

# Service Manual

## 42" PLASMA PDP TV

**CHASSIS : SP-900P**

**Model : DPP-42A2LMBD**



**Caution**

: In this Manual, some parts can be changed for improving. their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List)in Service Information Center.



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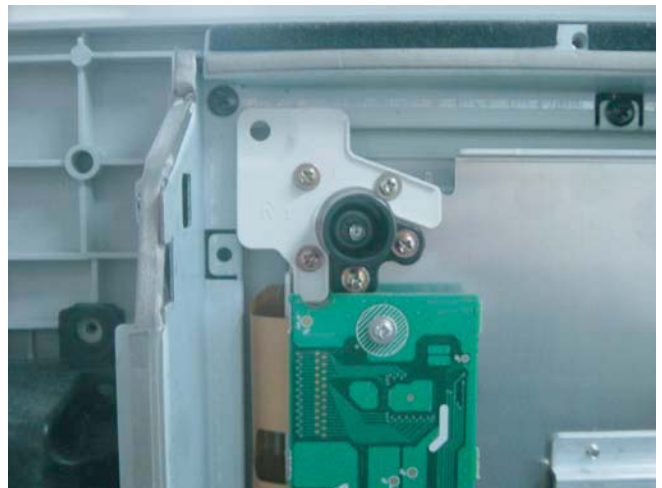
## II. Parts of MODULE

### 1. PDP MODULE SERVICE MANUAL

# I. Parts with the exception of MODULE

## 1. Safety Precautions

- (1) When moving or laying down a PDP Set, at least two people must work together.  
Avoid any impact towards the PDP Set.
- (2) Do not leave a broken PDP Set on for a long time. To prevent any further damages, after checking the condition of the broken Set, make sure to turn the power(AC) off.
- (3) When opening the BACK COVER, you must turn off power(AC) to prevent any electric shock. When PDP is operating, high voltage and high current inside the Set can cause electric shocks.
- (4) When loosening screws, check the position and type of the screw.  
Sort out the screws and store them separately for reassembling.  
Because screws holding PCBs are working as electric circuit GROUNDING, make sure to check if any screw is missing when assembling / reassembling.  
Do not leave any screws inside the set.
- (5) If you open the BACK COVER, you will see a Panel Gas Exhaust Tube (Picture. 1-1) inside the bracket.  
If this part is damaged, the entire PDP PANEL must be replaced. Therefore, when working with the set, be careful not to damage this part.
- (6) A PDP Set contains different kinds of connector cables.  
When connecting or disconnecting cables, check the direction and position of the cable beforehand.
- (7) Connect / disconnect the connectors slowly with care especially FFC(film) cables and FPC cables.  
Do not connect or disconnect connectors instantaneously with force, and handle them carefully for reassembling.
- (8) Connectors are designed so that if the number of pins or the direction does not match, connectors will not fit.  
When having problem in plugging the connectors, check their kind, position, and direction.



Picture.1-1 Panel Gas Exhaust Tube

## 2. Product Specification

### 2-1. SPECIFICATION

ITEM	SPECIFICATION	REMARK
1. GENERAL		
1-1. MODEL NO	DPP-42A2LMBD	
1-2. CHASSIS NO	SP-900P	
1-3. SCREEN SIZE	42"(16:9)	
1-4. COUNTRY	Europe, CIS, Middle esst Asia	
1-5. RESOLUTION	852(H) X 480(V)	
1-6. REMOCON TYPE	R-55E05	
1-7. SAFETY STANDARD	SASO(Saudi Arabia), PAI(Kuwait), CIS(GOST)	Basic : CB multi
1-8 .TUNING METHOD	VS	
1-9. MEMORY CHANNEL	99CH	
2. MECHANICAL		
2-1. APPEARANCE		
1) WITHOUT STAND	W x H x D = 1052 x 715.5 x 85 mm	
2) WITH STAND	W x H x D = 1052 x 770.5 x 306 mm	
2-2. WEIGHT		
1) WITHOUT STAND	30.5 Kg	
2) WITH STAND	35 Kg	
3. ELECTRICAL		
3-1. VIDEO INPUT	COMPOSITE(NTSC, PAL, SECAM, PAL-M/N, NTSC4.43) 1 Ports & S-VHS(50/60Hz Y/C) 1 Ports	
3-2. DTV/DVD INPUT	1080i, 720P, 480P, 480i, 576P, 576i (Y, Pb/Cb, Pr/Cr COMPONENT SIGNAL) 1 Port	
3-3.SCART INPUT	SCART(COMPOSITE, R, G, B, SOUND R/L) 1 Port SCART(COMPOSITE, SOUND R/L) 1 Port	
3-4. PC INPUT	VGA ~ WXGA(Dot clock : 110MHz), 15 PIN D-SUB 1 Port	
3-5. HDMI INPUT	HDMI-H INPUT(HDMI Jack) 1 Port	
3-6. TV INPUT		
1) COLOR STANDARD	PAL B/G+I/I+D/K, L-SECAM, L'-SECAM	
2) ANTENNA IN	ONE INPUT 75 $\Omega$ Unbalanced (DIN Standard)	
3) RECEPTION CHANNEL	VHF LOW : E2 ~ S6Ch. VHF HIGH : S7 ~ S36Ch. UHF : S37 ~ E69 Ch. L'-SECAM : FB, FC1, FC	
4) IF & SUBCARRIER	PIF : 38.90MHz(PAL, L-SECAM), 33.9MHz(L'-SECAM) SIF : 33.40MHz(B/G), 32.90MHz(I/I) 32.4MHz(D/K,L-SECAM), 40.4MHz(L'-SECAM)	
3-6. SOUND INPUT	VIDEO 1 Port, DTV/DVD 1 Ports, SCART 2Ports, PC / HDMI 1 Port	

## Product Specification

ITEM	SPECIFICATION	REMARK
3-7. SPEAKER OUTPUT 3-8. POWER REQUIREMENT 3-9. POWER CONSUMPTION 3-10. Phone Jack(Upgrade) 3-11. AV OUTPUT 3-12. FUNCTION 1) SCALING  2) OSD Language  3) PIP/POP 4) OTHERS	10W(R) + 10W(L) AC 100V~240V, 50/60Hz 250 W S/W Upgrade SCART(CVBS, SOUND R/L) 1 Port  HDMI : Screen Mode(16:9, 4:3) PC : Screen Mode(16:9, 4:3), H/V Position, Auto TV / AV : Screen Mode(16:9, 4:3, LB(16:9), LBS(16:9), 14:9, LB(14:9), LBS(14:9), Auto) COMPONENT : Screen Mode(16:9, 4:3) 19 Languages (English, Greek, Dutch, German, Russian, Rumanian, Swedish, Danish, Finnish, Norwegian, Spanish, Italian, Franch, Polish, Portuguese, Czech, Hungarian, Arab, Parsi) TV, Video, S-Video / HDMI Still, Sleep Mode, Sound Mode, Timer, Screen Mode, TeleText, MGD i WSS	
4. OPTICAL 4-1. SCREEN SIZE 4-2. ASPECT RATIO 4-3. NUMBER OF PIXELS 4-4. DISPLAY COLOR 4-5. CELL PITCH 4-6. PEAK LUMINANCE 4-7. CONTRAST RATIO 4-8. VIEWING ANGLE	42"(106 cm) DIAGONAL 16 : 9 852(H) X 480(V) 1,073,000,000 Colors (10 Bits for each RGB) 1.08(H) X 1.08(V)mm (1 Pixel = a Set of RGB Cells) 1,500cd/m <sup>2</sup> 10,000:1 FREE	: Without Filter Glass  : In a Dark Room
5. USERCONTROL & ACCESSORIES 5-1. CONTROL BUTTON(SET)  5-2. REMOTE CONTROL (R-55E05)  5-3. ACCESSORIES 5-4. OPTIONAL PARTS	SOFT S/W : MOVE/CH(UP, DOWN), VOLUME(LEFT, RIGHT), MENU, INPUT SELECT ,POWER  Power, Recall, 10KEY(0~9), Still, Screen Size, Menu, TV, AV, Multimedia, PREV PR, Mute, PR(UP/DOWN), VOL(UP/DOWN), TeleText, CYAN, Index, Red, Green, Yellow, Reveal, Update, Expand, Subpage, Hold, Picture Mode, Sound Mode, MTS, Sound Effect, PIP, PR Up(Sub), Sleep Timer, EDIT, Position, PR Down(Sub), Swap, Source(Sub), MGDI, COLOR TEMP  REMOTE CONTROL, INSTRUCTION MANUAL, POWER CORD WALL HANGER	

## Product Specification

### 2-2. Available Input Singnal

#### 1) PC&HDMI

Resolution	H.Freq.(kHz)	V.Freq.(Hz)	Remar	HDMI	PC
640 x 480	31.469	59.940	DOS	O	O
	37.861	72.809	VESA	O	O
	37.500	75.000	VESA	O	O
720 x 400	31.469	70.087	IBM	O	O
800 x 600	35.156	56.250	VESA	O	O
	37.879	60.317	VESA	O	O
1024 x 768	48.363	60.004	VESA	O	O
1280 x1024	63.981	60.020	VESA	O	O
1600 x 1200	75.000	60.000	VESA	O	O

#### 2) Component

- 1080p/i - 50 / 60Hz
- 720p - 50 / 60Hz
- 480p/i - 50 / 60Hz
- 576p/i - 50 / 60Hz

#### 3) Video

- PAL, PAL - M, PAL - N
- NTSC, NTSC 4.43
- SECAM

## 3. The Feature of Inside

### 3-1. Main PCB's Connection Diagram

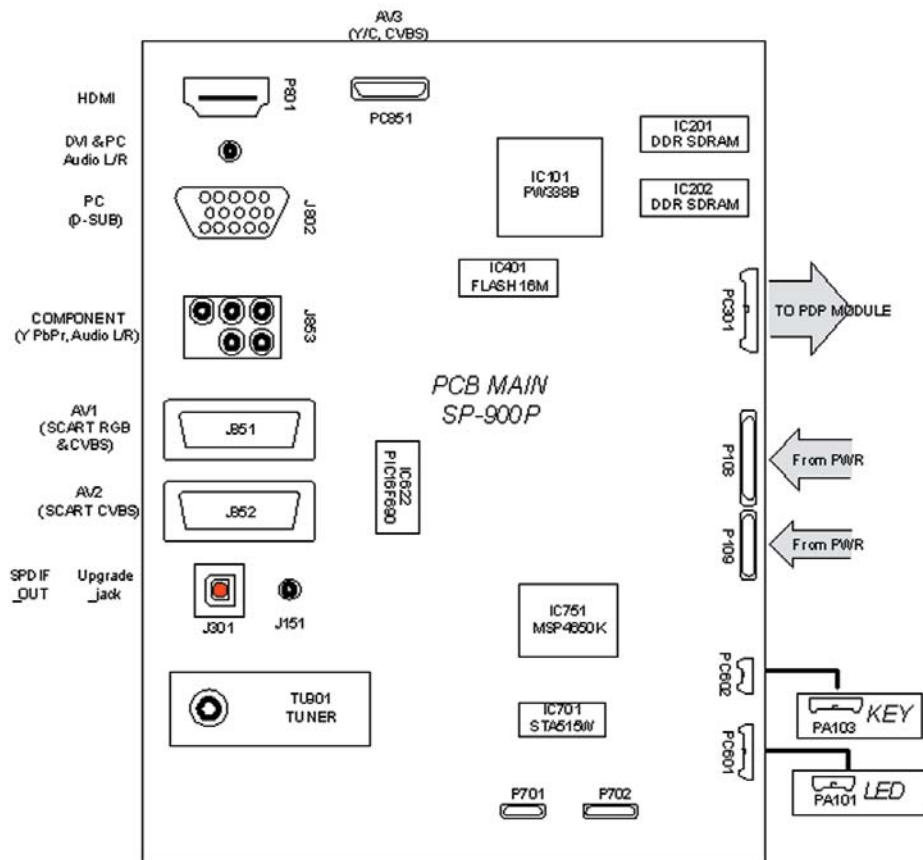


Fig.1 Main PCBs Block Diagram

### 3-2. Main PCB's Block Diagram

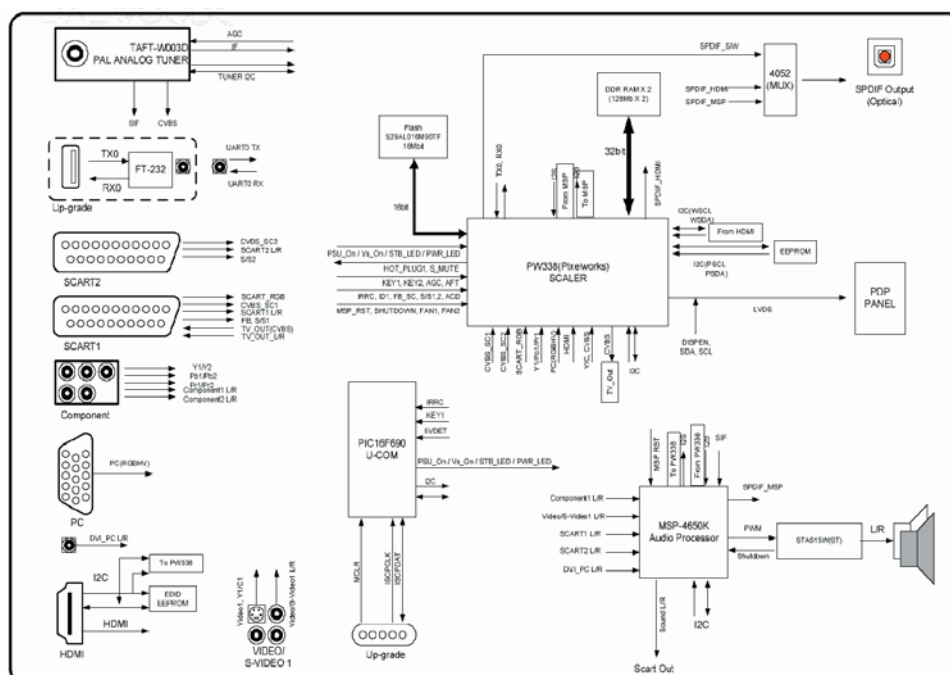


Fig.2 Signal Block Diagram : DPP-42A2

## The Feature of Inside

### 3-3. Power Specification

#### 1) Input and Environmental Requirement

Input Requirement	Description
Nominal Input Voltage	AC100V to AC240V
Input Voltage Variation Range	AC90V to AC264V
Nominal Frequency	50 / 60 Hz
Frequency Variation Range	47Hz to 63Hz
Inrush Current	50A peak MAX.

Environment Requirement	Description
Operating Temperature Range	0 to 55 Deg.
Operating Humidity Range	10 to 80%
Storage Temperature Range	-20 to 70 Deg.
Storage Humidity Range	10 to 85%
Cooling system	Convection

#### 2) Output Characteristics

	Output Name	Output Typical(V)	Variable Voltage Range(V)	Voltage Tolerance (%)	Output Current(A)		Ripple & (mVp-p)	Remarks
					Min.	Max.		
VSC Board (Image Board)	5V Stand_by	5.0	Fixed	±5	0.03	1.5	150	Total maximum power 100W
	3.4Vsc	3.4	Fixed	±5	0.1	6	200	
	6Vsc	6.0	Fixed	±5	0.1	3.0	200	
	12Vsc	12.0	Fixed	±5	0.1	2.0	250	
	19Vsc	19.0	Fixed	±12	0.03	3.0	500	
PDP Module	5Vctrl	5.0	Fixed	±5	0.1	4.0	100	Total maximum power 330W
	Va	60.0	55~65	±1	0.05	2.0	300	
	Vs	190.0	180~200	±1	0.1	1.5	500	



## The Feature of Inside

### 3) Connector

Connector number		CN811	CN812	SC101
Model name		YW396-08V	YW396-09V	YW396-03AV
Maker		YEONHO	YEONHO	YEONHO
The number of pins		8	9	2
Pin number	1	Vs	5V	L
	2	Vs	GND	N
	3	NC	Va	
	4	GND	GND	
	5	GND	GND	
	6	Va	GND	
	7	GND	NC	
	8	5V	Vs	
			Vs	

Connector number		P802	P803	P800
Model name		SMW250-10	SMW250-12	SMW250-13
Maker		YEONHO	YEONHO	YEONHO
The number of pins		10	12	13
Pin number	1	19V	3.4V	AC-DET
	2	19V	3.4V	RL-ON
	3	GND	GND	STBY5V
	4	GND	GND	GND
	5	6V	6V	Vs-ON
	6	GND	6V	5V_MNT
	7	3.4V	GND	M5V-ON
	8	GND	GND	STBY5V
	9	12V	12V	GND
	10	GND	12V	NC
	11		GND	6V
	12		GND	NC
	13			3.4V_ON

## 4. Default Setting in User Menu OSD

### 4-1. Picture

#### 1) Mode

	Normal	Dynamic	Cinema	User
Brightness	45	40	50	Undefined
Contrast	70	80	60	Undefined
Sharpness	7	8	6	Undefined
Colour	55	60	50	Undefined
Tint	50	50	50	Undefined

\* HDMI & PC Input - Only brightness and contrast are available.

