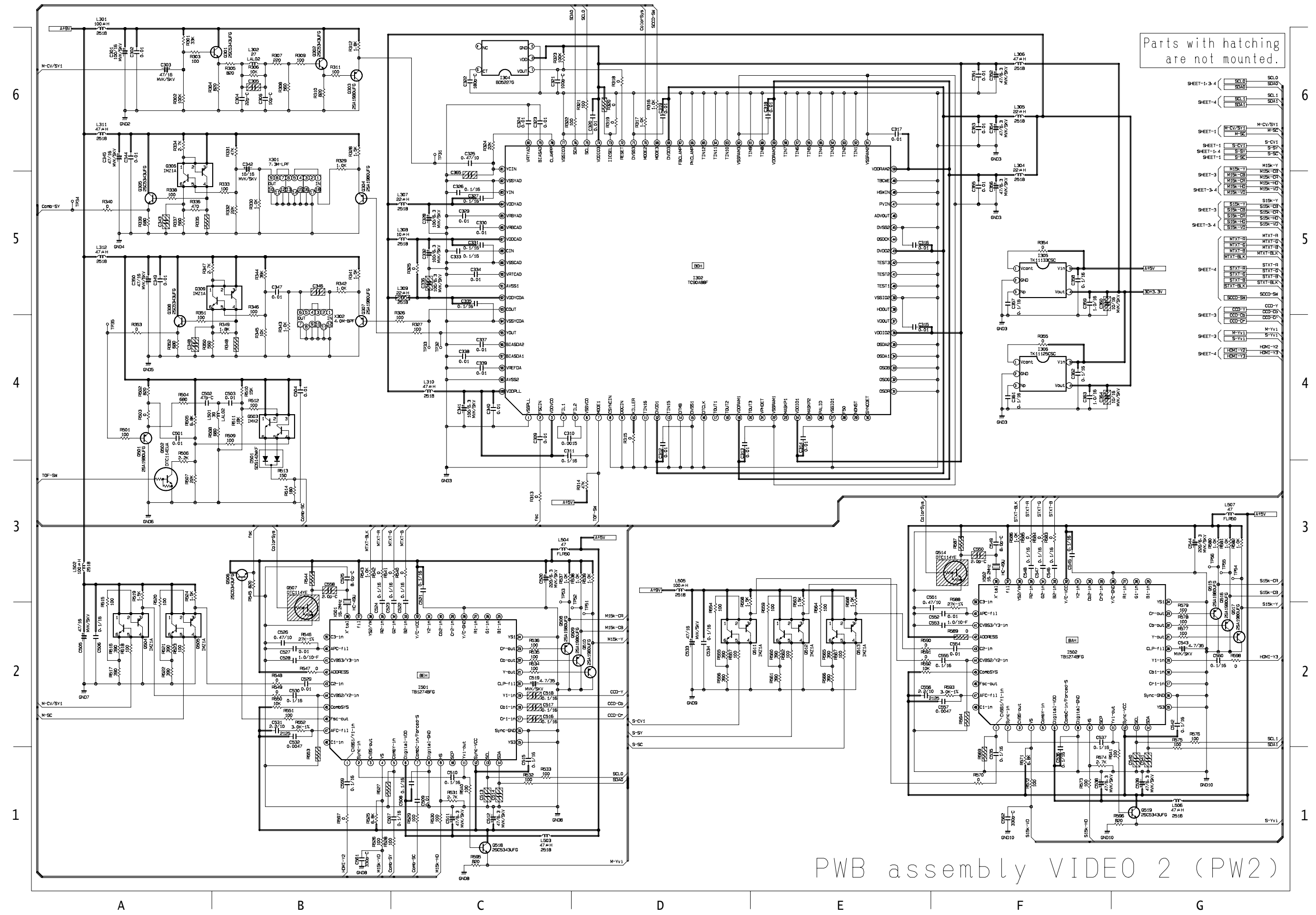


Code	stored up in failure history	Self checking item	Problem	Phenomenon	Cause
C10	—	—	No sync. (Snow noise)	OSD of " ! Check Antenna " appears.	No connection of ANT cable Preset tuning is not yet
H11	—	○	Tuner problem	Cannot receive the main signal from antenna	Communication error of U101
H15	—	○	Composite video SW IC problem	Cannot receive picture and audio Cannot change input mode	Communication error of I201
H16	—	○	Component video SW IC problem	No component picture Cannot change input mode	Communication error of I601
H31	—	○	Color demodulator IC problem	Abnormal color Dark picture	Communication error of I501
H32	—	○	Sync. separator IC problem	Unsynchronized picture	Communication error of I503
H33	—	○	3D Y/C separator IC problem	Abnormal color Dark picture / No picture	Communication error of I302
F63	○	—	I ² C-bus latch problem	Cannot store setting data (Ex. Channel, Volume etc.)	SCL3/SDA3 latched up

If you clear history of failure, make FACTORY RESET: enter the factory setting mode; press the SUB-POWER(⏻) button, INPUT SELECT(↺) button and ▲ button on the bottom of the monitor at the same time. And keep it for more than 5 seconds after the power turned on.