#### 2) Default Value of Other Functions

Function	Default Value
Colour Temp	Normal
N.R.	On

\* N.R. means the noise reduction

\* HDMI & PC don't support N.R. functions

### 4-2. Sound

#### 1) Mode

	Normal	Movie	Music	News	User
120 Hz	32	50	48	15	Undefined
200 Hz	32	50	48	15	Undefined
500 Hz	32	38	38	32	Undefined
1.2 kHz	32	28	15	50	Undefined
3 kHz	32	28	15	50	Undefined
7.5 kHz	32	40	42	32	Undefined
12 kHz	32	48	56	15	Undefined

#### 2) Default Value of Other Functions

Function	Default Value
Balance	0
Effect	Off
AVC	Off

## Default Setting in User Menu OSD

### 4-3. Screen

#### 1) Mode

	16 : 9	4 : 3	LB (16:9)	LBS (16:9)	14 : 9	LB (14:9)	LBS (14:9)
Component	O	O	X	X	X	X	X
TV	O	O	O	O	O	O	O
AV	O	O	O	O	O	O	O
PC	O	O	X	X	X	X	X
HDMI	O	O	X	X	X	X	X

\* H. Position, V. Position, and Auto screen size is available in only PC mode.

### 4-4. Feature

#### 1) Mode

Function	Background	Language	Child Lock	MGDi plus	Auto Power
Default Value	10	English	Off	On	Off

\* HDMI & PC don't support MGDI function.

#### 2) Time Setting

Function	Clock	Auto Clock	Off Timer	Off Time	Wake Timer	Wake Time	Wake CH.	Wake Vol.
Default Value	Undefined	On	Off	PM 12:00	Off	PM 12:00	1	20

#### 3) ISM

Function	Pixel Shift	Low Bright	Image Invert
Default Value	Off	Off	Off

## 5. Service Mode

To enter SERVICE MODE,

A. Press “**▼VOL**” -> “**MUTE**” -> “**RECALL**” -> “**MUTE**” button of remote controller (R-55E05)

or

B. Press “**S9**” button of SERVICE REMOTE CONTROLLER.

[Note] In the first line, there is the model name and the version of the upgraded program on the PDP set.

### 5-1. Default Value of Pw338B\_1 and Pw338B\_2

	Sub Bias	Sub Gain	Bias R	Bias G	Bias B	Gain R	Gain G	Gain B
Pw338B_1	32	72	32	30	41	28	32	45
Pw338B_2	32	64						

#### 1) Pw338B\_1

- Sub Bias : For BRIGHTNESS adjustment (All inputs)
- Sub Gain : For CONTRAST adjustment (All inputs)
- Bias R : For R BRIGHTNESS adjustment (All inputs)
- Bias G : For G BRIGHTNESS adjustment (All inputs)
- Bias B : For B BRIGHTNESS adjustment (All inputs)
- Gain R : For R CONTRAST adjustment (All inputs)
- Gain G : For G CONTRAST adjustment (All inputs)
- Gain B : For B CONTRAST adjustment (All inputs)

#### 2) Pw338B\_2

- Sub Bias : For HDMI BRIGHTNESS adjustment
- Sub Gain : For HDMI CONTRAST adjustment

### 5-2. FrontEnd\_1

Function	R Offset	G Offset	B Offset	R Gain	G Gain	B Gain
Default Value	512	512	512	512	512	512
Function	Y Offset	Pb Offset	Pr Offset	Y Gain	Pb Gain	Pr Gain
Default Value	512	512	512	512	512	512

- RGB offset values will be set by executing ‘RGB Auto Cal’ in service mode.
- YPbPr offset values will be set by executing ‘YPbPr Auto Cal’ in service mode.

## Service Mode

- The automatically set offset values may different from the default value depend on B/D. However, the main B/D should be replaced or contact Kunpo R&D center in Korea if the **OFFSET** values differ more than  $\pm 20$  from default value.

### 5-3. FrontEnd\_2

	AV Brt	AV Cont
FrontEnd_2	128	128

### 5-4. MGDI

Function	VEH	2D-Peaking	BWE Enable	BWE Gain	BWE Mid gain
Default Value	1	1	0	4	2
Function	BWE TCONST	BWE BWCOFS	HFILTER	VFILTER	
Default Value	5	16	6	6	

### 5-5. Msp46X0

Function	Sc pScale	Fm pScale	Nic pScale	HDMI pScale
Default Value	24	40	85	20
Function	BBE pScale	Mvoice Level	Audio Delay	
Default Value	30	12	40	

- In Msp46X0,
  - Sc pScale : Prescale adjustment for external input (AV, Component, PC etc.)
  - Fm pScale : FM/AM prescale adjustment
  - BBE Level : BBE level control
  - HDMI pScale : HDMI prescale adjustment
  - Mvoice Level : Mvoice level control
  - Audio Delay : Sound delay control

## Service Mode

### 5-6. Misc

Function	Tst Ptrn AT	Tst Ptrn MA	TV Auto Off	Search Mode
Default Value	Undefined	Undefined	On	60Hz

- Tst Ptrn AT shows five cycled patterns (white, black, red, green, blue) every 1 minute automatically
- Tst Ptrn MA shows five cycled patterns manually by pressing volume up key.

### 5-7. Panel

Function	Sync Mode	Bright Mode	Power Mode	Gamma Mode	Panel Temp
Default Value	AUTO	100%	100%	2.2N	**.*

- Panel Temp indicates the current temperature of the panel.

### 5-8. Reset

- Level 1 - Resets all data in E<sup>2</sup>PROM other than HDCP key, EDID, RGB offset and YPbPr offset of FrontEnd\_1.
- Level 2 - Resets all data in E<sup>2</sup>PROM other than the exception of Level 1 and Pw338B\_1.
- Factory - Resets the data of auto search, language setting, time setting, and the user menu values that could be reset by 'Initialize' function in Feature mode.

## 6. Adjusting Method

### 6-1. MODULE POWER Adjustments and Test Point Locations

- Video pattern condition : 100 IRE Full White Pattern
- Adjust voltages (Vadd, Vsus) to the values that module maker labeled on the PDP panel.  
If there are some problems in picture after adjusting, you should classify that PDP module as a fault and contact to PDP module maker.

1) Vd (Vadd Voltage) : Data address voltage

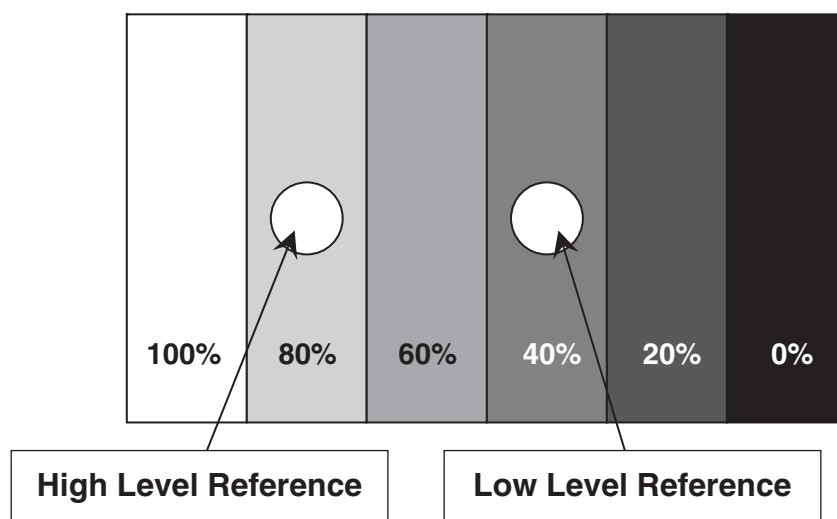
- Measurement equipment : Digital Volt Meter (DC Volt mode)
- TP : P812 #3
- Adjusting Volume : VR901
- Adjusting Voltage : Voltage written in the Label, which is located in the upper middle side of PDP Module. (Typical Voltage : 55 ~ 66 V)

2) Vs (Vsus Voltage) : Sustain voltage

- Measurement equipment : Digital Volt Meter (DC Volt mode)
- TP : P812 #9
- Adjusting Volume : VR951
- Adjusting Voltage : Voltage written in Label, which is located in the upper middle side of PDP Module. (Typical Voltage : 180 ~ 200 V)

### 6-2. White Balance Adjustments

1) Apply 5 Step Gray Scale pattern to Video input terminal



2) Check initial data of User Menu [refer to 4-1. Picture (dynamic)]

3) To enter Service mode, press button “VOL DOWN -> MUTE -> RECALL -> MUTE” on the remote control and select PW338\_1, then check initial data of Service mode [refer to 5. Service Mode].

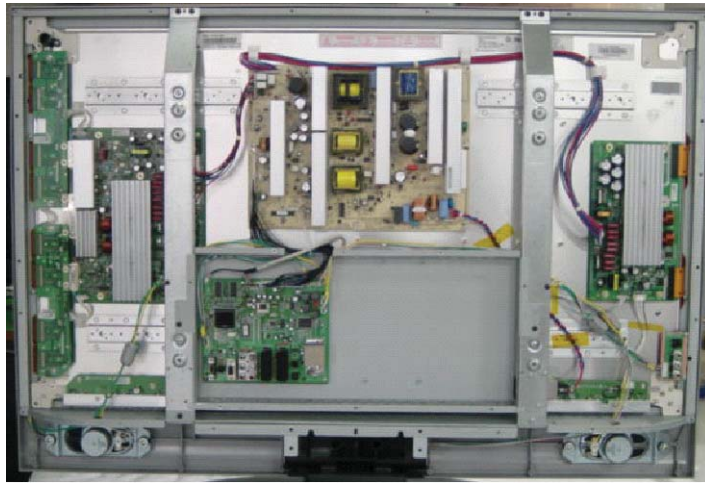
## Adjusting Method

- 4) Attach a sensor of White Balance Meter (CA-100) to 80% of white level on the screen.
- 5) Adjust White Balance by varying Gain of R, G, B
  - Gain of R, G, B should be adjusted to DP  $\pm 10$ , if out of these range then classify as a fault.
  - Set Color Coordinate to  **$x=0.275 \pm 0.005$ ,  $y=0.285 \pm 0.005$  (Low : 0.295)** and the Color Temperature should be over 10,000-degree K (standard R&D center equipment).
- 6) Attach a sensor of White Balance Meter to 40% of white level on the screen.
- 7) Adjust White Balance by varying the BIAS values of R, G, B
  - BIAS Values of R,G,B should be adjusted to DP  $\pm 10$  ,if out of these range then classify as a fault.
  - Set the Color Coordinate to  **$x=0.275 \pm 0.003$ ,  $y=0.295 \pm 0.003$**  (standard R&D center equipment).
  - Does not need to adjust if the deviation of color coordinate is within  $\pm 0.003$ .
- 8) Repeat No 4) to No 7) until getting the Color Coordinate is  **$x=0.275 \pm 0.003$ ,  $y=0.295 \pm 0.003$  at 40%** and  **$x=0.275 \pm 0.005$ ,  $y=0.285 \pm 0.005$  at 80%** white level. Then adjust Sub Contrast to **over 140 Cd/m<sup>2</sup>** after attaching a sensor of White Balance Meter to 100% of white level on the screen.
- 9) To exit from Service mode, press Menu button on the remote control.

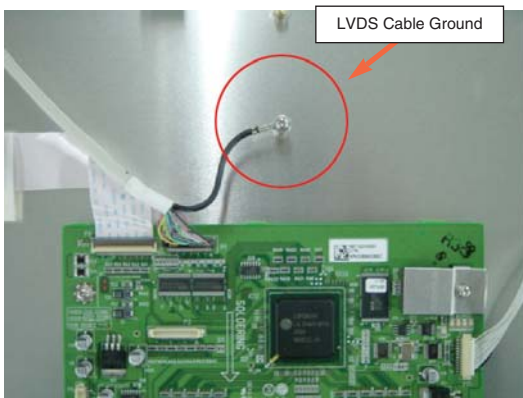


## 7. Noticeable Point While Assembling

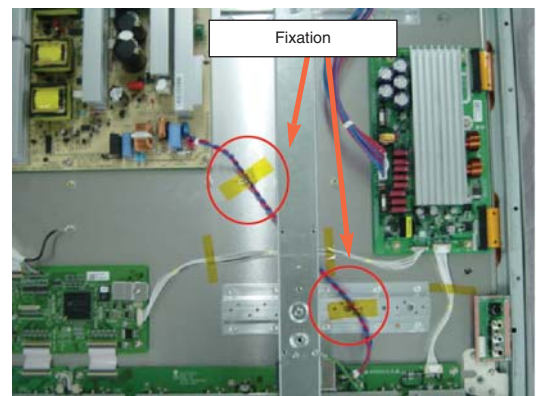
### A. DPP-42A2LMBD Inside Feature



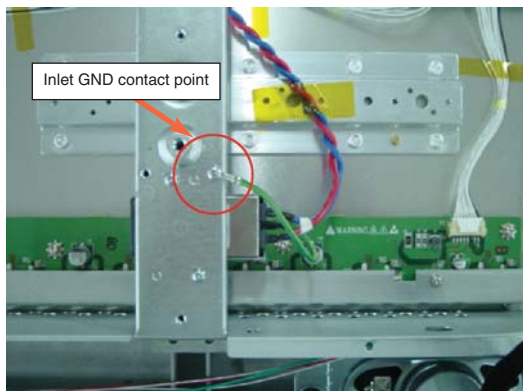
### B. LVDS connect (Module)



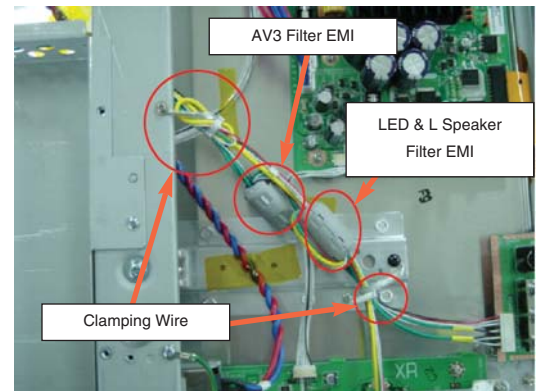
### C. Inlet Power Cable Fixing



### D. Inlet Ground contact

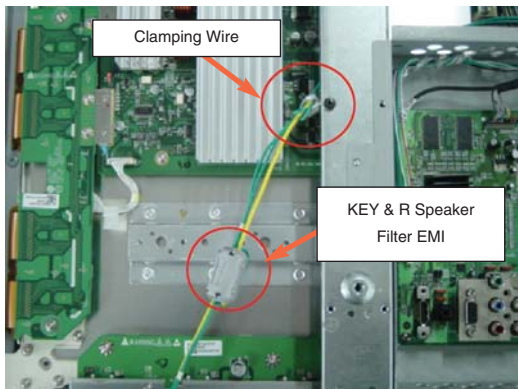


### E. AV3 Cable Arrangement

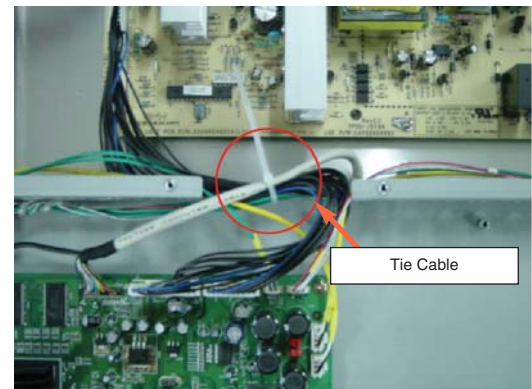


## Noticeable Point While Assembling

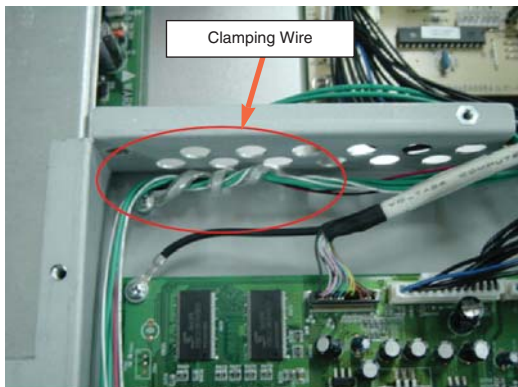
F. Side Key Cable Arrangement



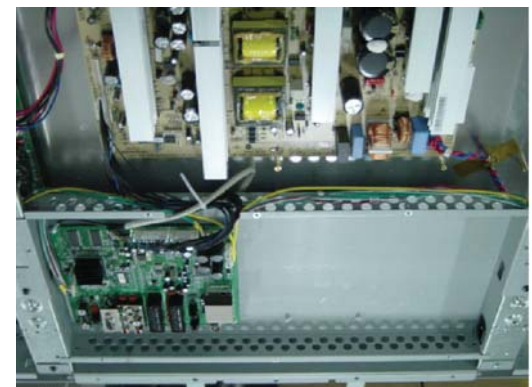
G. Main B/D Cable Arrangement



H. Main B/D Cable Arrangement

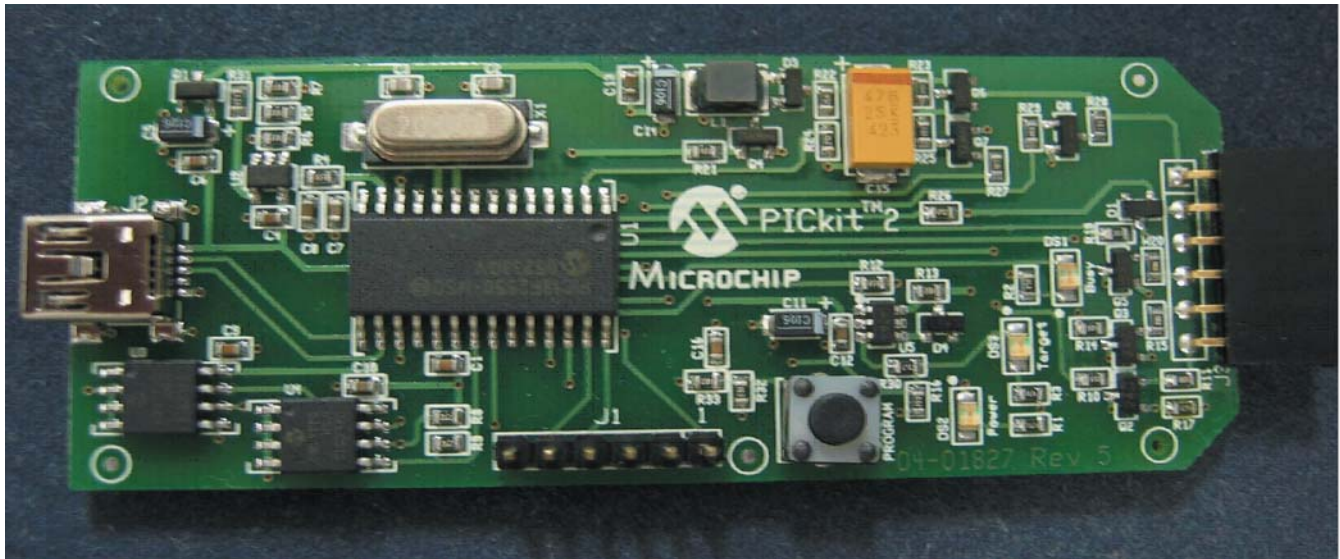


I. Main B/D Cable Arrangement (Upper view)



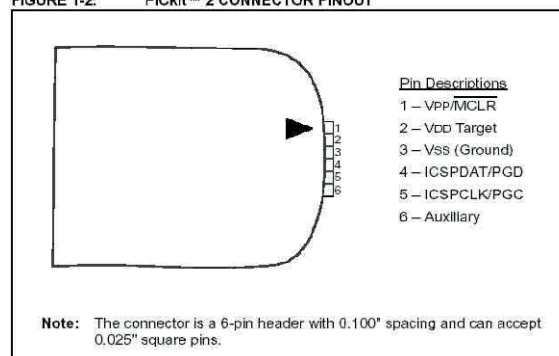
## 8. Software Upgrade Method

### 8-1. Pic upgrade



PICKit 2 Micro Controller Programmer

FIGURE 1-2: PICKit™ 2 CONNECTOR PINOUT

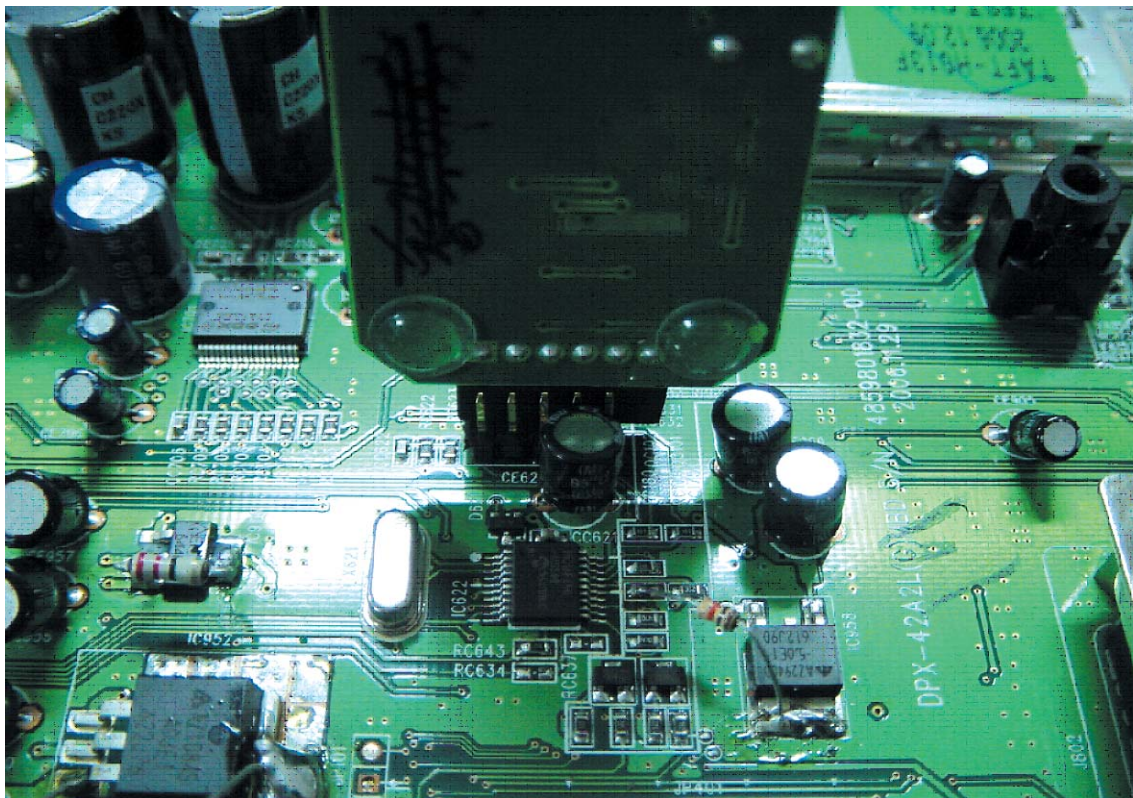
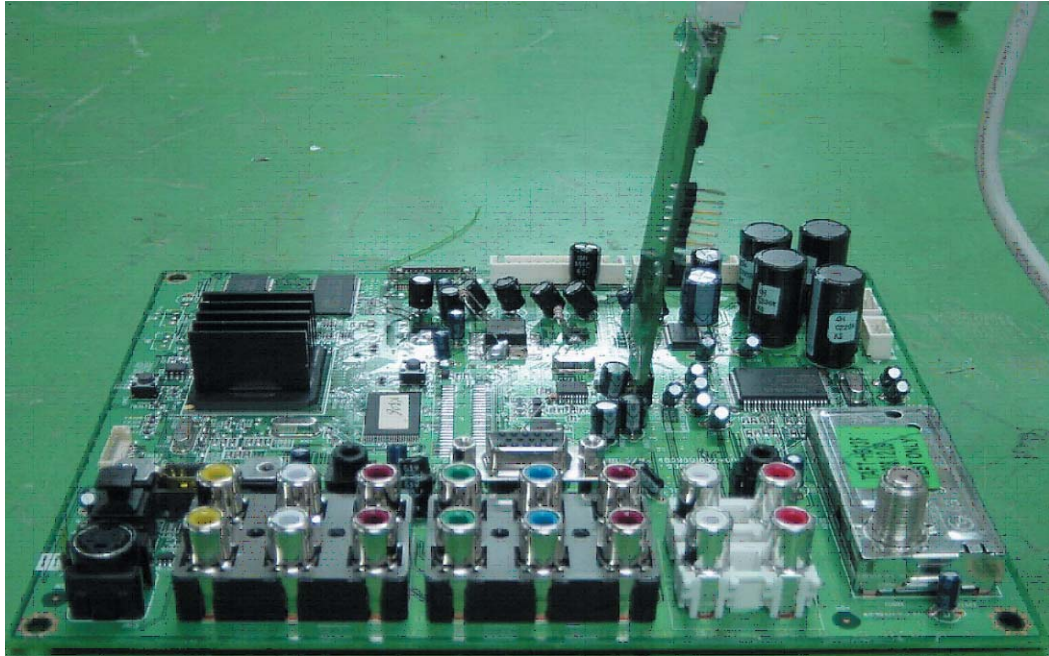


PICKit 2 Connector Pinout



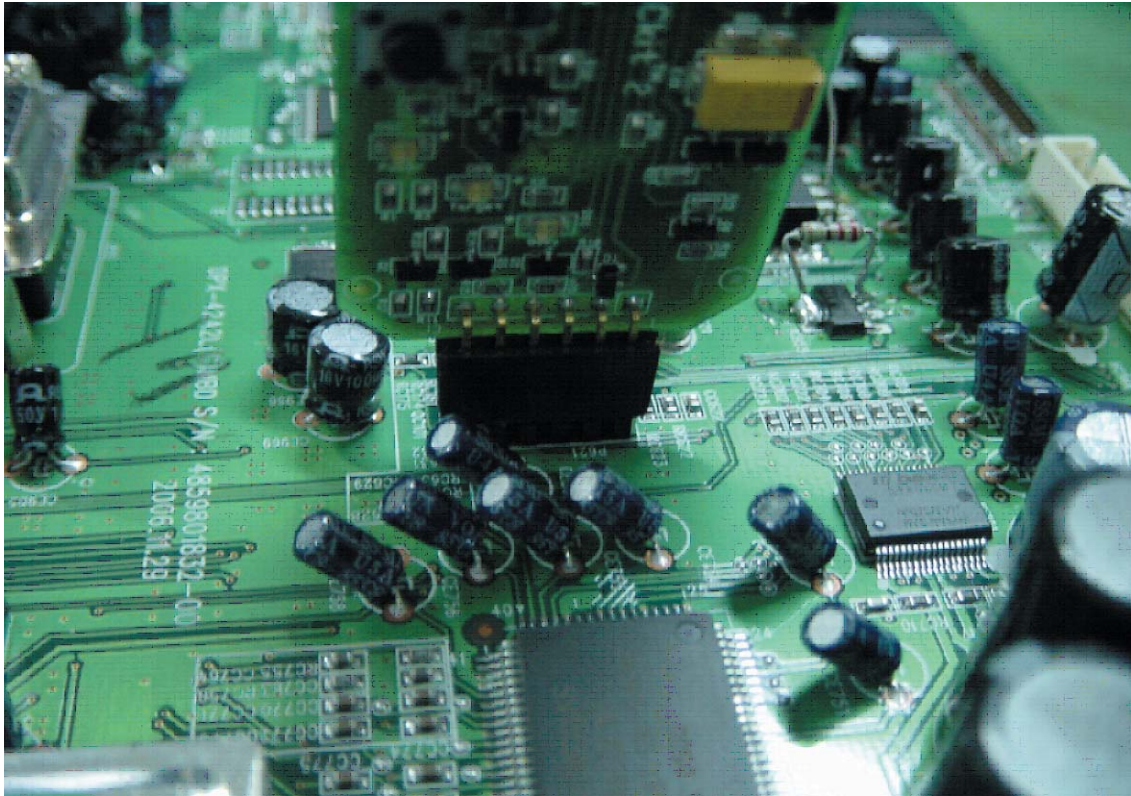
## Software Upgrade Method

- 1) Main pcb Power off
- 2) Connecting the Pic upgrade board to Main pcb as shown below



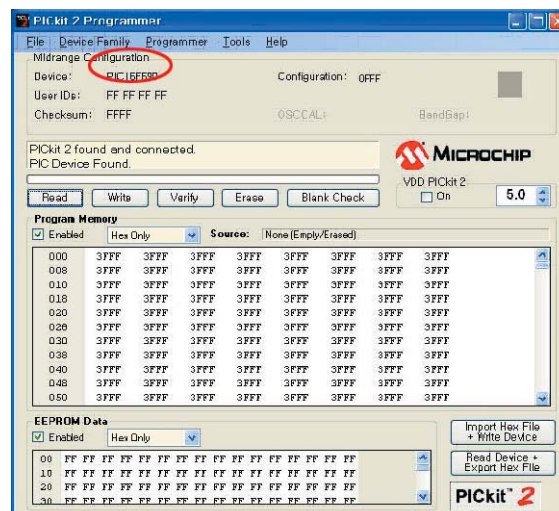


## Software Upgrade Method



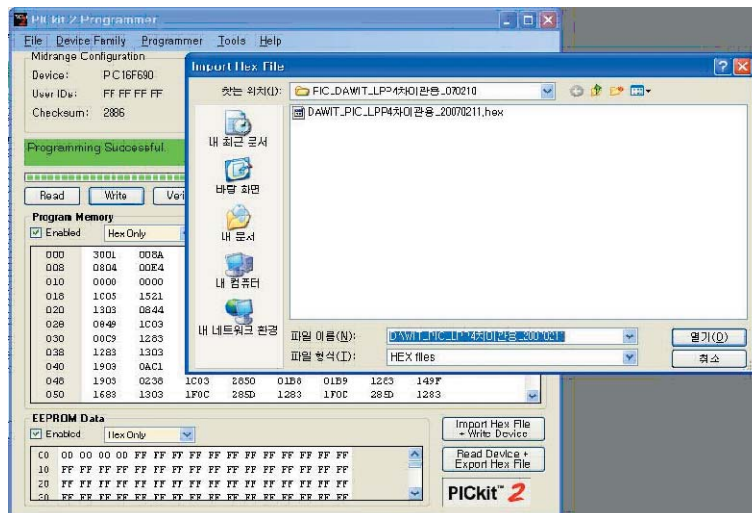
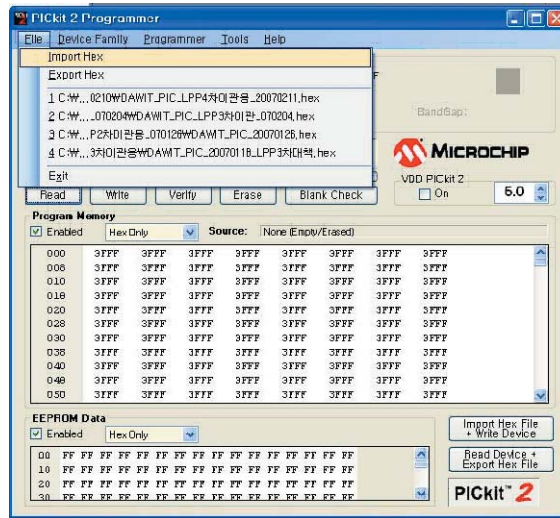
3) Run PICkit 2 Microcontroller Programmer

4) Please confirm if pickit 2 microcontroller programmer detected device(PIC16F690) appropriately or not



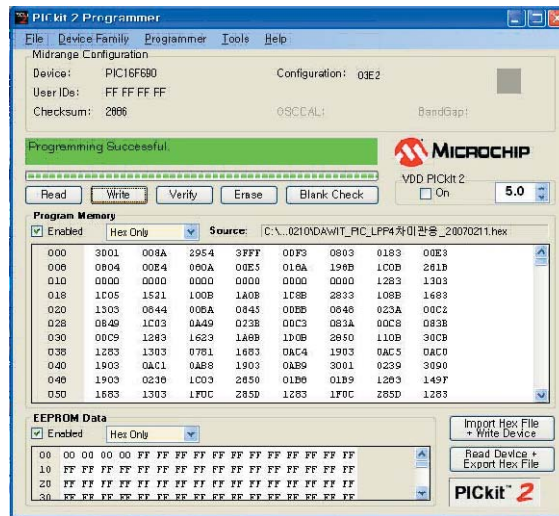
## Software Upgrade Method

### 5) Importing HEX file for upgrade



## Software Upgrade Method

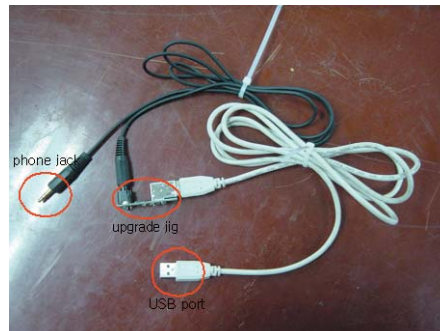
6) Write Click.



7) Please remove Pickit2 upgrade board when complete message is come out

## Software Upgrade Method

### 8-2. Flash Upgrade



Flash Upgrade JIG

#### 1) Installing CDM Driver

- Download the latest available CDM drivers from the FTDI web site and unzip them to a location.
- Connect the device to a spare USB port on your PC.

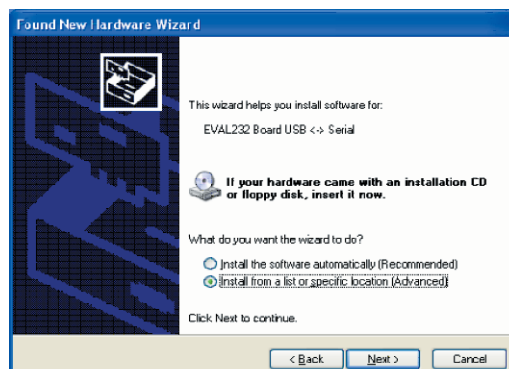
Once the composite driver has been installed Windows Found New Hardware Wizard will launch.

The screen below is shown.

Select “No, not this time” from the options available and then click “Next” to proceed with the installation



- Select “Install from a list or specific location (Advanced)” as shown below and then click “Next”.

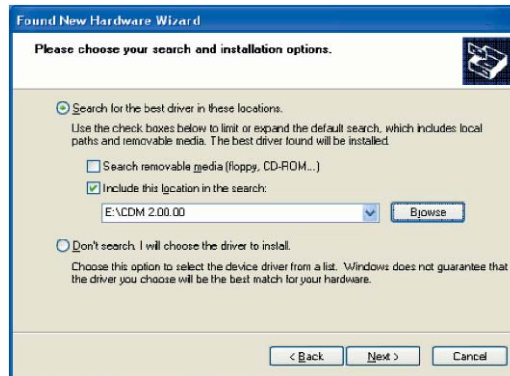




## Software Upgrade Method

- Select “Search for the best driver in these locations” and enter the file path in the combo-box (ex. “E:\WCDM 2.00.00” in the example below) or browse to it by clicking the browse button.

Once the file path has been entered in the box, click next to proceed.



- The following screen will be displayed as Windows XP copies the required driver files.



- Windows should then display a message indicating that the installation was successful. Click Finish to complete the installation for the first port of the device.



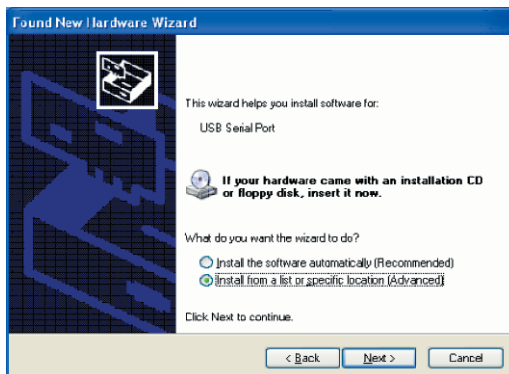
## Software Upgrade Method

- The Found New Hardware Wizard will launch automatically to install the COM port emulation drivers.