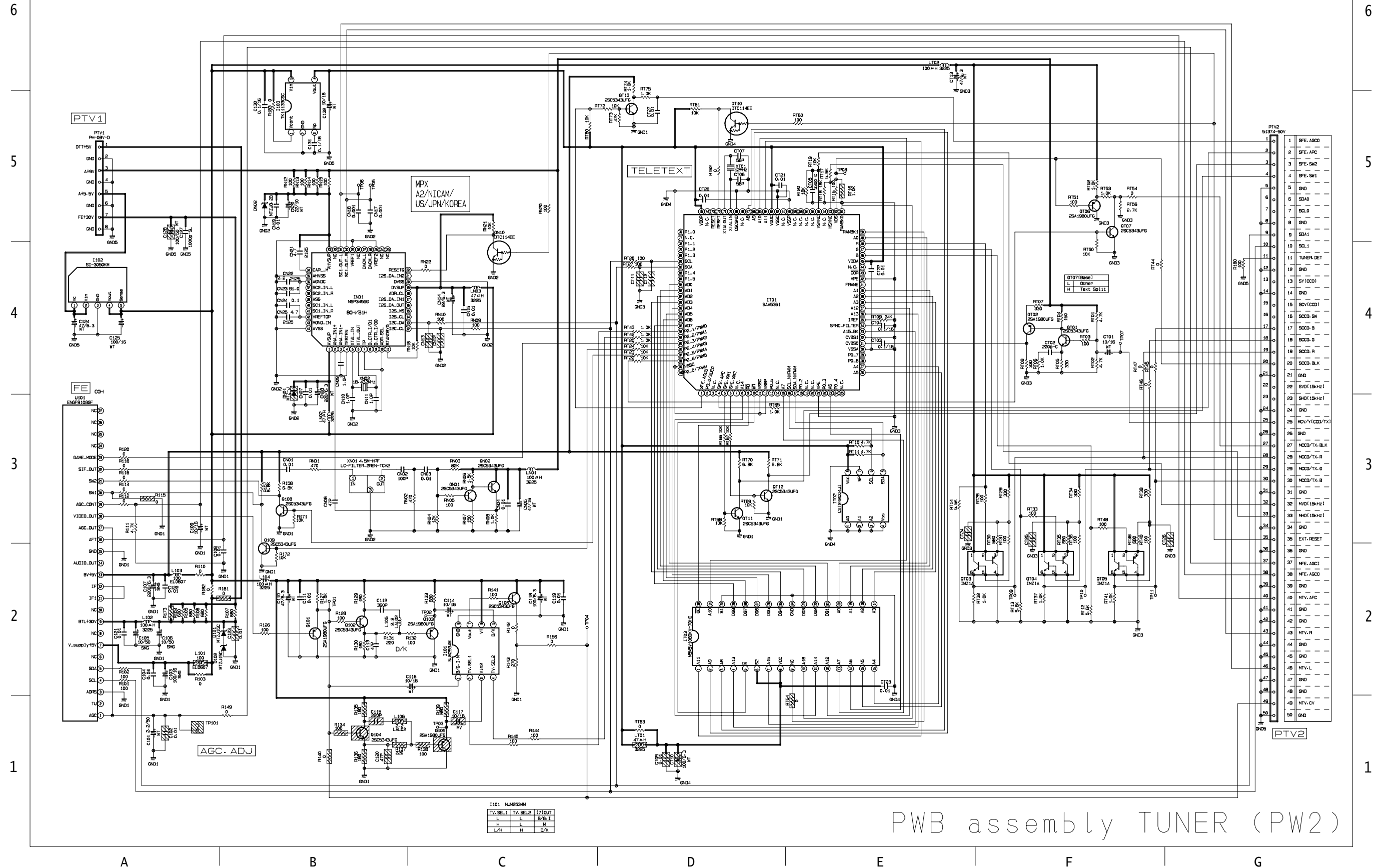




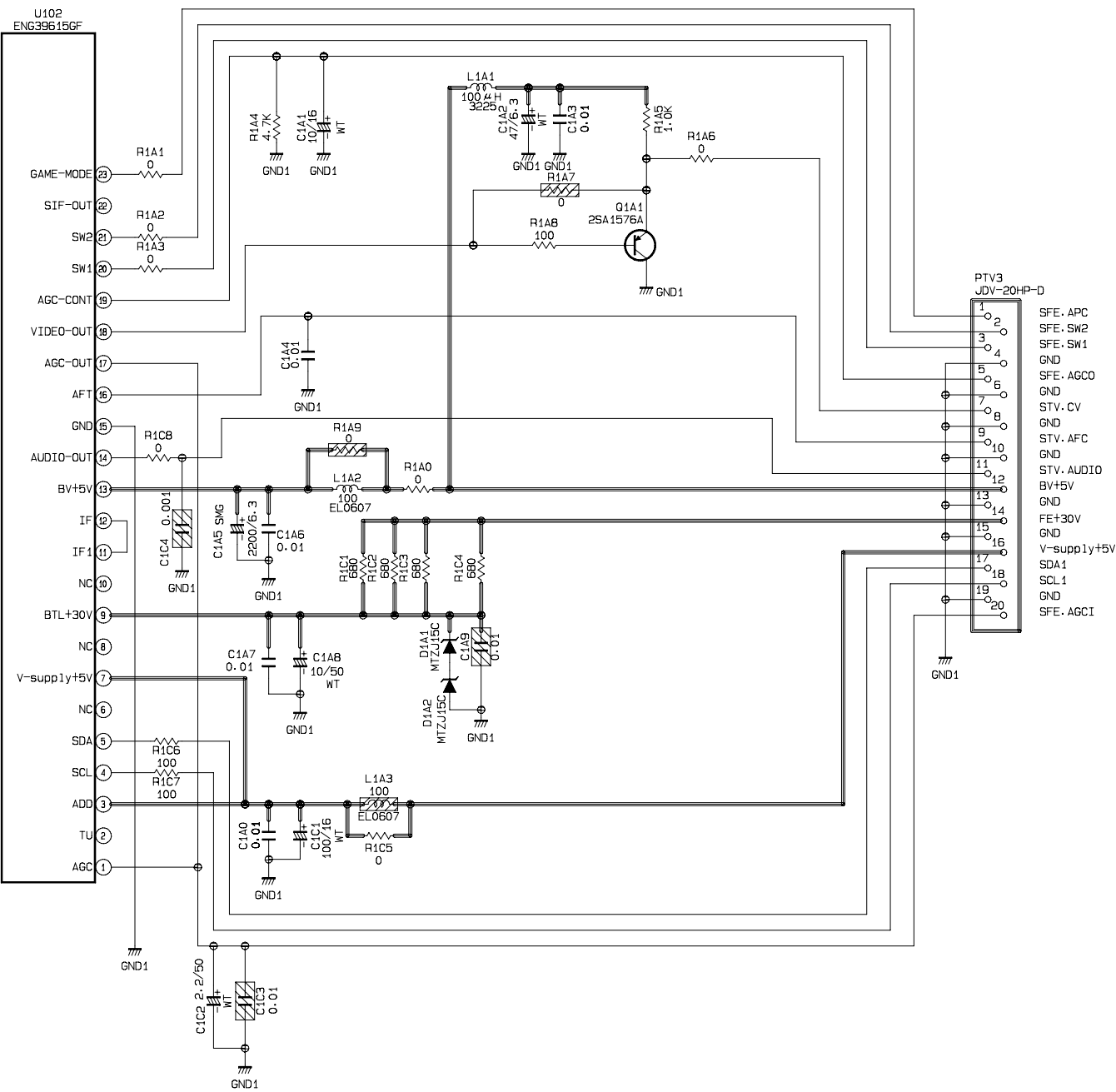




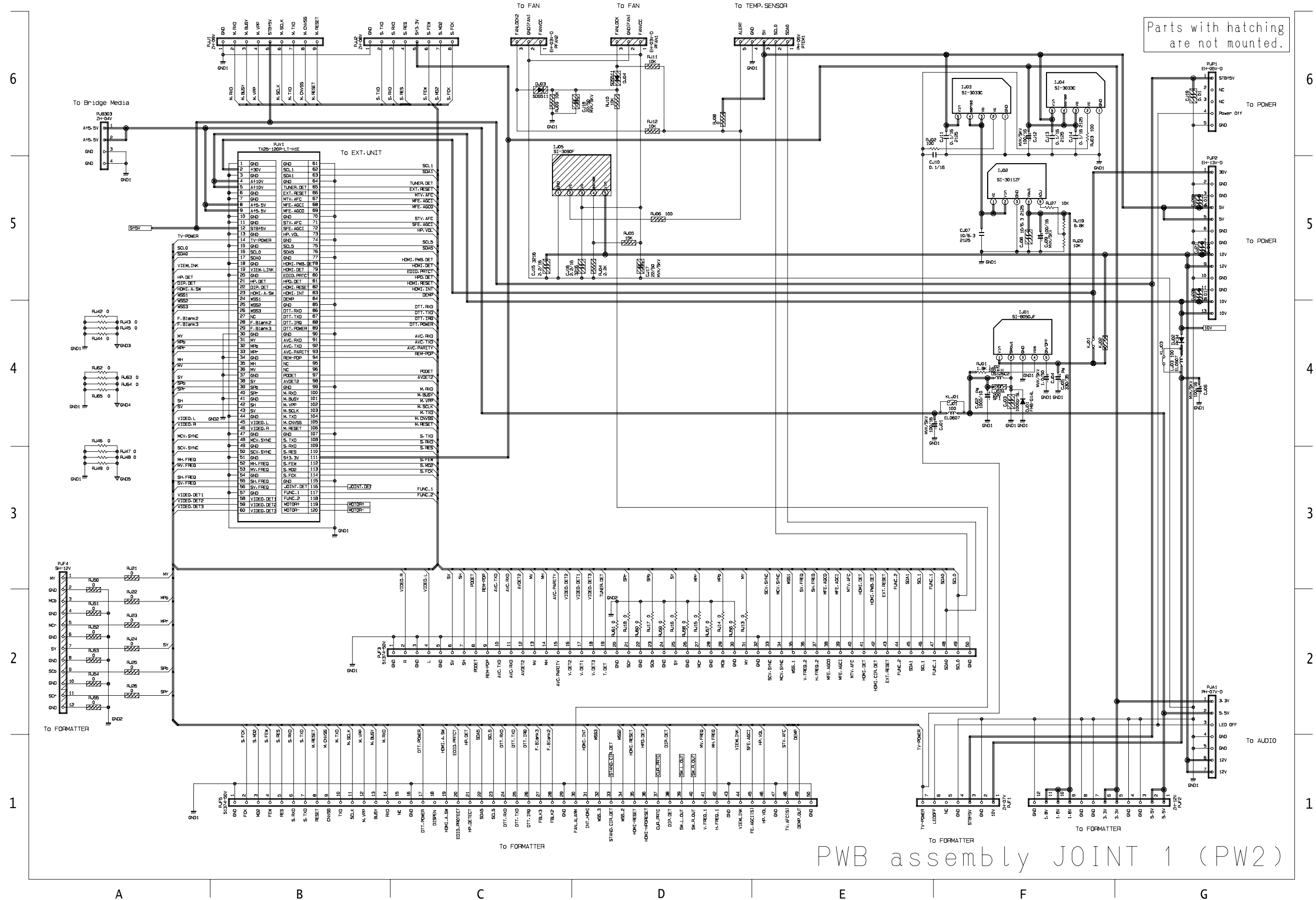
Parts with hatching
are not mounted.