As above, select “No, not this time” from the options and click “Next” to proceed with the installation.

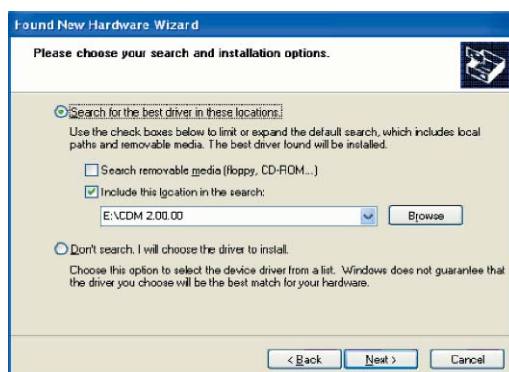


- Select “Install from a list or specific location (Advanced)” as shown below and then click “Next”.



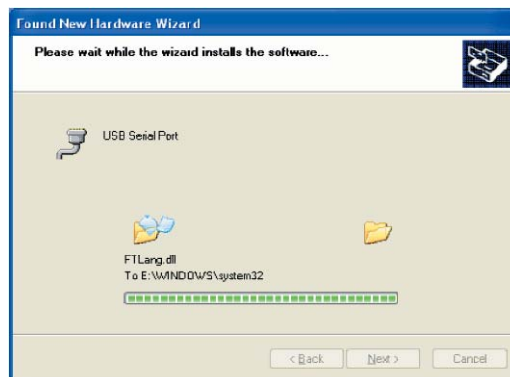
- Select “Search for the best driver in these locations” and enter the file path in the combo-box (ex. “E:\WCDM 2.00.00” in the example below) or browse to it by clicking the browse button.

Once the file path has been entered in the box, click next to proceed.



## Software Upgrade Method

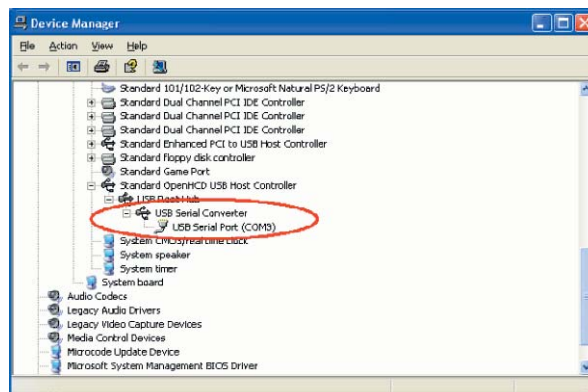
- The following screen will be displayed as Windows XP copies the required driver files.



- Windows should then display a message indicating that the installation was successful. Click Finish to complete the installation for the first port of the device.

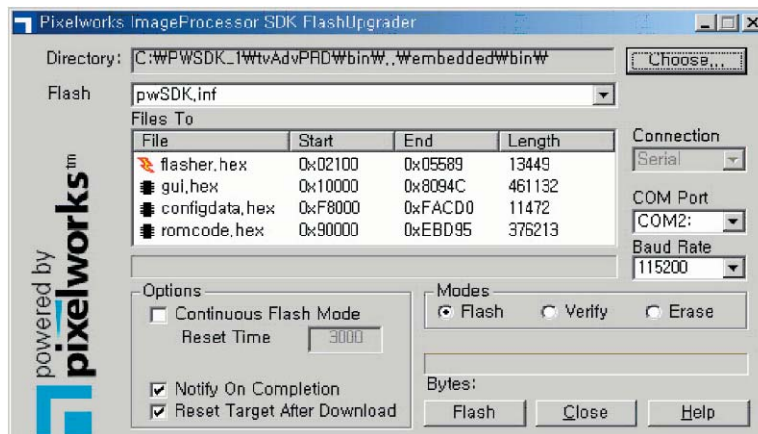


- Open the Device Manager (located in "Control Panel\System") then select the "Hardware" tab and click "Device Manager") and select "View > Devices by Connection", the device appears as a USB Serial Converter with an additional COM port with the label "USB Serial Port".

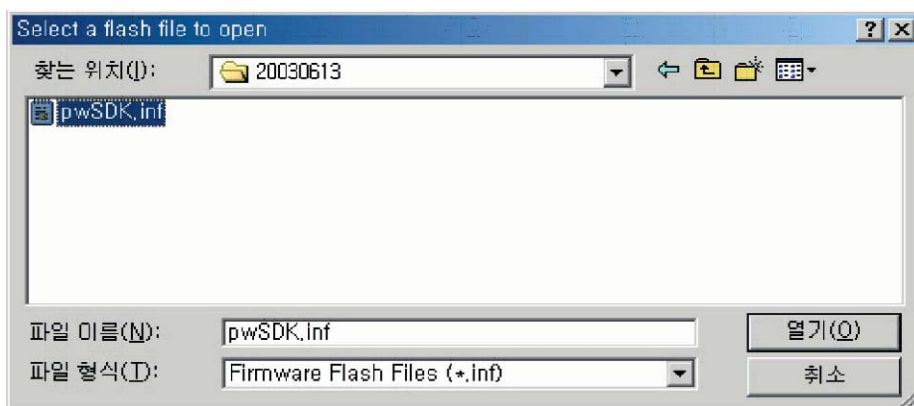


## Software Upgrade Method

- Connect USB cable to the USB port of the computer.
- Connect the phone jack cable the phone jack port of main PCB.
- Run Flashupgrader.exe in the PC to execute the program as shown below.

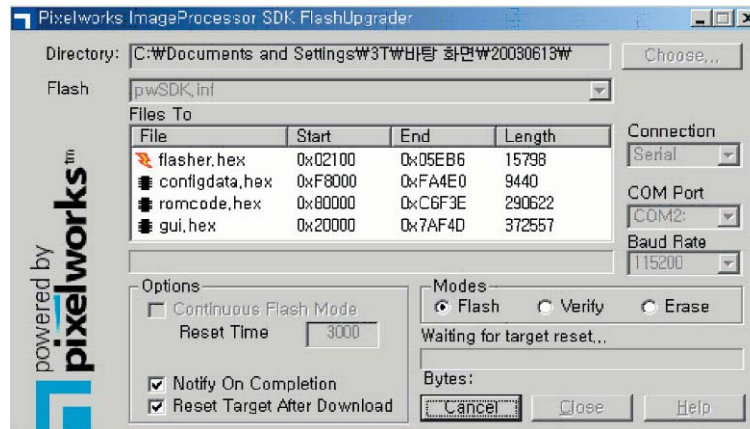


- Select current Upgrade file
  - i) Click "Choose..." button to select the file you want to upgrade.
  - ii) Select the file (pwSDK.inf) that you want to upgrade.

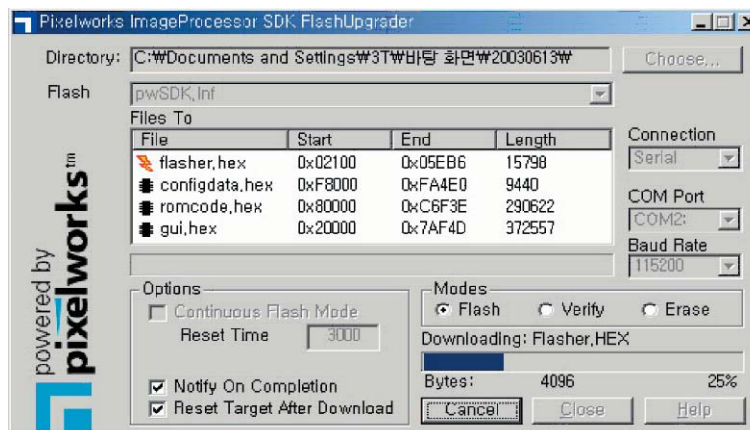


## Software Upgrade Method

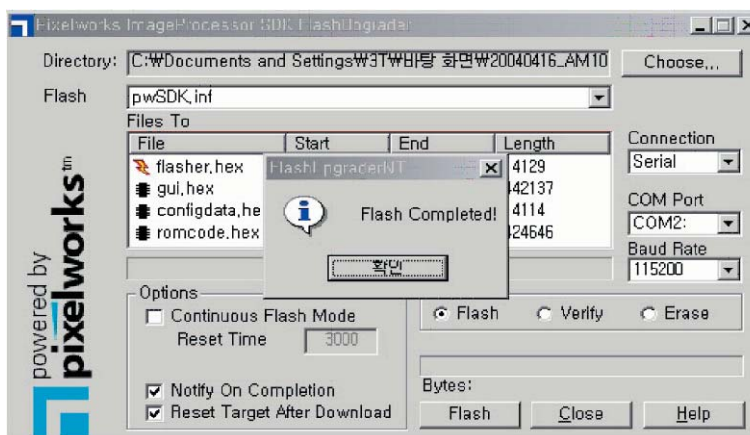
- Select correct COM Port and Baud Rate(115200) as shown below.  
Then press Flash button to finish setup



- Turn on the power and then upgrade program will start the download as shown below.



- When the upgrading is complete, a window (below) will be opened.  
Press "Finish" button to complete the process.



## 9. Trouble Shooting

### ***Before starting Trouble Shooting***

- Trouble diagnosing and repairing of set mean find out which PCBs or blocks are not working and replace them with new PCBs.  
Repairing the broken PCBs are not necessary.  
Keep the broken PCBs and return them to service center or R&D center.
- This Trouble Shooting list only contains representative and simple PCB trouble diagnosis and Module Exchange method.  
Therefore, if you find sets that are difficult to diagnose or to repair, contact R&D center.
- Basic Trouble Diagnosis procedure
  - 1) Check problem Symptoms
  - 2) Open Back Cover
  - 3) Trouble Diagnosis & Replace broken PCB
  - 4) Adjust new PCB module
  - 5) HEATRUN for at least 30 minutes, inputting Full White test pattern
  - 6) Full Function test
  - 7) Repair Complete
- Required Equipment for trouble diagnosis
  - 1) Digital Multimeter (User Mode : measure DC Voltage, measure Diode Voltage, Short-open test)
  - 2) Screwdriver (or electric screwdriver), Plastic adjusting tool
  - 3) Oscilloscope (for detailed examination only)
- Before replacing PCBs, you MUST disconnect the AC Power.
- After replacing High Voltage Board (Power PCB, Y-SUS, Z-SUS, Data B/D, Scan B/D), and Main, extra adjustment might be needed. (Refer to 6-1. MODULE POWER Adjustments and Test Point Locations)
- Dust or extraneous materials may cause bad connections.  
Therefore, try to apply soft brush, air fresher, or breath to clean the dust or extraneous materials.
- While assembling the set in factory, it could have bad connection.  
Try to reassemble the necessary connectors and also check the state of the connectors.
- After the set is repaired, leave Back Cover open for followings.  
Run HEAT RUN for at least 30 minutes by displaying Full White test pattern of Service Mode (Refer to Service Manual '5. Service Mode' part).  
Check the screen conditions and basic functions (remote control operation etc.)
- After Back Cover is closed, redo HEAT RUN for at least one hour with Full White input using Test Pattern of Service Mode.  
Check the screen conditions and basic functions.

## Trouble Shooting

### - Caution 1 !!

When disconnecting / connecting connectors, you MUST disconnect the AC Power.  
And check the direction and position of the connectors before working.

### - Caution 2 !!

Whenever you reassemble connectors connecting High Voltage Board and POWER PCB, remaining voltage still exists in the POWER PCB could cause electric shock and damage the set.

Therefore always reassemble the connectors several minutes after AC power disconnect. To be more careful, using a Multimeter you should check to see if Vs is less than 10V and then connect connectors.

### **Definition**

- Red LED - Stand by state (ready for operating)
- Blue LED - The set is turned on and operating
- Shut Down - While blue LED, power PCB does not make any operating sound or noise (i.e. Power relay does not operate normally)
- Weak Discharge - The screen looks like BLACK, but there are little discharged cells on the screen
- Abnormal Discharge - Shows unexpected discharged cells on the image
- No Signal - OSD is working but no images are displaying
- No Raster - Not even OSD is displaying



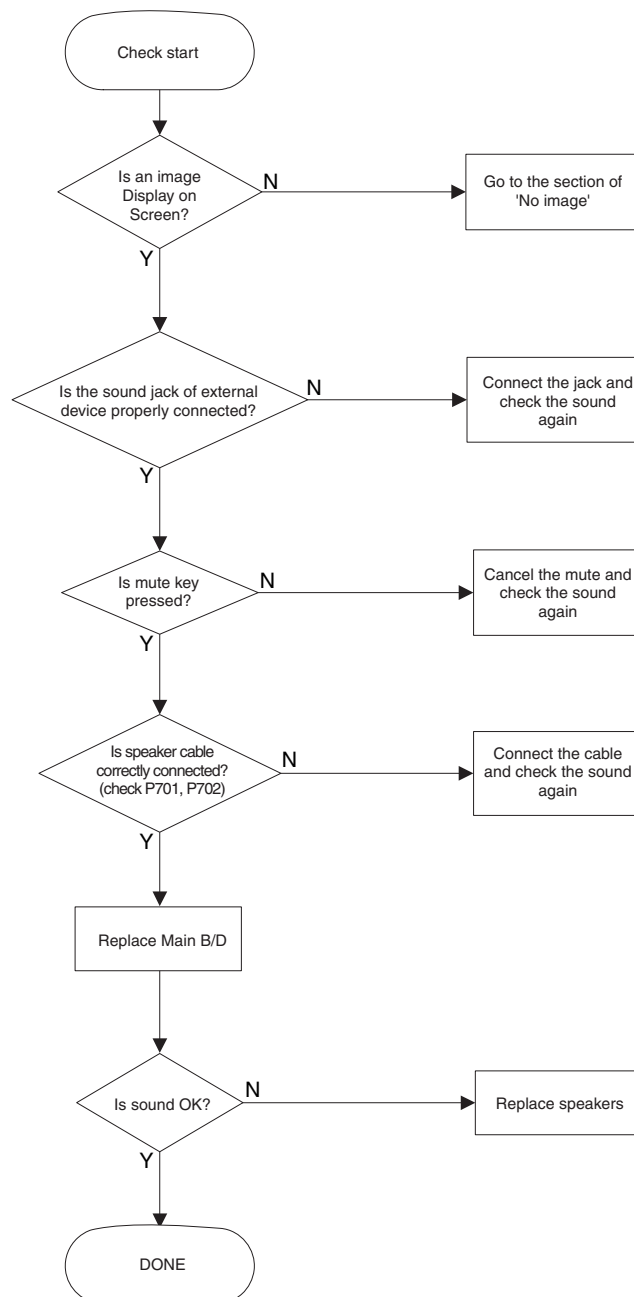
## Trouble Shooting

### 9-1. No Signal or No Raster

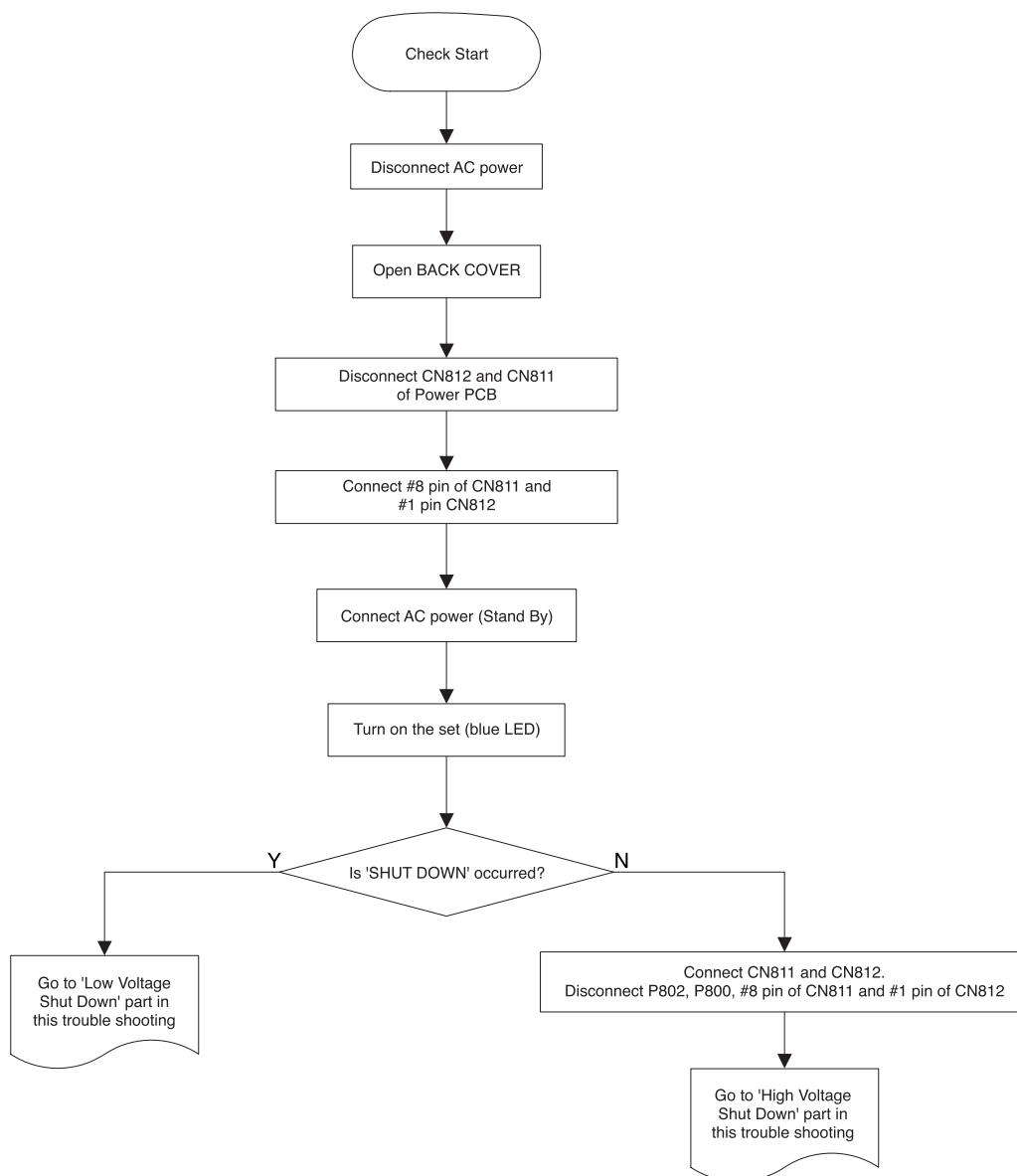




### 9-2. No Sound

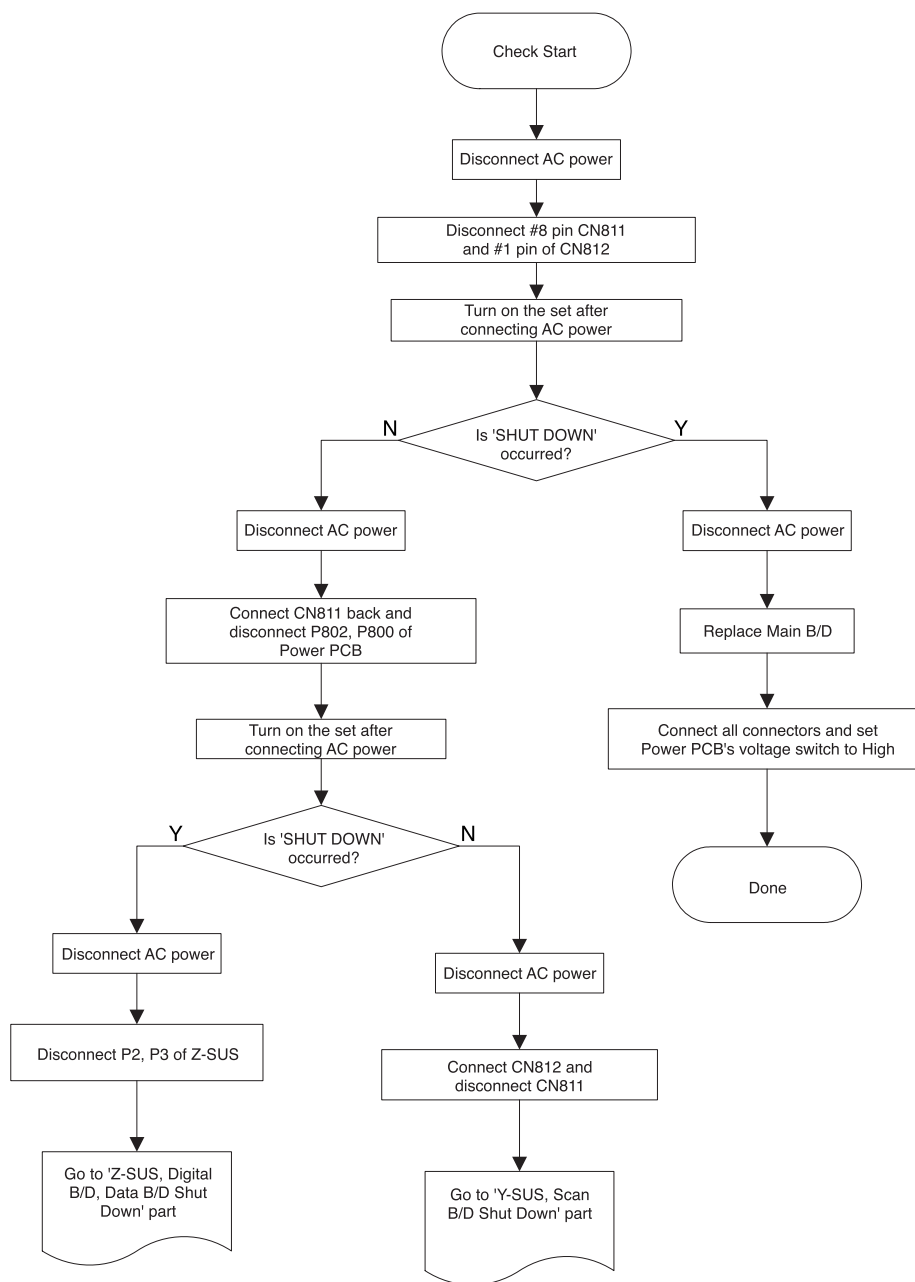


### 9-3. Shut Down



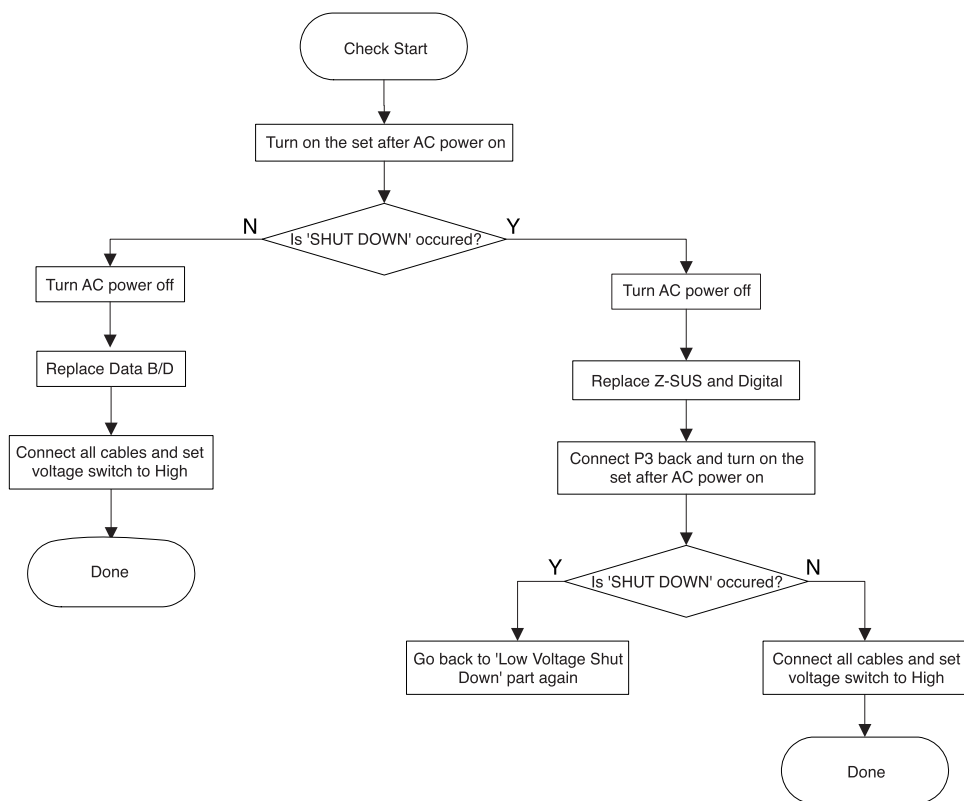
## Trouble Shooting

### A) Low Voltage Shut Down



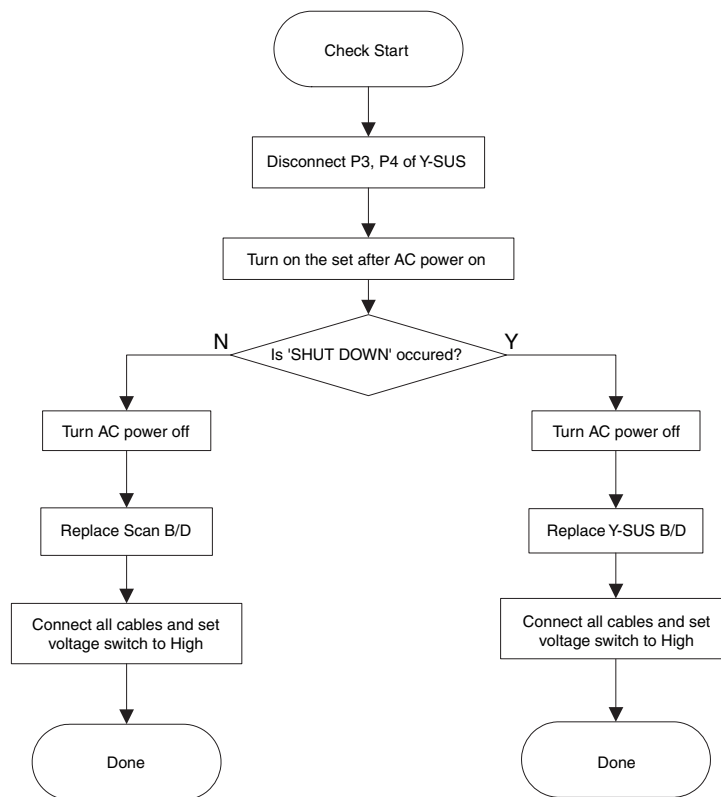
## Trouble Shooting

### B) Z-SUS, Digital B/D, Data B/D Shut Down



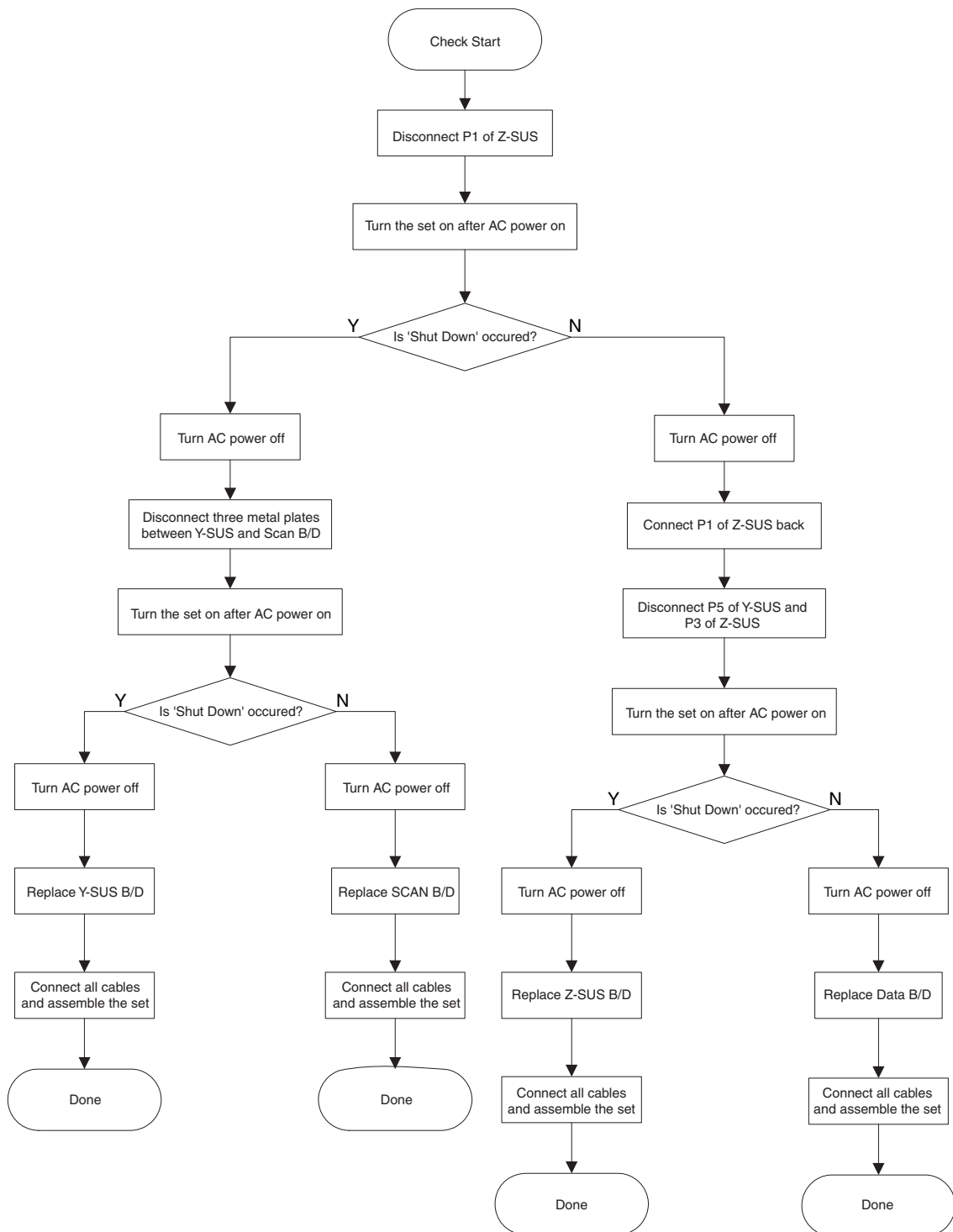
## Trouble Shooting

### C) Y-SUS, Scan B/D Shut Down

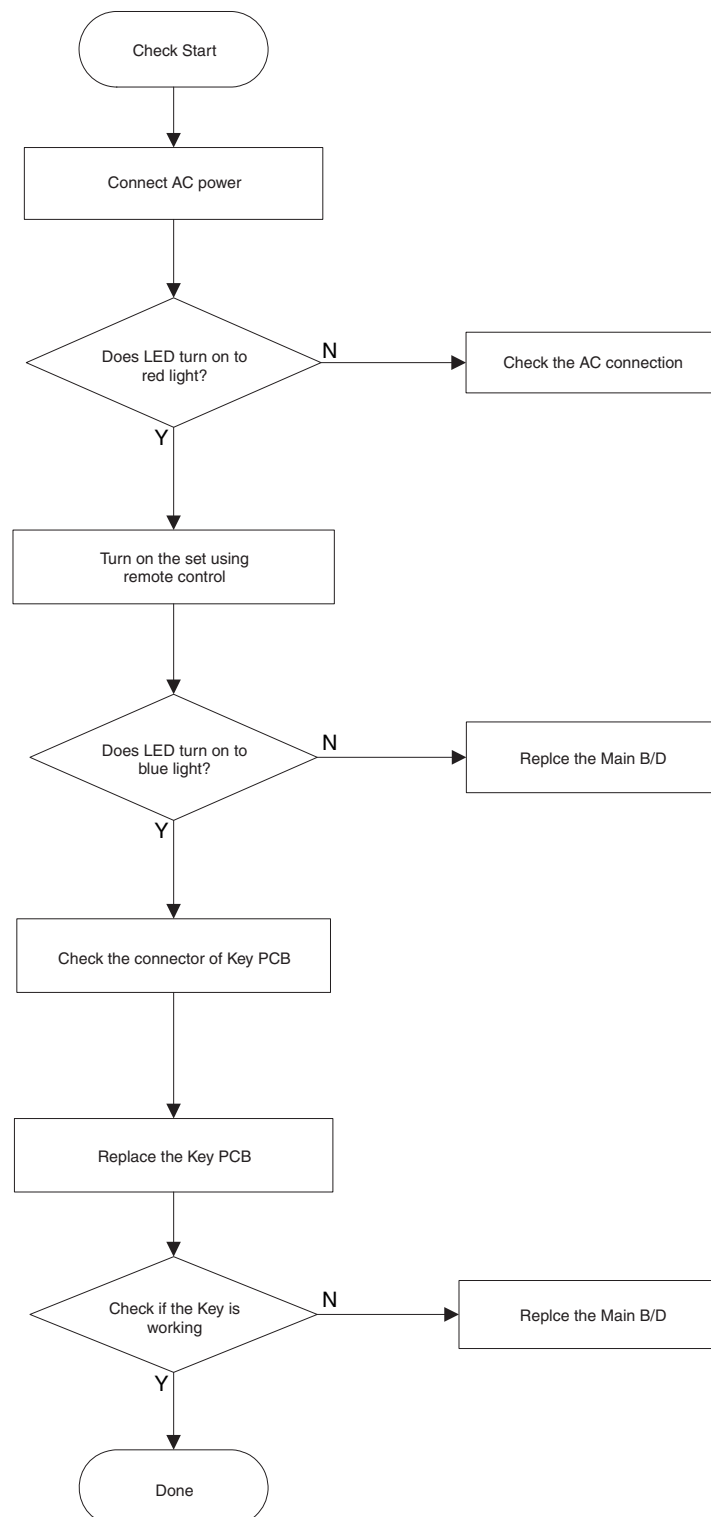


## Trouble Shooting

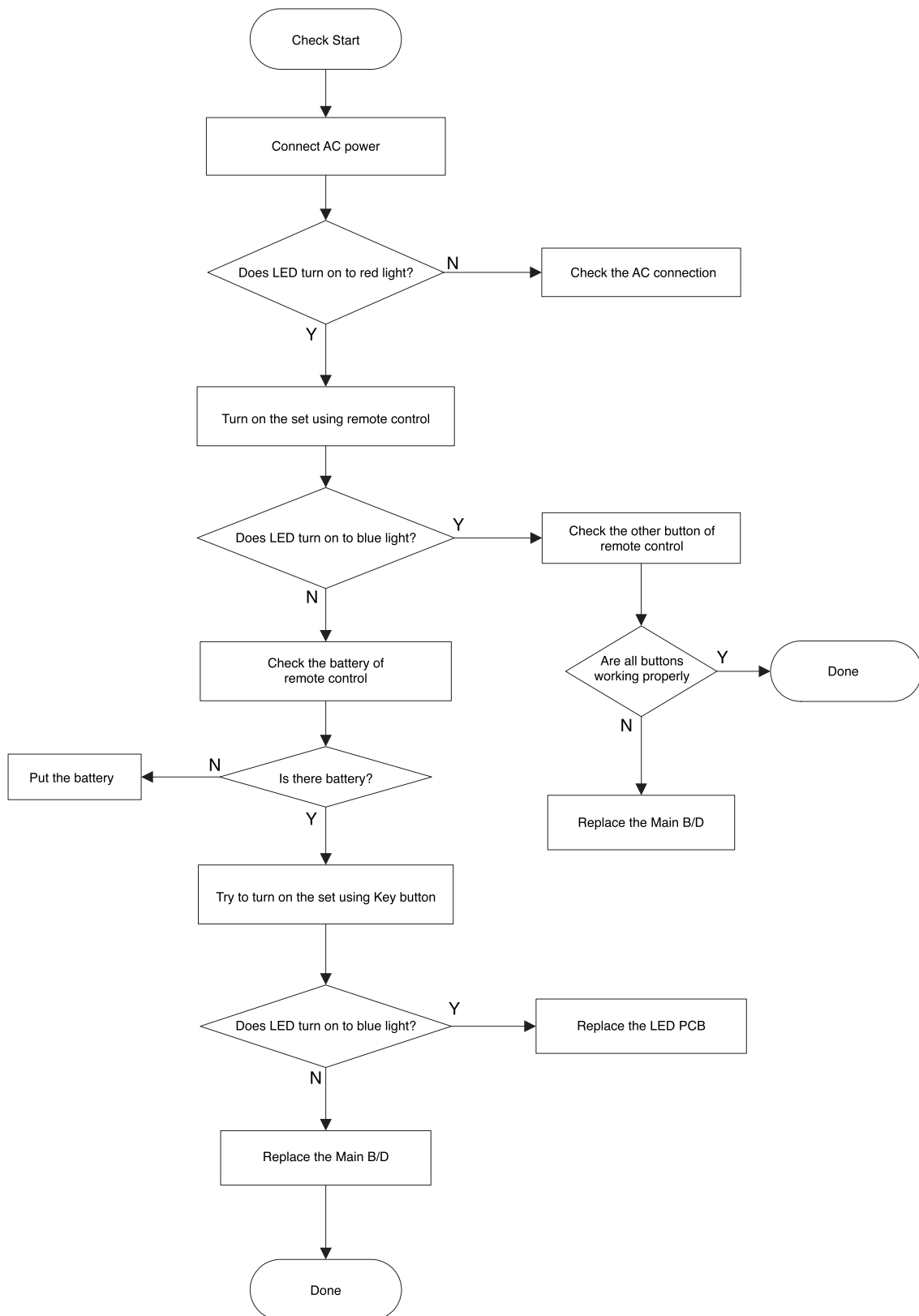
### D) High Voltage Shut Down



### 9-4. No Key Operation

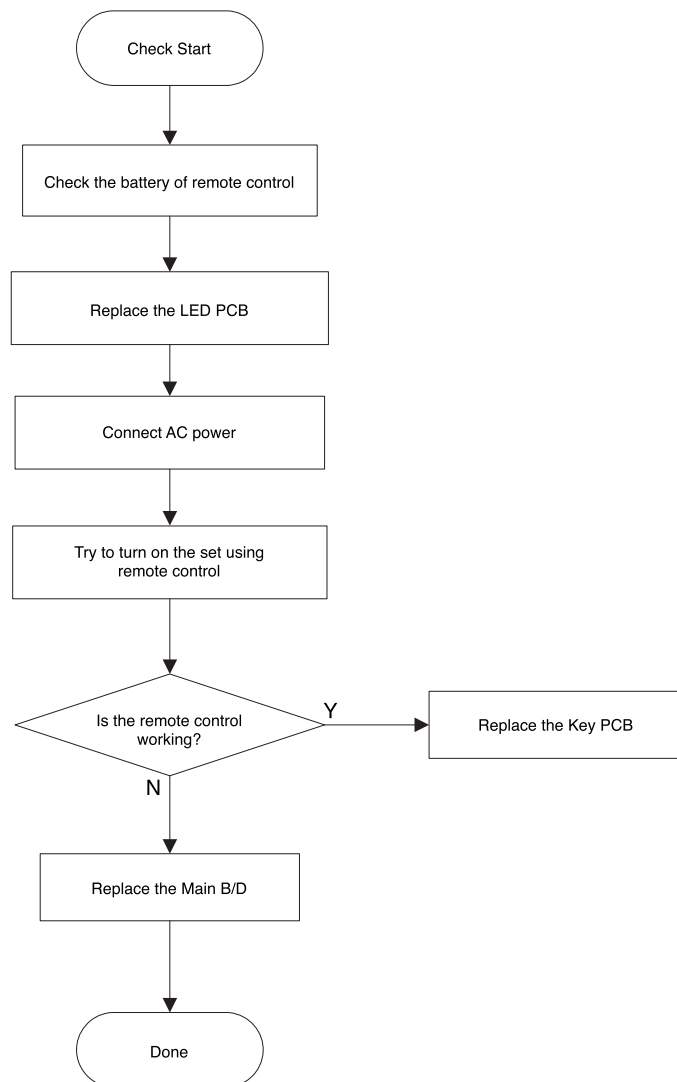


### 9-5. No Remote Control Operation

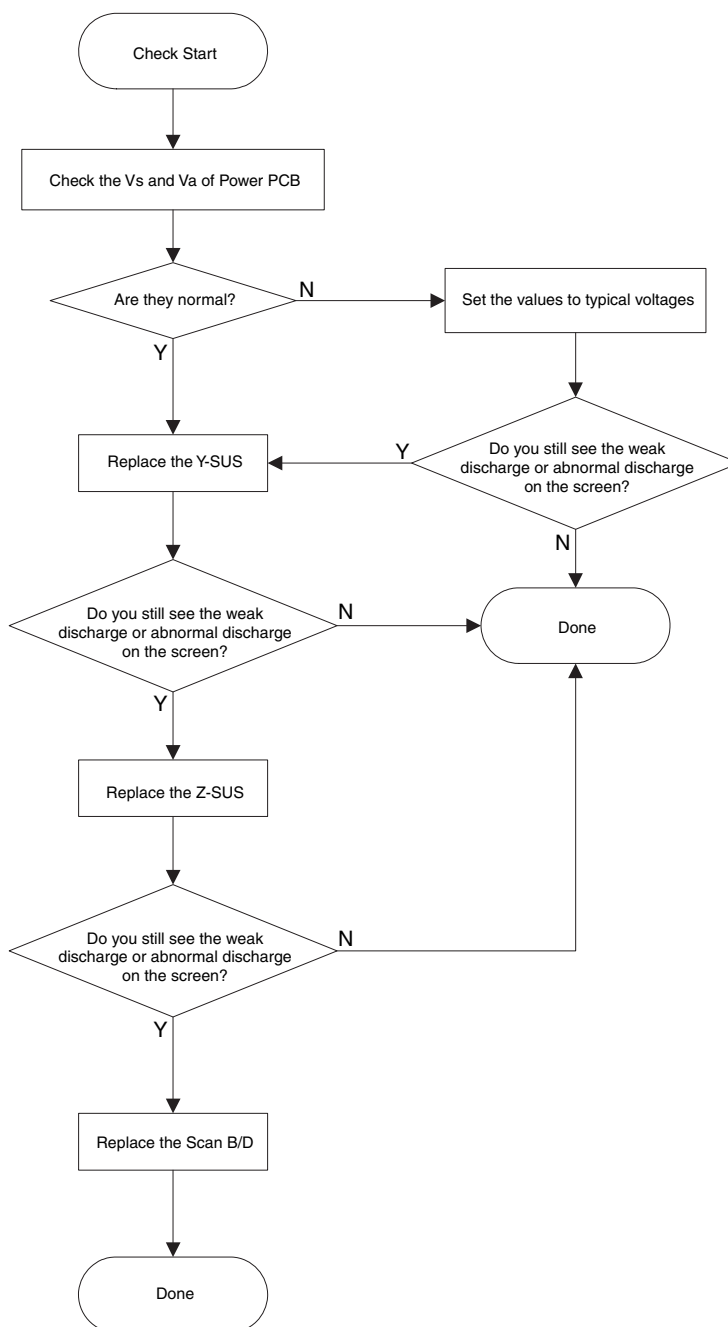




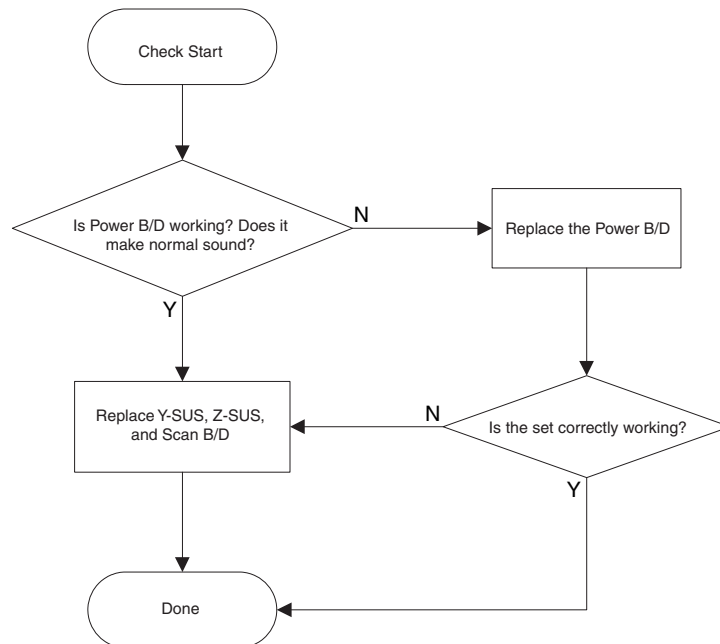
### 9-6. No Key and Remote Control Operation



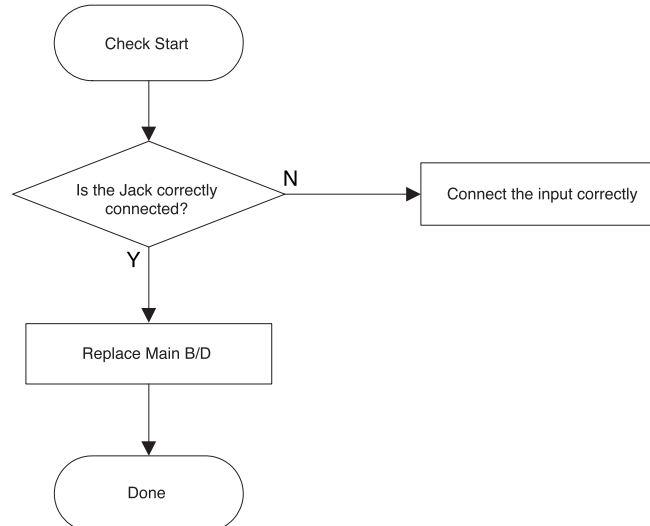
### 9-7. Abnormal Discharge



### 9-8. Not Even Weak Discharge



### 9-9. Particular Input Signal(Video, PC, TV or Component) Does Not Work



### 9-11. Others

#### A) Set Is Making Unusual Noise

-> Check the connection of Power PCB and Module. If they are OK, replace the Power PCB and check the symptom again.

#### B) Occasionally, the set does not operate normally.

Turning off and on the AC power make the set to operate normal again

-> Upgrade the software first.

If you still see the same symptom, replace the Main and Sub B/D.

#### C) Images are abnormal

-> Check the default values of service mode and user mode.