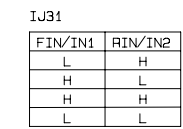
Parts with hatching
are not mounted.



PWB assembly TUNER SUB (PW2)



PWB assembly JOINT 2 (PW2)

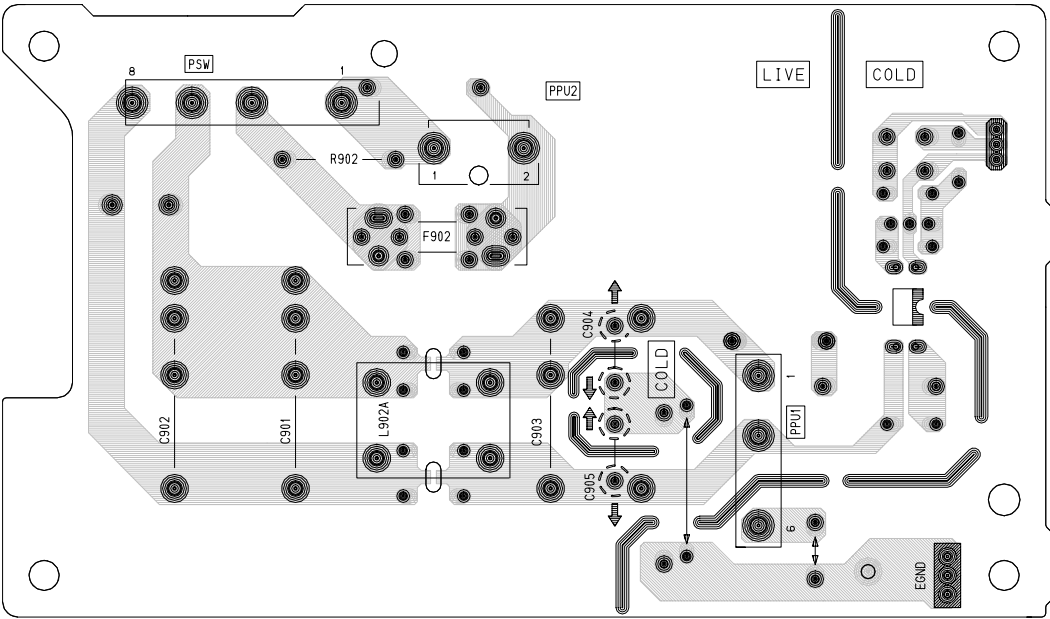




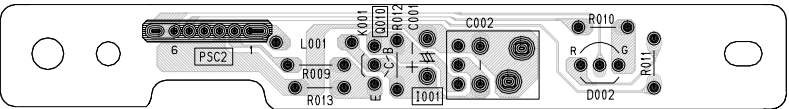


10. Printed wiring board diagram

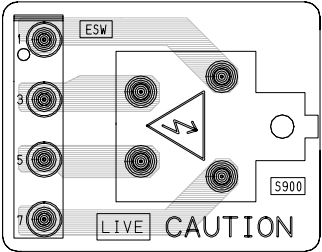
FILTER board



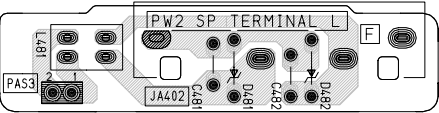
LED/RECEIVER board



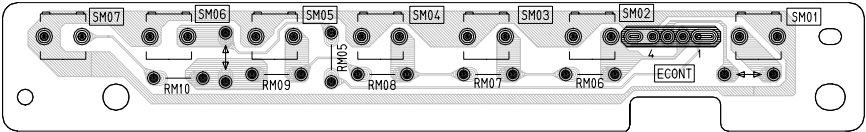
SW board



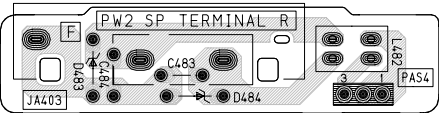
SP TERMINAL L board



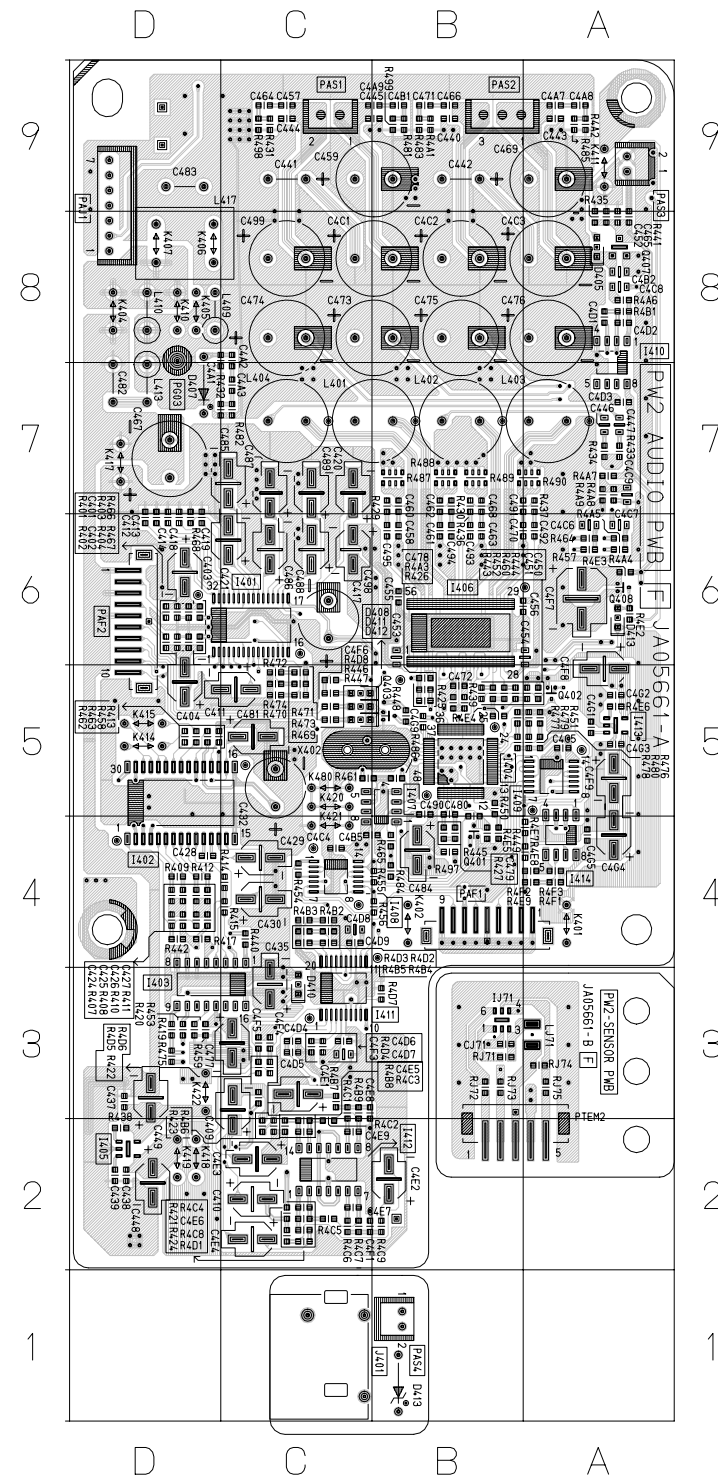