If they are OK, replace the Main and Sub B/D.

If they are not OK, upgrade the software and check the symptom again.

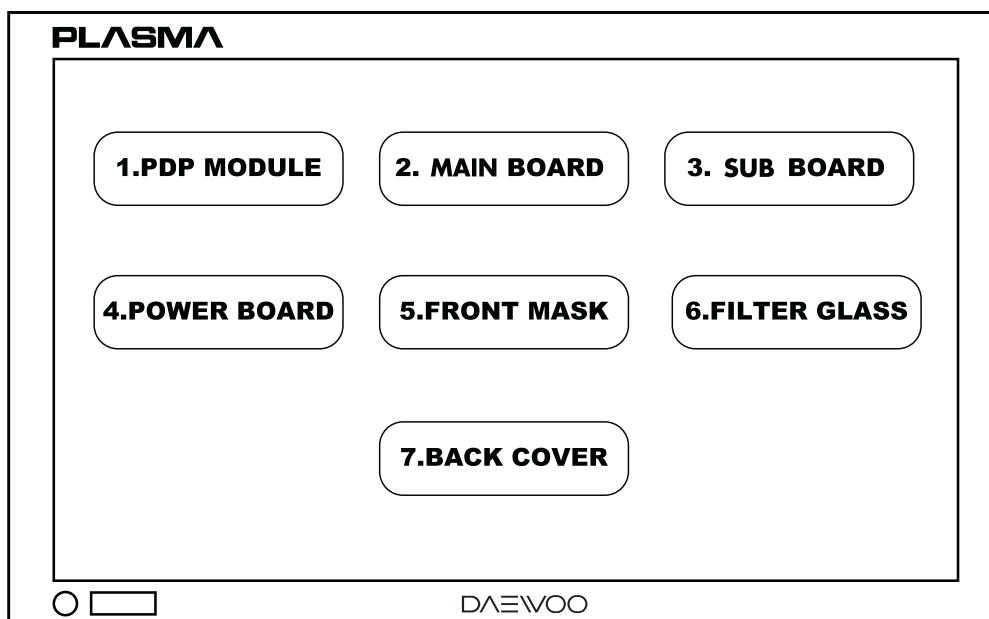
## 10. Assembly list

No.	PCB ASS'Y CODE	ASS'Y NAME	ASS'Y DESCRIPTION
1	48B5655E05	TRANSMITTER REMOCON	R-55E05 (AAA)
2	PTACPWG191	ACCESSORY AS	DPP-42A2GMBD
3	PTBCSHG191	COVER BACK AS	DPP-42A2GMBD
4	4852179100	COVER BACK	SECC T=0.5
5	4855947100	DECO SIDE AV	PVC T=0.3
6	PTCACAG255	CABINET AS	DPP-42A2LMBD
7	4851C05100	FRAME HORIZONTAL AS	38322+32981+7115401051
8	4851F02300	STAND AS	PDP 42A2 STAND
9	485A102580	GLASS FILTER (PDP)	DFM4203PCA
10	4853298200	BRKT INLET FILTER	SECC T=1.0
11	4851C05200	FRAME SIDE T AS	3831800 + A111570 + 7744521
12	4851C05300	FRAME SIDE B AS	3831900 + A111570 + 7744513
13	4851C05400	FRAME SIDE L/R AS	3832000 + A111670 + 7744514
14	4853832100	FRAME SURPORT	SGCC T=1.8
15	4856815910	CLAMP WIRE	EGI T0.4+TUBE+PIE 4.2
16	4854964811	BUTTON CH	ABS GY
17	4859006660	CABLE LVDS	1001-31FC+1001-31FC+42A2=300
18	5PZCA2009A	FILTER EMI	ZCAT2035-0930A
19	5PZCA2009A	FILTER EMI	ZCAT2035-0930A
20	PTFMSJG191	MASK FRONT AS	DPP-42A2GMBD
21	4852095401	MASK FRONT	ABS BK
22	4921300100	BRAND MARK	AL
23	4853569011	HOLDER LED	ABS GY
24	4855946300	DECO LED	GPPS
25	PTSPPWG192	SPEAKER AS	DPT-42A2GMBD
26	4858318410	SPEAKER	SP-57165F01C
27	4856017800	SCREW SPKR FIX	SWRM+SECC 3CR
28	PTMPMSG191	PCB MAIN MANUAL AS	DPP-42A2GMBD
29	4850703S83	CONNECTOR	25048HS-03+YRT205+YRT110+USW=800
30	4850704S89	CONNECTOR	25048HS-04+YRT205+YRT110+USW=950

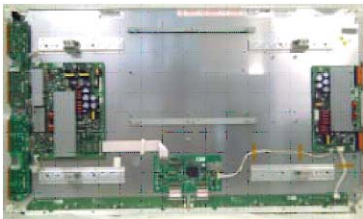
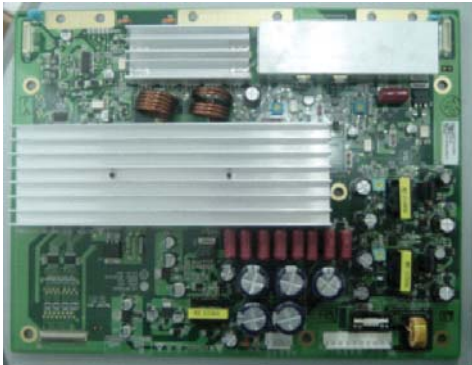