TACT SW board



SP TERMINAL R board



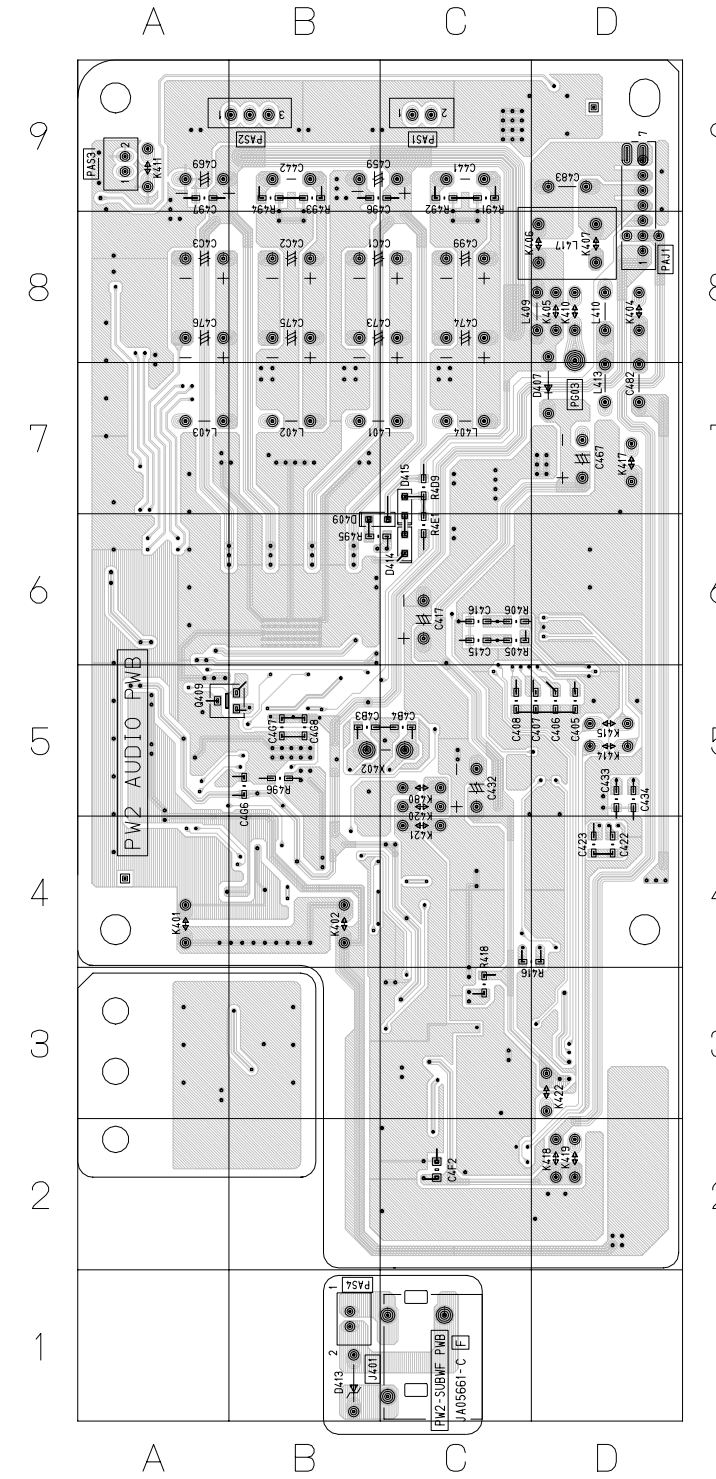
AUDIO / SENSOR / SUB-WOOFER board (side-A)



Mainly chip parts
reference table

CIR.No.	Position
D405	A8
D408	C5
D410	C3
D411	C5
D412	C5
D413	A6
I401	C6
I402	D5
I403	D3
I404	B5
I405	D2
I406	B6
I407	B5
I408	C4
I409	A5
I410	A8
I411	C3
I412	C2
I413	A5
I414	A4
IJ71	B3
LJ71	A3
PAF1	B4
PAF2	D6
PTEM2	B2
Q401	B4
Q402	A5
Q403	B5
Q407	A8
Q408	A6

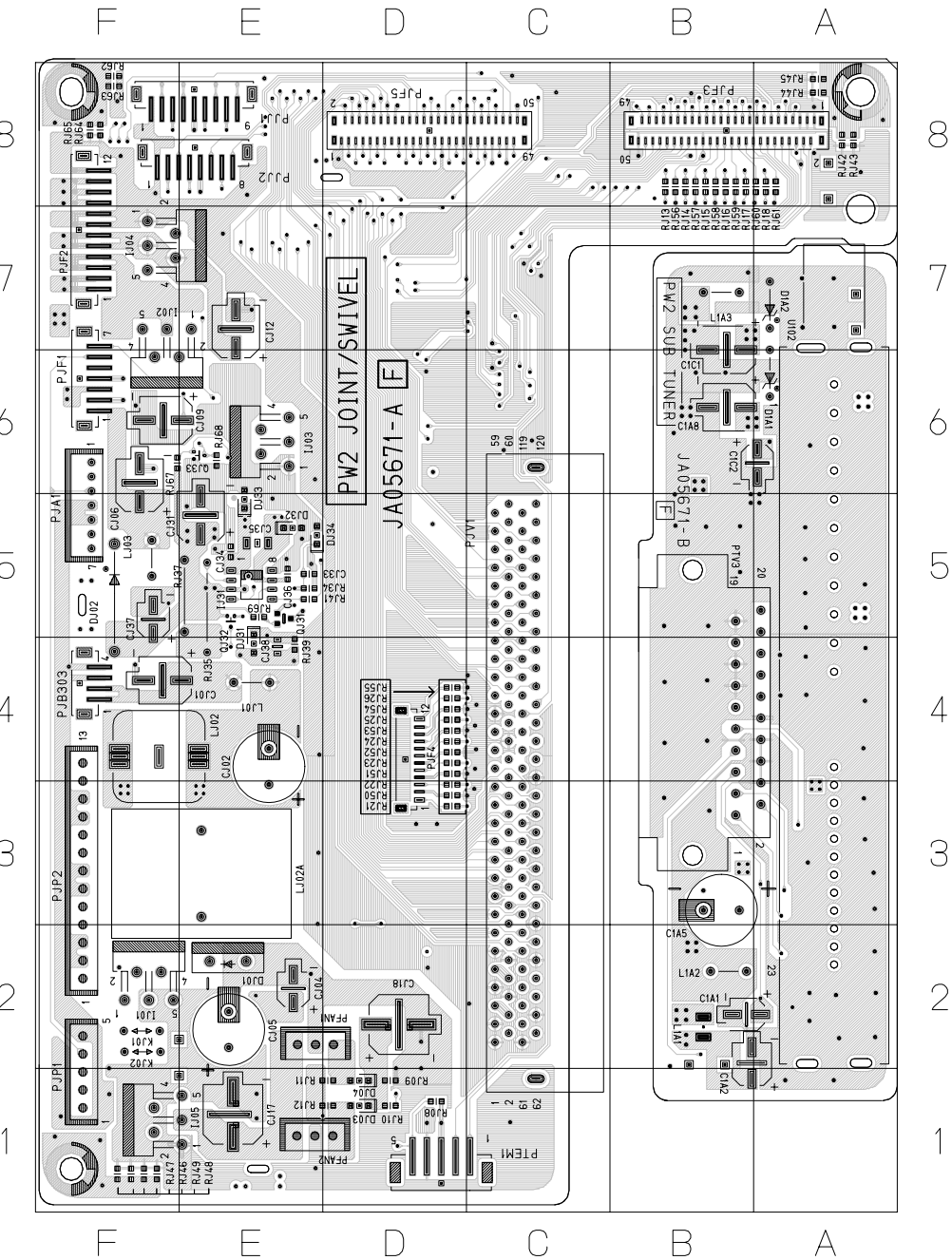
AUDIO / SENSOR / SUB-WOOFER board (side-B)



Mainly chip parts
reference table

Cir.No.	Position
D409	B6
D414	C6
D415	C7
Q409	A5

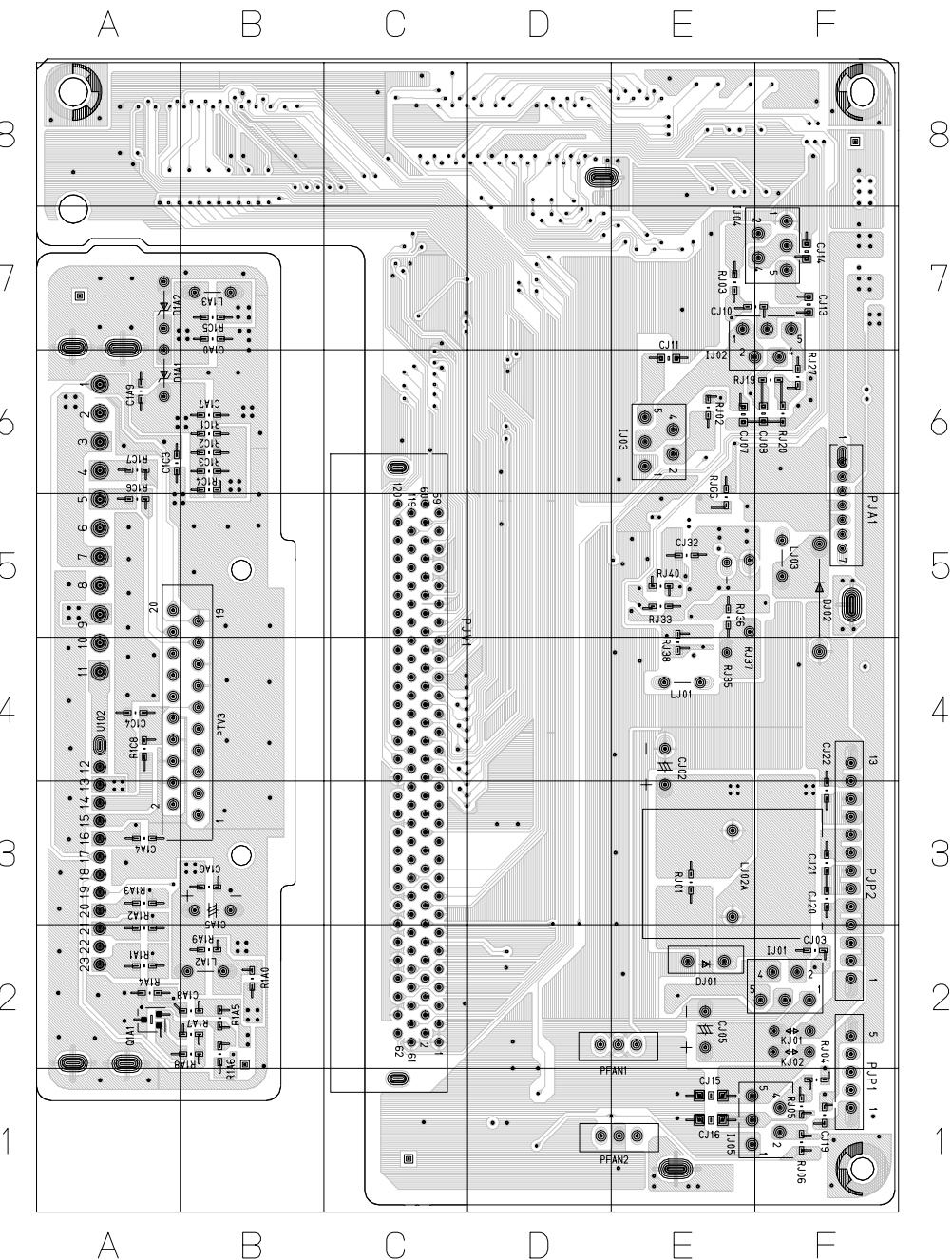
JOINT board / TUNER SUB board (side-A)



Mainly chip parts reference table

Cir.No.	Position	Cir.No.	Position	Cir.No.	Position
DJ03	D1	LJ02	F4	PJJ2	E8
DJ04	D1	PJB303	F4	PTEM1	D1
DJ31	E4	PJF1	F6	QJ31	E5
DJ32	E5	PJF2	F7	QJ32	E5
DJ33	E5	PJF3	B8	QJ33	E6
DJ34	E5	PJF4	D4		
IJ31	E5	PJF5	D8		
L1A1	B2	PJJ1	E8		

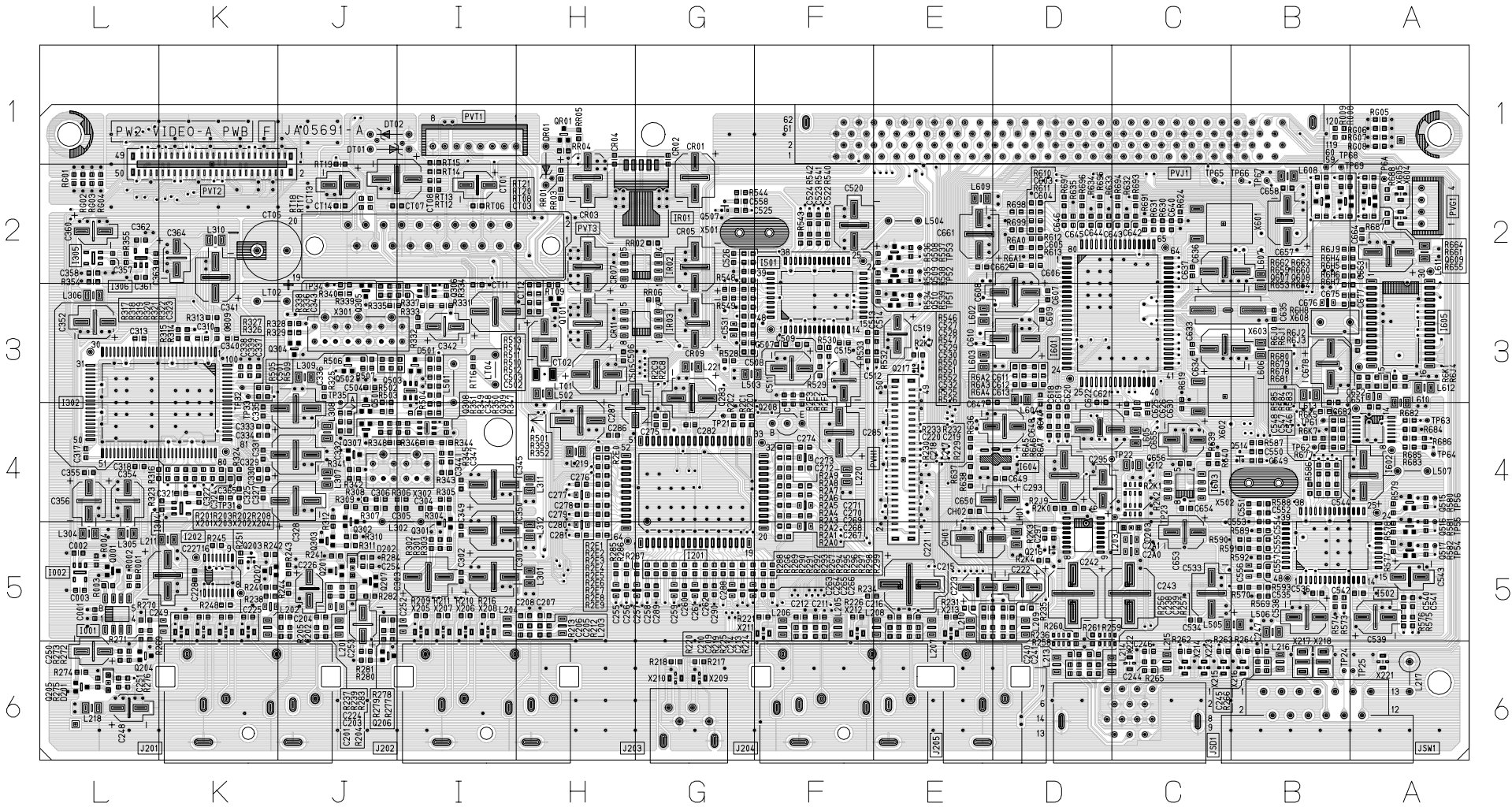
JOINT board / TUNER SUB board (side-B)