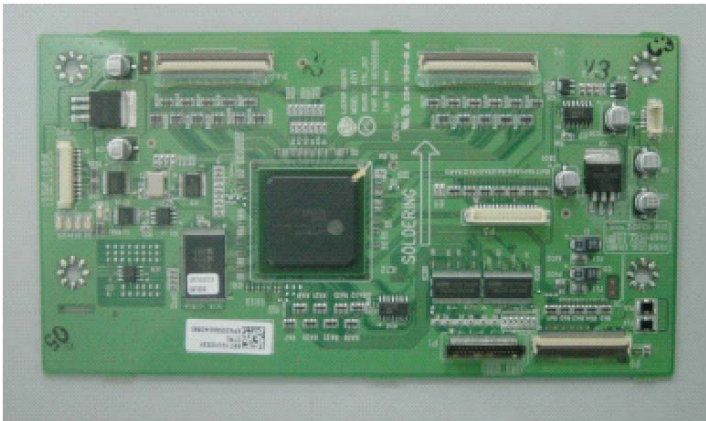
## Assembly list

No.	PCB ASS'Y CODE	ASS'Y NAME	ASS'Y DESCRIPTION
31	4850713N02	CONNECTOR	SMH250-13+SMH250-13+ULW=300
32	4850710S35	CONNECTOR	SMH250-10+SMH250-10+ULW=300
33	4850710N36	CONNECTOR	20017HS-10+12505HS-10+USW=1000
34	4850705N44	CONNECTOR	12505HS-05+20017HS-05+USW=1200
35	4850704N44	CONNECTOR	12505HS-04+20017HS-04+USW=900
36	PTSBMSG191	PCB SUB MANUAL AS	DPP-42A2GMBD
37	PTJAMSG191	PCB JACK MANUAL AS	DPP-42A2GMBD
38	4850M14110	MODULE PDP	PDP42V7U4XX
39	485AS13990	CTRL ASSY	
40	485AS14090	YDRV TOP B/D ASSY	Scan TOP BOARD
41	485AS14190	YDRV BTM B/D ASSY	Scan BTM BOARD
42	485AS14290	XRLT ASSY	Data LEFT BOARD
43	485AS14390	XRRT ASSY	Data RIGHT BOARD
44	485AS14490	YSUS ASSY	Y-SUS BOARD
45	485AS14590	ZSUS ASSY	Z-SUS BOARD
46	485AS14690	14" V7 XPOWER FOR DAEWOO	

## 11. Structure of PDP SET







## Structure of PDP SET


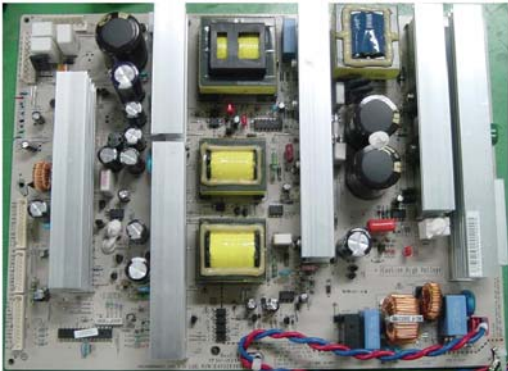

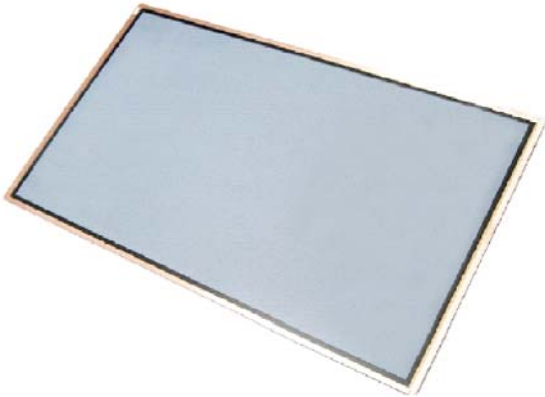
COMPONENT	PICTURE	REMARK
1) PDP MODULE		4850M14110 (DPP-42A2LMBD)
1a) Y-SUS B/D		485AS14490 (DPP-42A2LMBD)
1b) Z-SUS B/D		485AS14590 (DPP-42A2LMBD)
1c) Digital PKG		485AS13990 (DPP-42A2LMBD)




## Structure of PDP SET

COMPONENT	PICTURE	REMARK
1d) Data Relay PKG(L)		485AS14290 (DPP-42A2LMBD)
1e) Data Relay PKG®		485AS14390 (DPP-42A2LMBD)
1f) Scan Relay PKG-T		485AS14090 (DPP-42A2LMBD)
1g) Scan Relay PKG-B		485AS14190 (DPP-42A2LMBD)

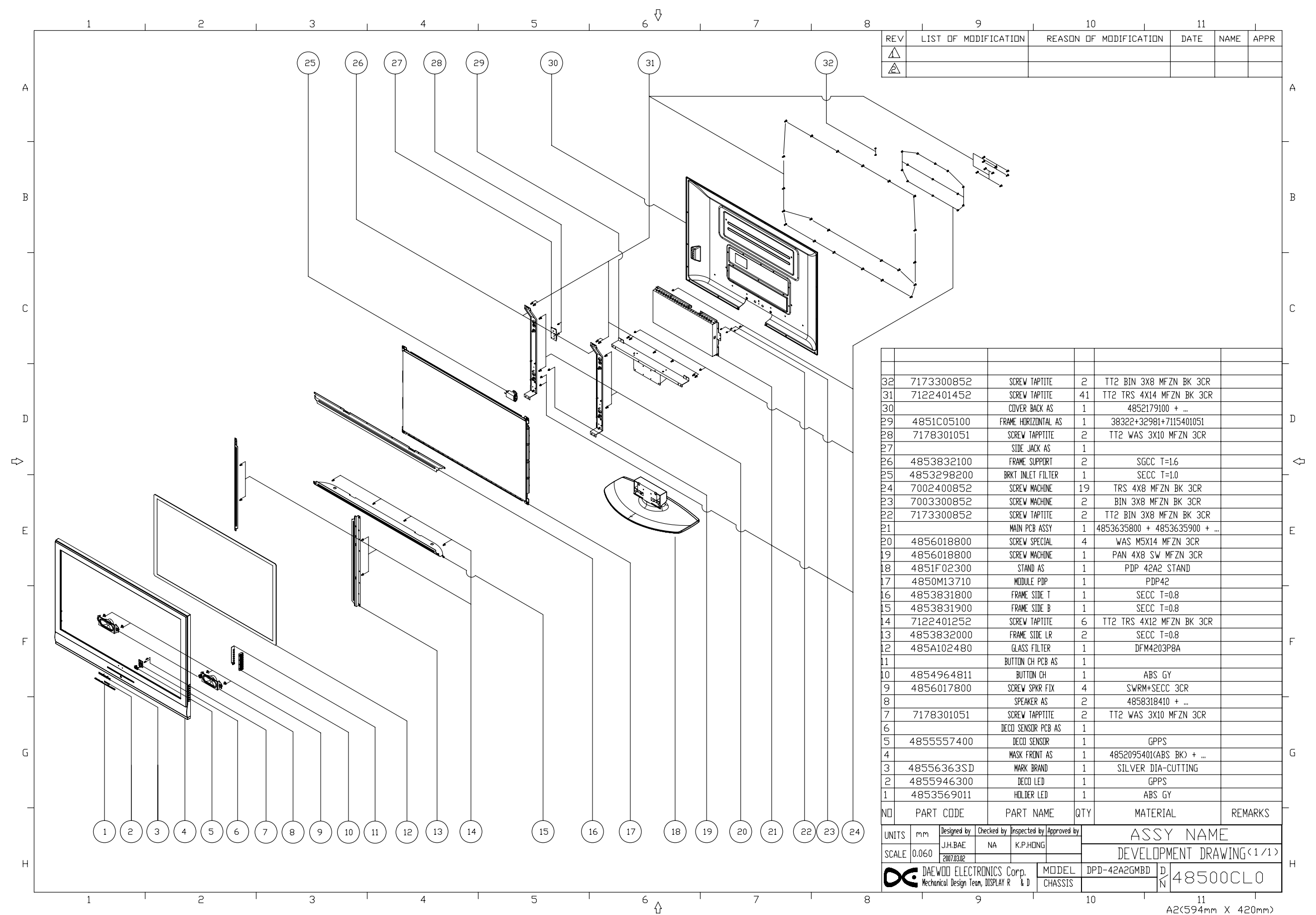
## Structure of PDP SET

COMPONENT	PICTURE	REMARK
2) MAIN BOARD		PTMPMSG191
4) POWER BOARD		485AS14690 (DPP-42A2LMBD)
5) FRONT MASK		PTFMSJG191
6) FILTER GLASS		485A102580

## Structure of PDP SET

COMPONENT	PICTURE	REMARK
7) BACK COVER		PTBCSHG191

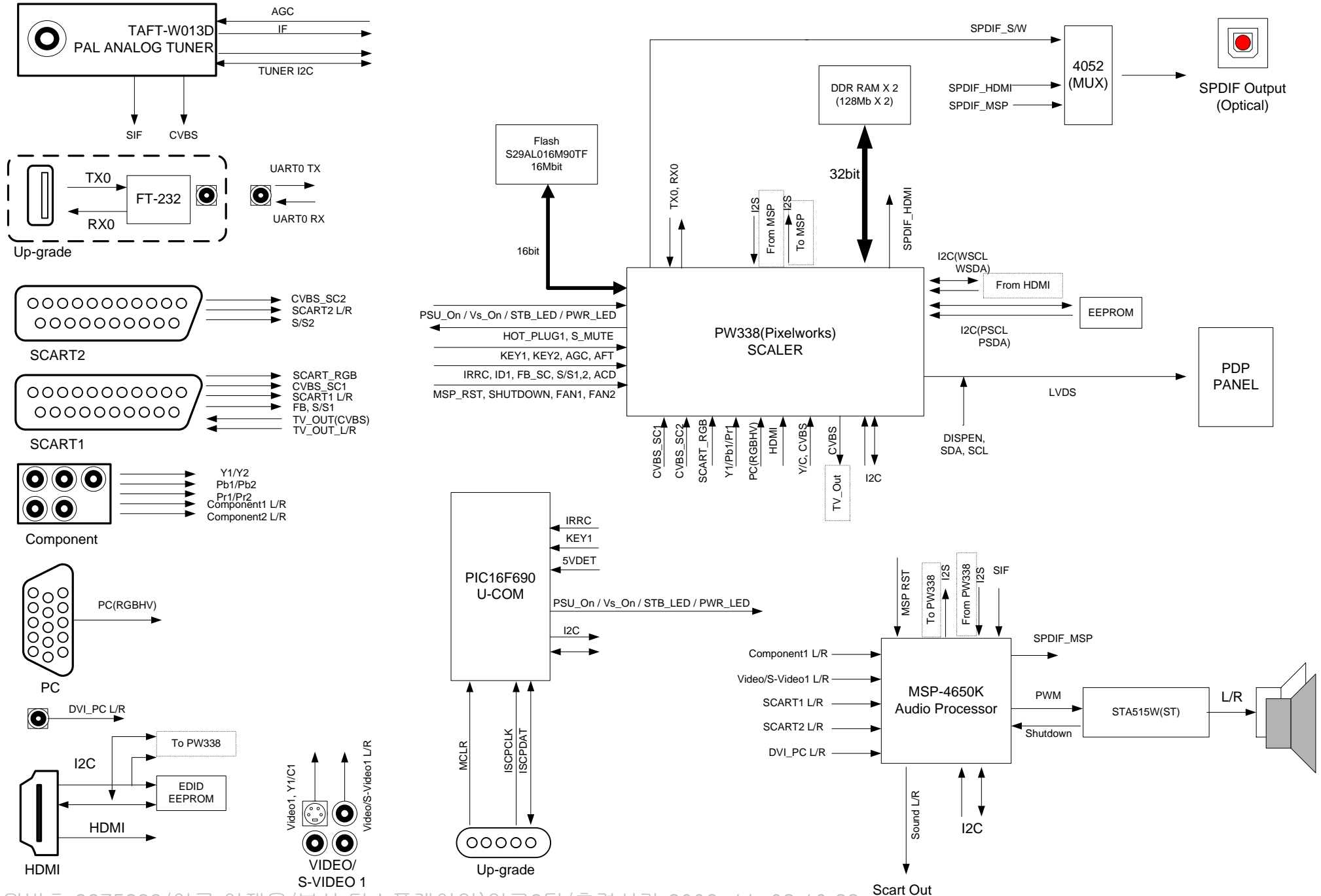
12. Exploded View



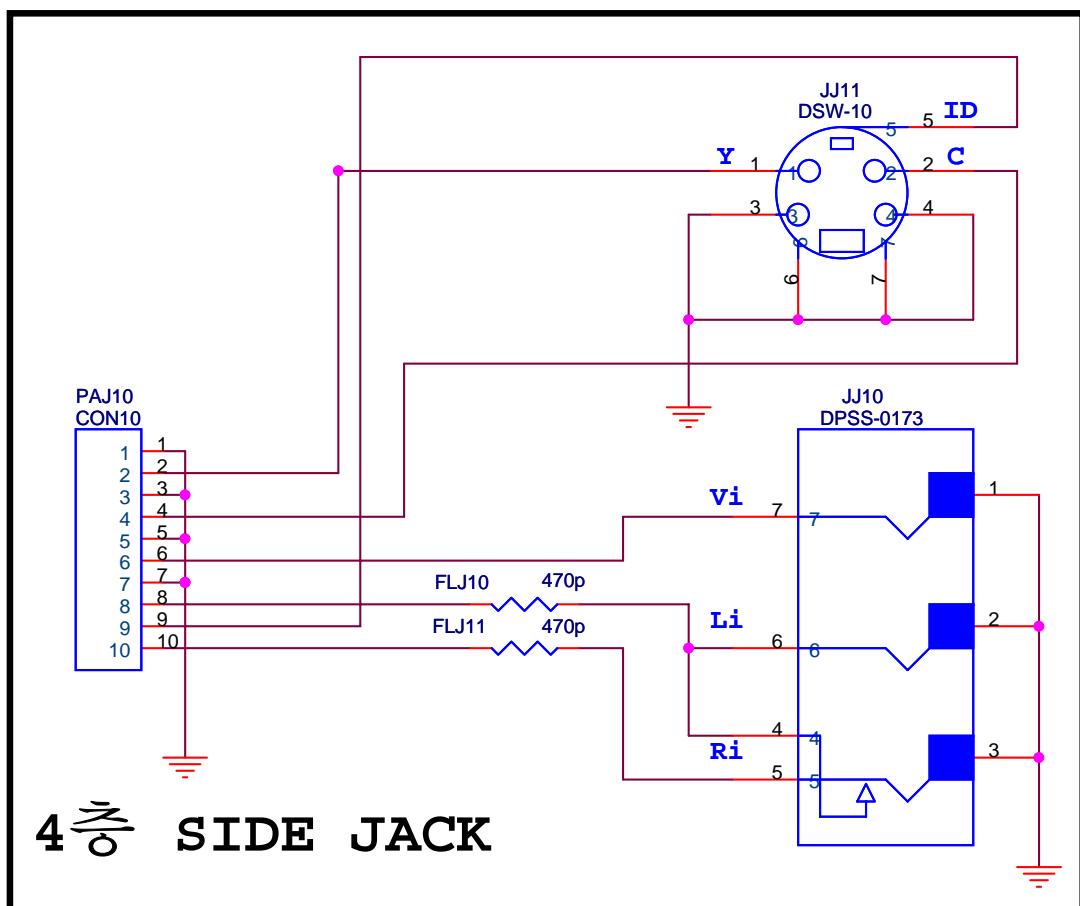
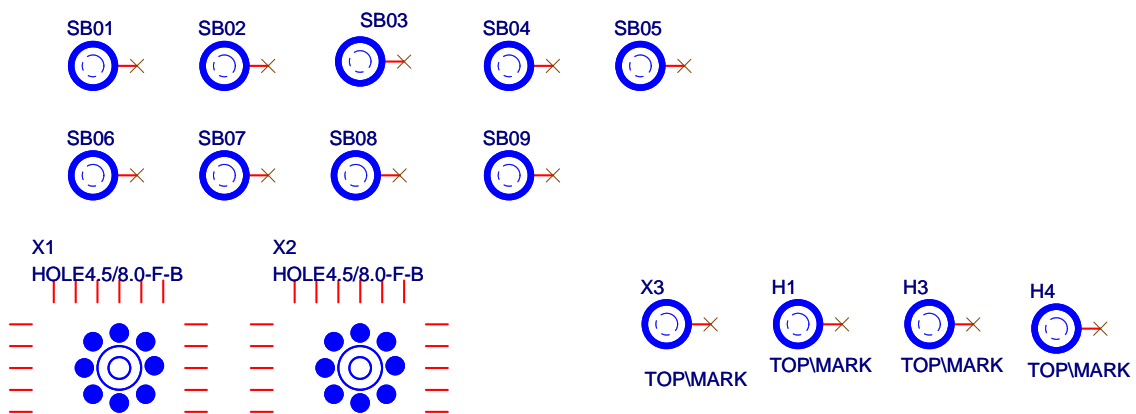


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SEOUL, KOREA.  
C.P.O. BOX 8003 SEOUL KOREA  
PRINTED DATE : May. 2007