Mainly chip parts reference table

Cir.No.	Position
Q1A1	A2

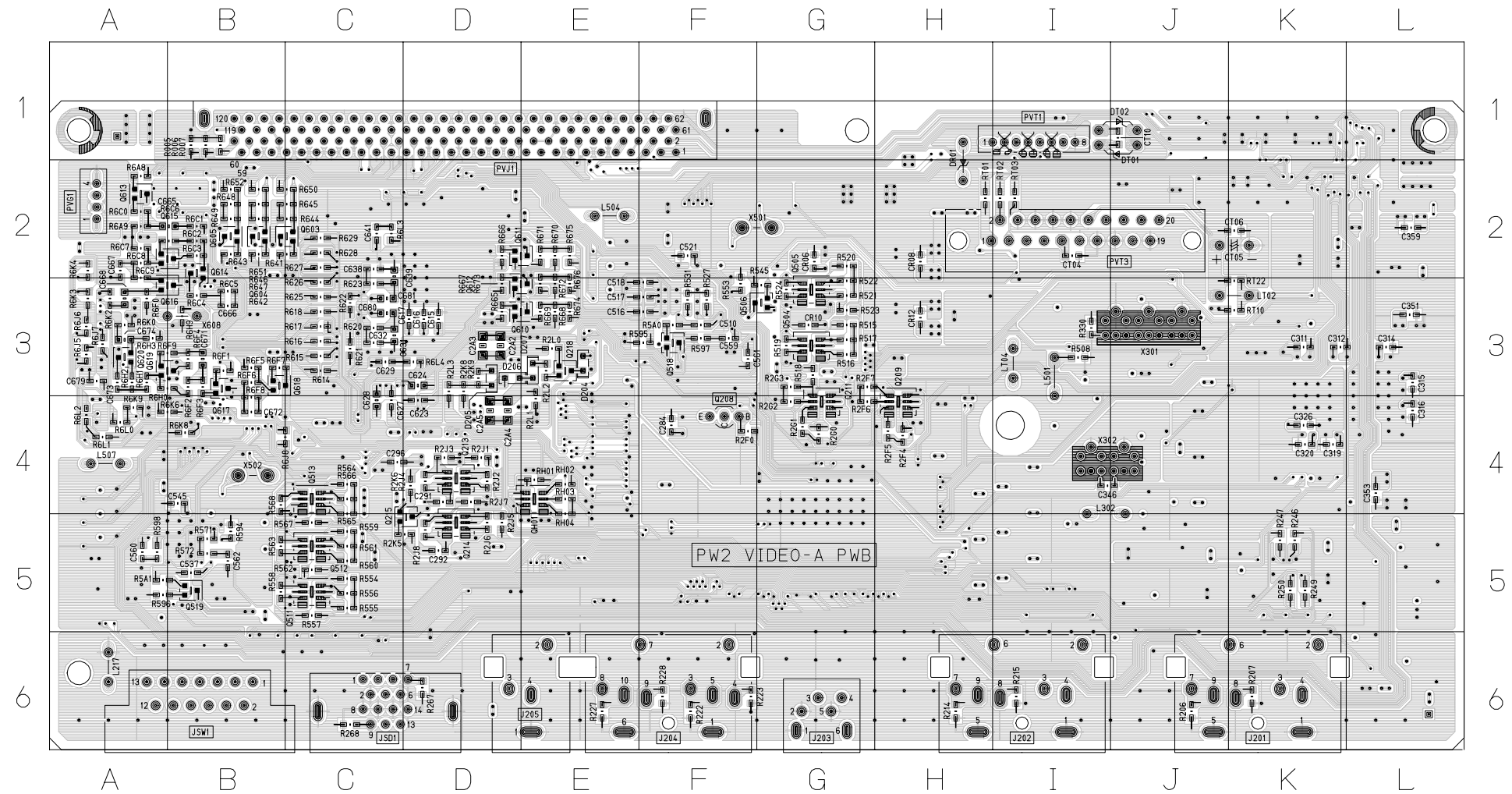
VIDEO board (side-A)



Mainly chip parts reference table

Cir.No.	Position	Cir.No.	Position	Cir.No.	Position	Cir.No.	Position	Cir.No.	Position
D201	L6	I601	C3	L208	E5	L305	L5	L605	C4
D202	J5	I602	A4	L209	D5	L306	L3	L606	B3
D203	C5	I603	C4	L210	E5	L307	J4	L607	B2
D501	I3	I604	D4	L211	K5	L308	J4	L608	B2
I001	L5	I605	A3	L212	C4	L309	J3	L609	E2
I002	L5	IR01	G2	L213	D6	L310	K2	L610	A4
I201	G4	IR02	G2	L214	D6	L311	H4	L611	A2
I202	K5	IR03	G3	L215	C6	L312	H5	L612	A3
I203	D5	L201	J5	L216	B6	L502	H3	L613	B3
I302	L4	L202	K5	L218	L6	L503	G3	LH01	D5
I304	K4	L203	H5	L219	H4	L505	B5	LT01	H3
I305	L2	L204	I5	L220	F4	L506	B5	PVH1	E4
I306	L2	L205	F5	L221	G3	L602	E3	PVT2	K2
I501	F3	L206	F5	L301	H5	L603	E3	Q001	L5
I502	B5	L207	E5	L304	L5	L604	D3		

VIDEO board (side-B)



Mainly chip parts reference table

Cir.No.	Position
D204	E3
D205	D3
D206	D3
D207	E3
Q209	H4
Q211	G4
Q213	D4

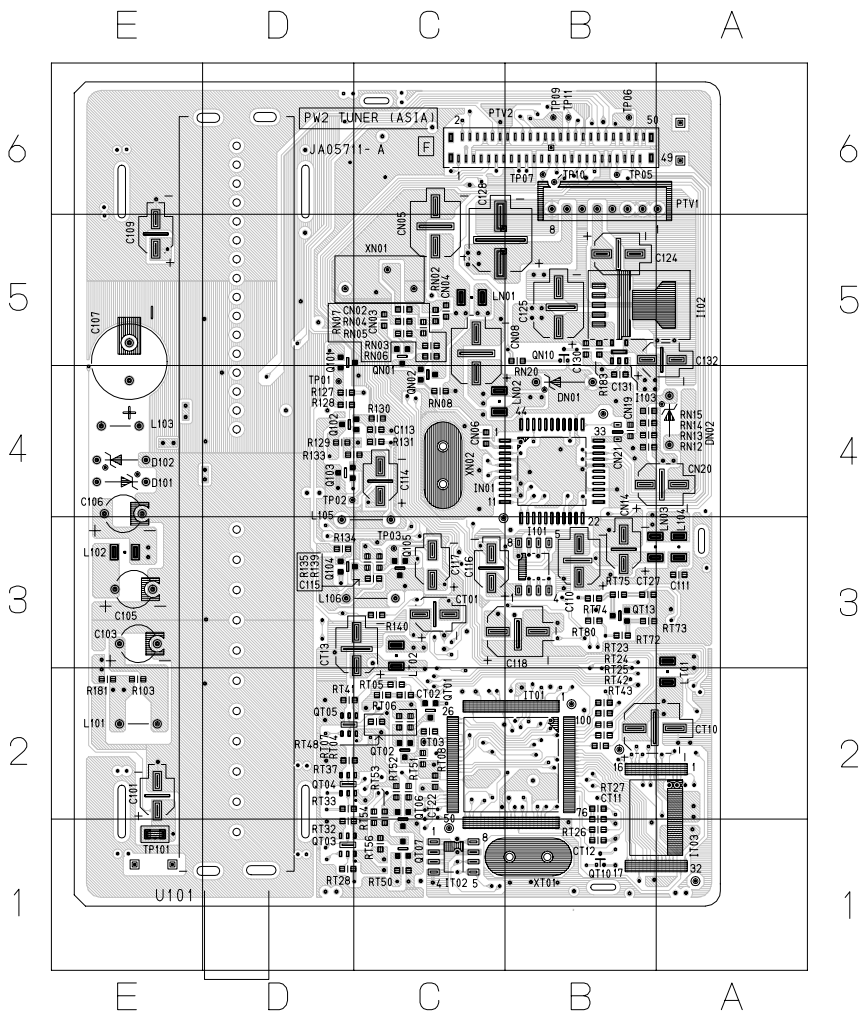
Cir.No.	Position
Q214	D5
Q215	D5
Q218	E3
Q504	G3
Q505	G3
Q506	G3
Q511	C5

Cir.No.	Position
Q512	C5
Q513	C4
Q518	F3
Q519	B5
Q603	C2
Q604	B2
Q605	B2

Cir.No.	Position
Q610	E3
Q611	E2
Q612	E3
Q613	A2
Q614	B2
Q615	B2
Q616	B3

Cir.No.	Position
Q617	B3
Q618	B3
Q619	B3
Q620	A3
QH01	E4

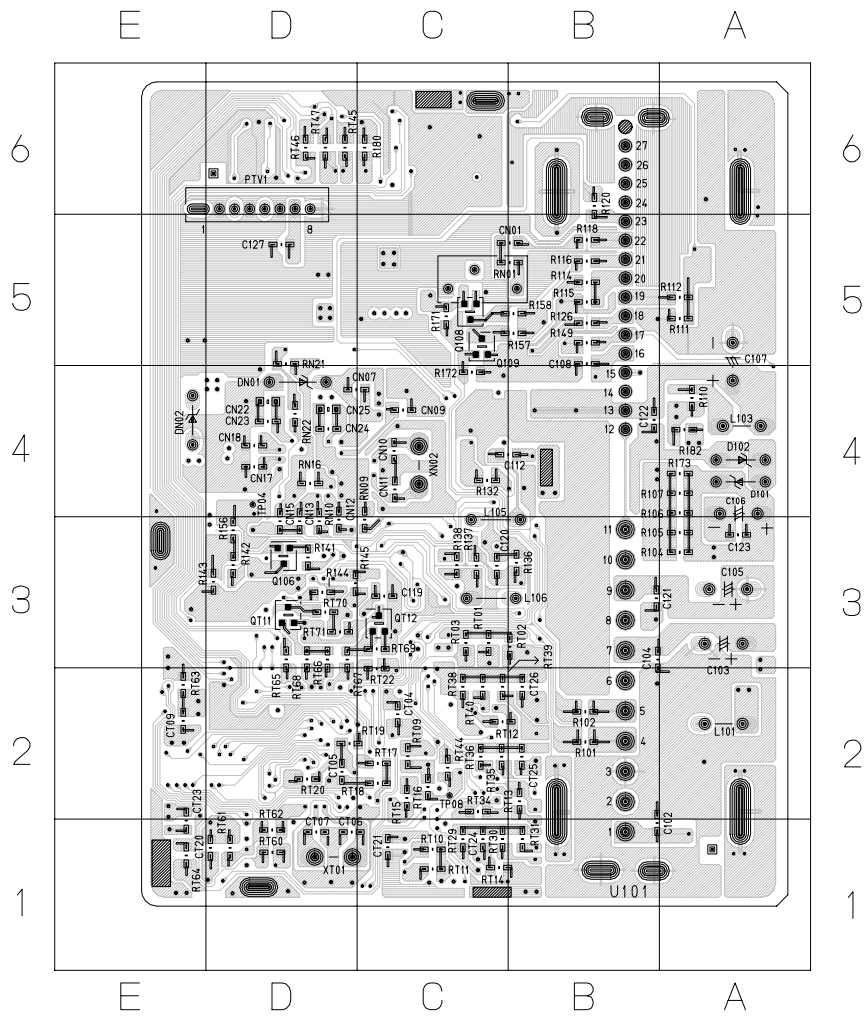
TUNER board (Side-A)



Mainly chip parts reference table

Cir.No.	Position	Cir.No.	Position
I101	B3	LT02	C3
I102	B5	PTV2	B6
I103	B5	Q101	D5
IN01	B4	Q102	D4
IT01	B2	Q103	D4
IT02	C1	Q104	D3
IT03	B2	Q105	C3
L102	E3	QN01	C5
L104	A3	QN02	C4
LN01	C5	QN10	B5
LN02	C4	QT01	C2
LN03	B3	QT02	C2
LT01	A2	QT03	D1

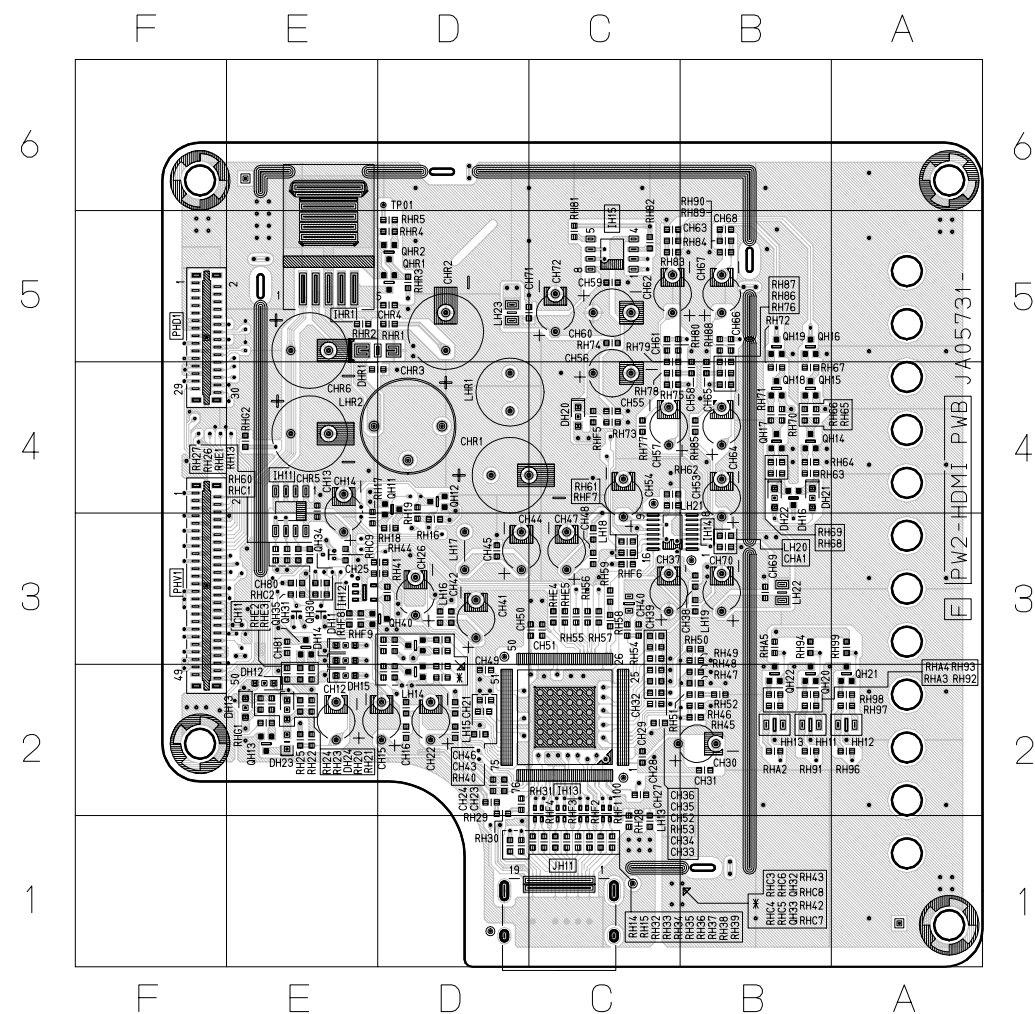
TUNER board (Side-B)



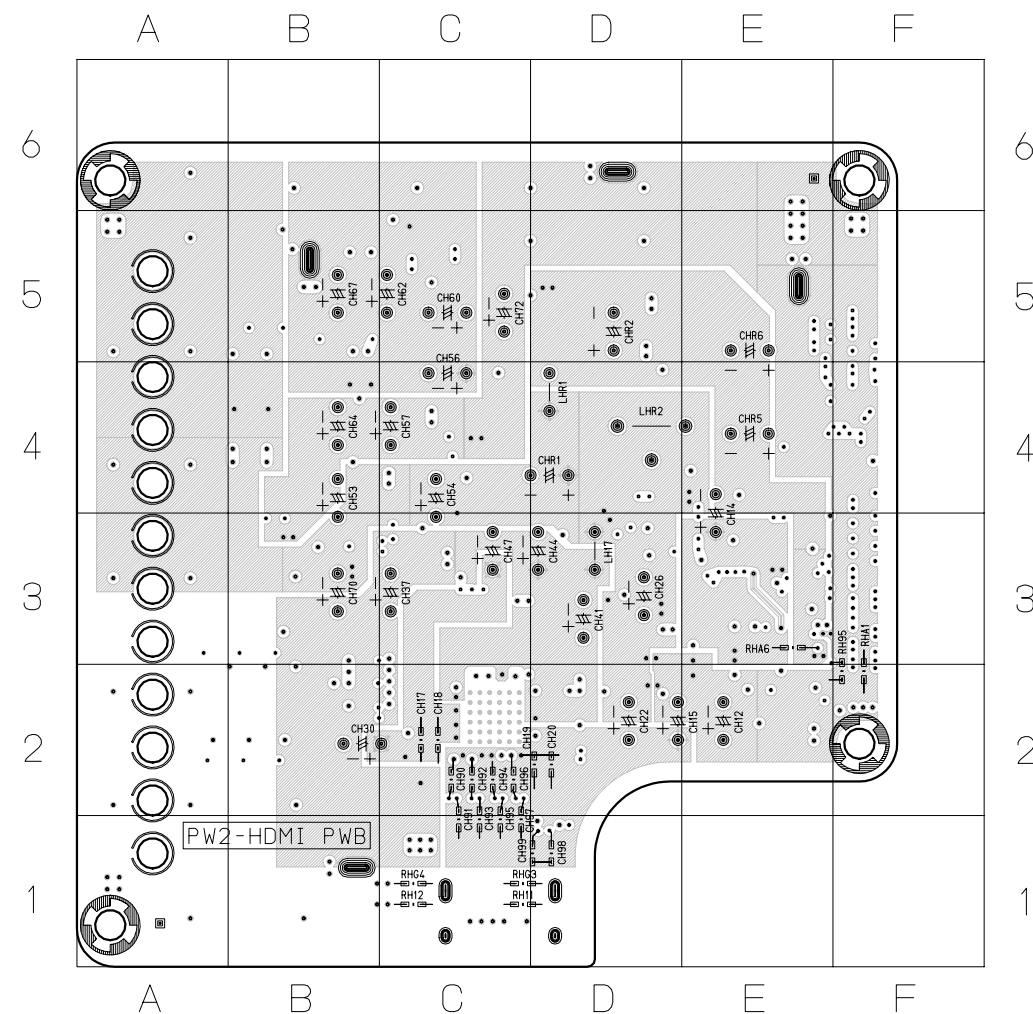
Mainly chip parts reference table

Cir.No.	Position
Q106	B3
Q108	C5
Q109	C5
QT11	B3
QT12	C3
TP04	B4
TP08	C2

HDMI board (Side-A)



HDMI board (Side-B)



Mainly chip parts reference table (Side-A)

CIR.No.	Position	CIR.No.	Position	CIR.No.	Position	CIR.No.	Position
DH11	E3	IH11	E4	LH18	C3	QH18	B4
DH12	E2	IH12	E3	LH19	B3	QH19	B5
DH13	E2	IH13	C2	LH20	B3	QH20	B2
DH14	E3	IH14	C3	LH21	C4	QH21	A2
DH15	E2	IH15	C5	LH22	B3	QH22	B2
DH16	B4	IHR1	E5	LH23	D5	QH30	E3
DH20	C4	JH11	C1	PHD1	F5	QH31	E3
DH21	B4	KIKU1C	F2	PHV1	F3	QH32	D3
DH22	B4	KIKU2C	A1	QH11	D4	QH33	D2
DH23	E2	KIKU3C	F6	QH12	D4	QH34	E3
DH24	E2	KIKU4C	A6	QH13	E2	QH35	E3
DHR1	E5	LH13	C1	QH14	B4	QH40	D3
HH11	B2	LH14	D2	QH15	B4	QHR1	D5
HH12	A2	LH15	D2	QH16	B5	QHR2	D5
HH13	B2	LH16	D3	QH17	B4	TP01	D6

Mainly chip parts reference table (Side-B)

CIR.No.	Position
KIKU1S	F2
KIKU2S	F6
KIKU3S	A6
KIKU4S	A1

Diagram illustrating the pin connections for the P303 2H-4P connector, organized into functional blocks: POWER, FILTER, TUNER, VIDEO, SUB-TUNER, HDMI, and AUDIO. Each block lists pins and their corresponding functions.

POWER

Pin	Function
1	Va
2	NC
3	NC
4	GND
5	GND
6	GND
7	Va
8	Va
9	Va
10	Va

FILTER

Pin	Function
1	1Vc
2	1Vc
3	1Vc
4	1Vc
5	1Vc
6	1Vc
7	1Vc
8	1Vc
9	1Vc
10	1Vc

TUNER

Pin	Function
1	1Vc
2	1Vc
3	1Vc
4	1Vc
5	1Vc
6	1Vc
7	1Vc
8	1Vc
9	1Vc
10	1Vc

VIDEO

Pin	Function
1	1Vc
2	1Vc
3	1Vc
4	1Vc
5	1Vc
6	1Vc
7	1Vc
8	1Vc
9	1Vc
10	1Vc

SUB-TUNER

Pin	Function
1	1Vc
2	1Vc
3	1Vc
4	1Vc
5	1Vc
6	1Vc
7	1Vc
8	1Vc
9	1Vc
10	1Vc

HDMI

Pin	Function
1	1Vc
2	1Vc
3	1Vc
4	1Vc
5	1Vc
6	1Vc
7	1Vc
8	1Vc
9	1Vc
10	1Vc

AUDIO

Pin	Function
1	1Vc
2	1Vc
3	1Vc
4	1Vc
5	1Vc
6	1Vc
7	1Vc
8	1Vc
9	1Vc
10	1Vc