# Signal Block Diagram : 유럽형 ANALOG B/D (DAWIT)

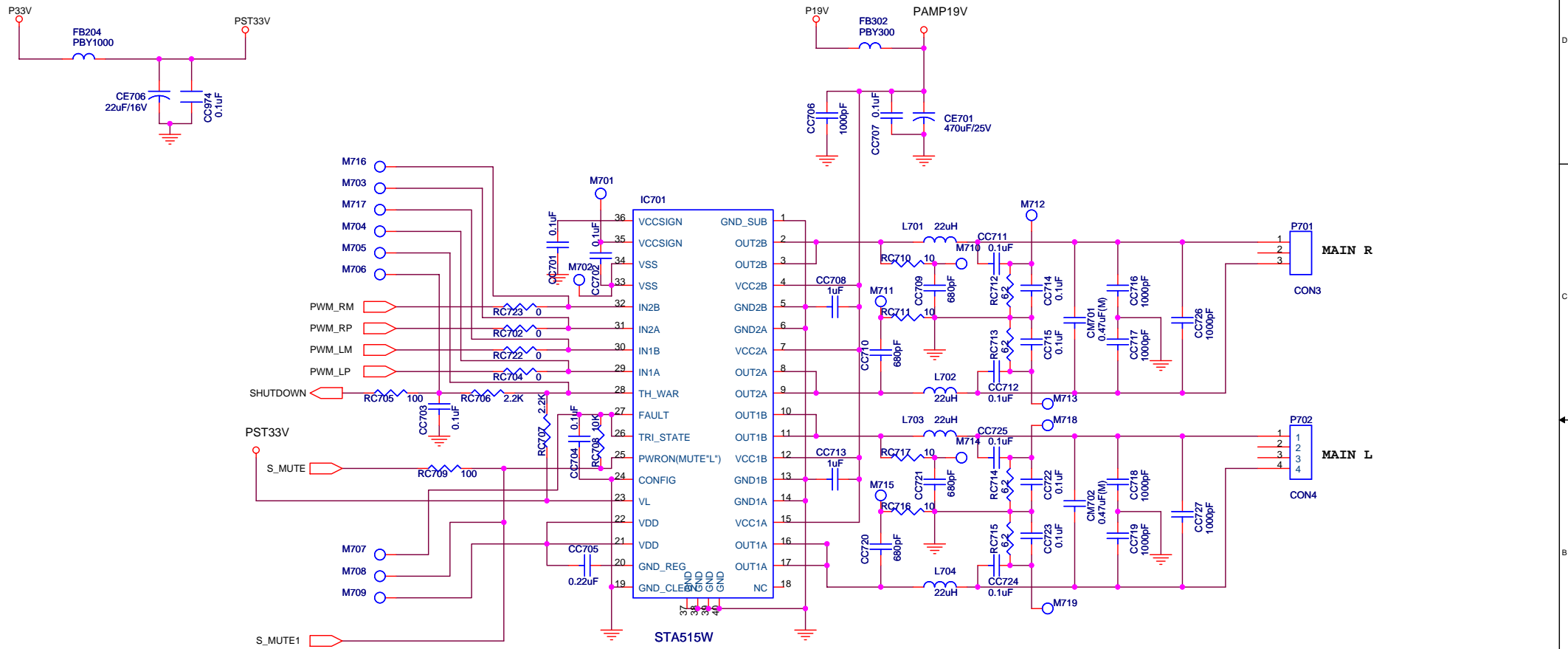




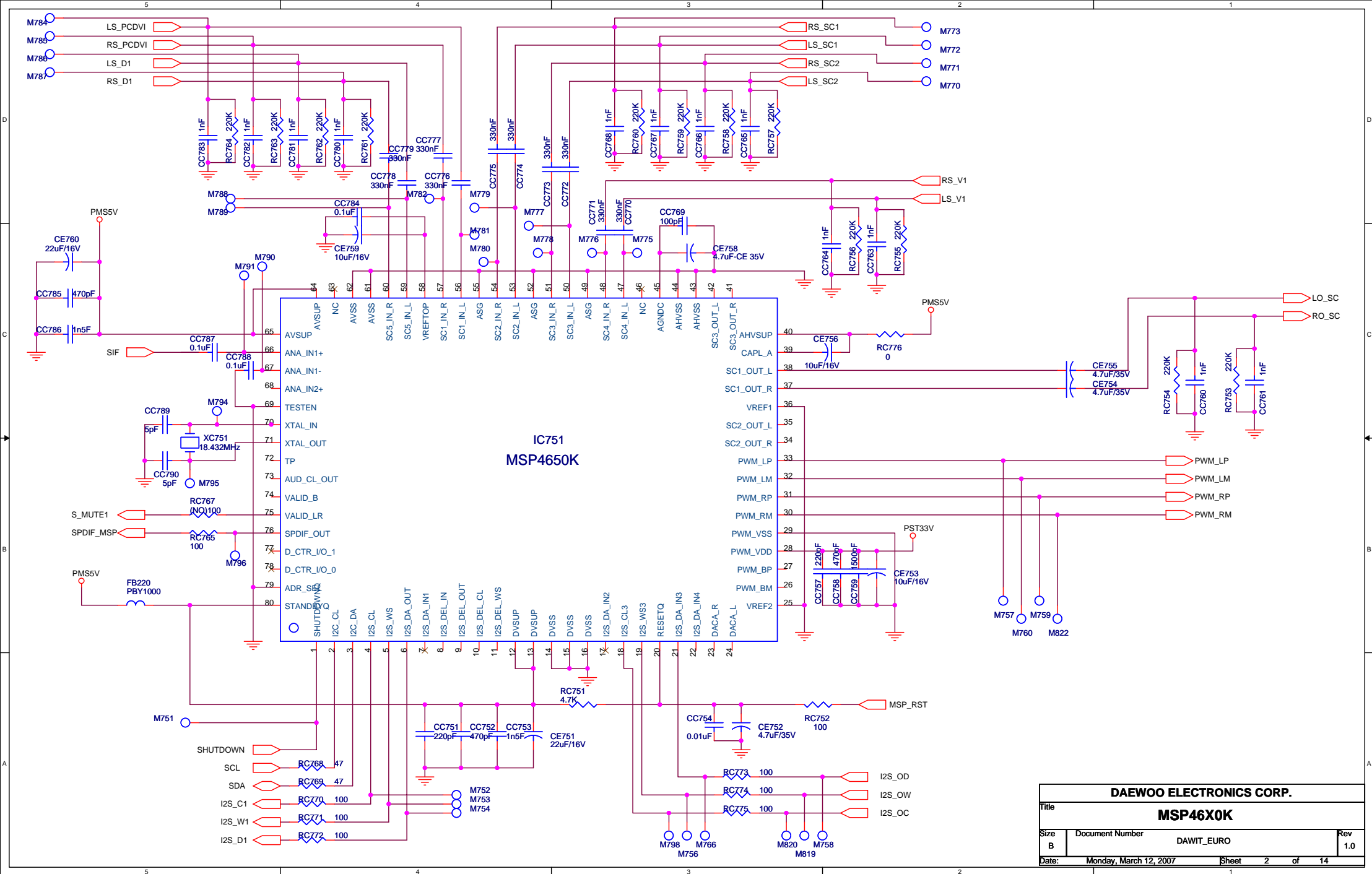


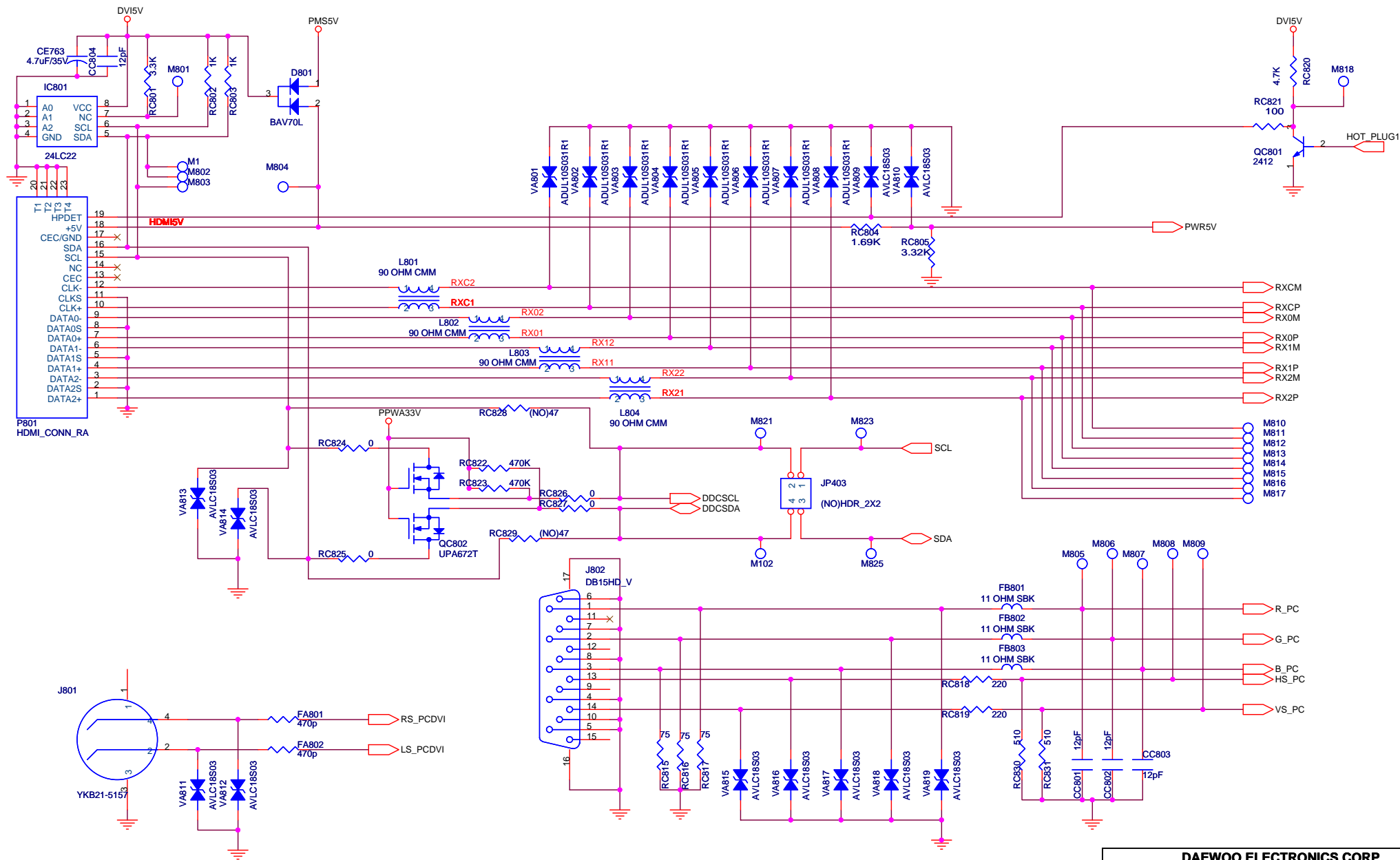
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Size A	Document Number	Rev
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Date:	Wednesday, March 21, 2007	Sheet 1 of 1



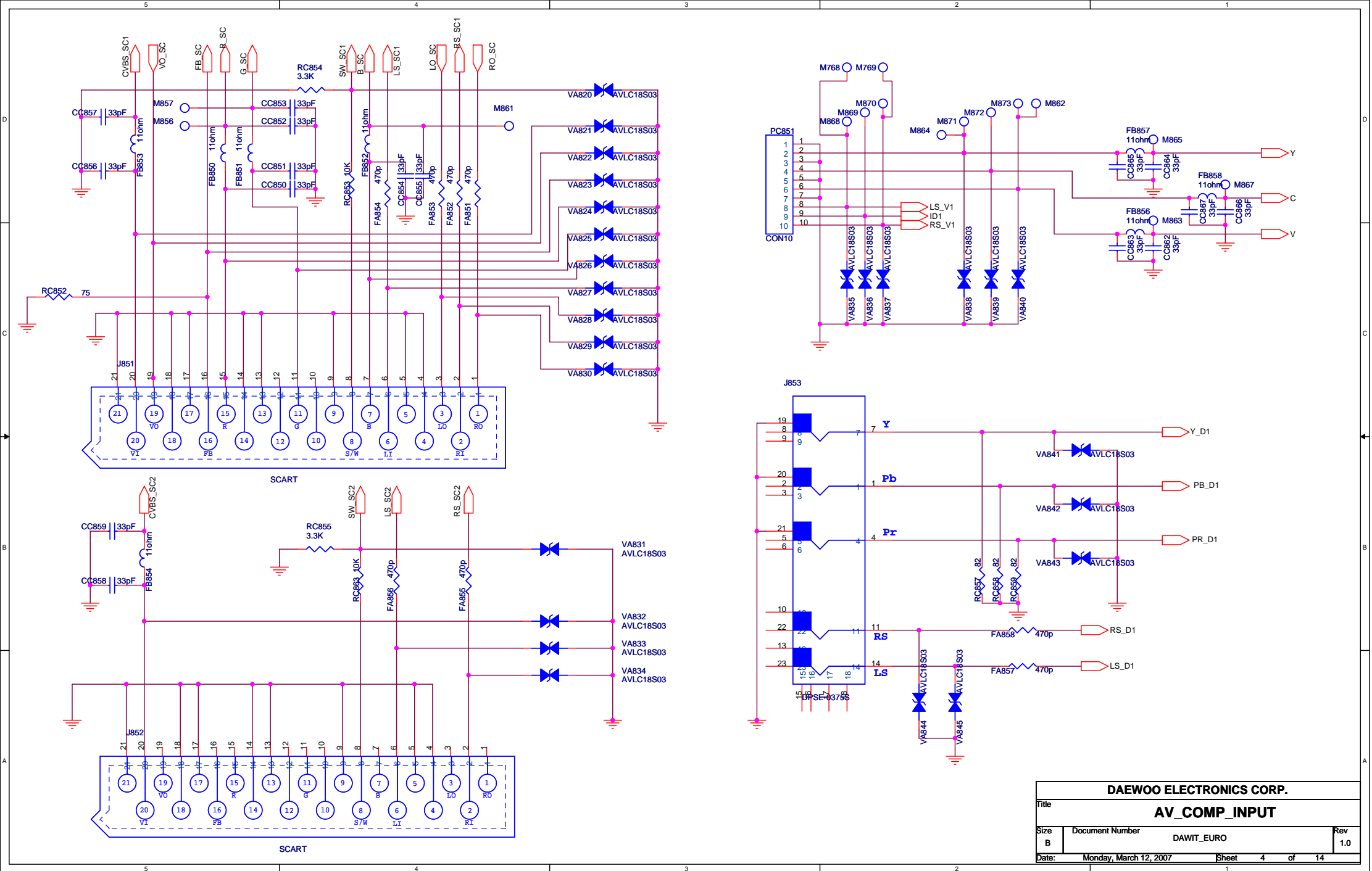


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Size	Document Number	DAWIT_EURO	Rev
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Date:	Monday, March 12, 2007	Sheet	1 of 14

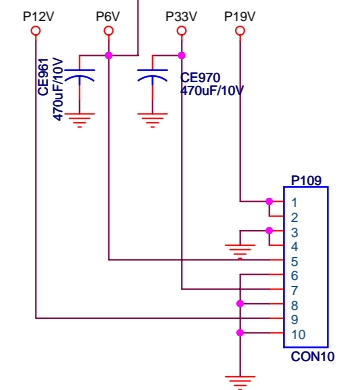
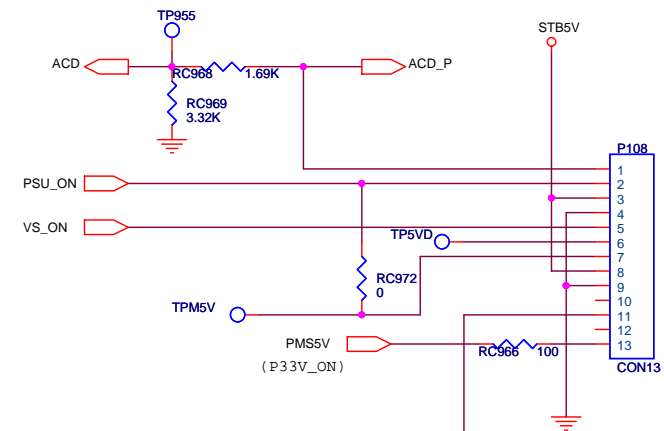
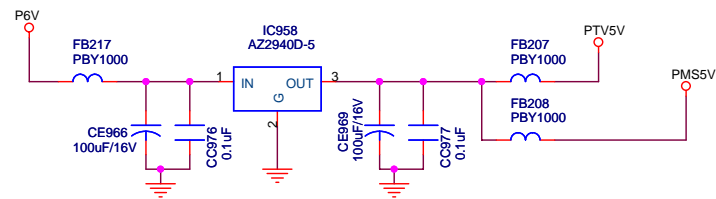
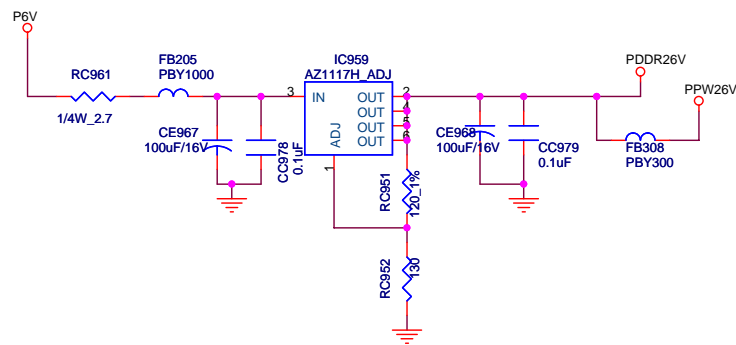
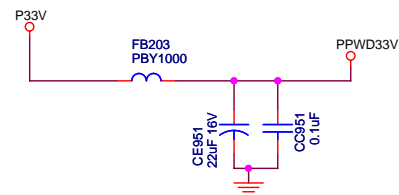
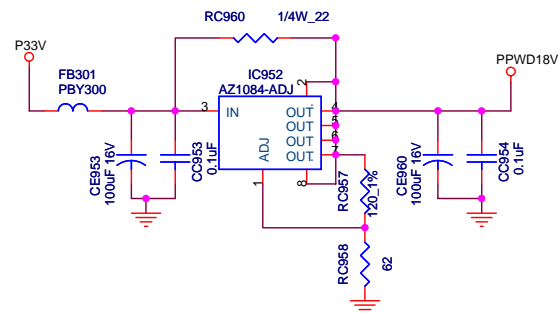
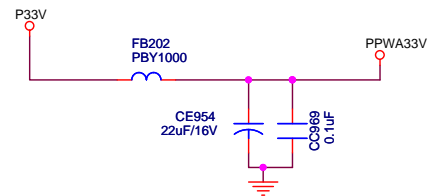
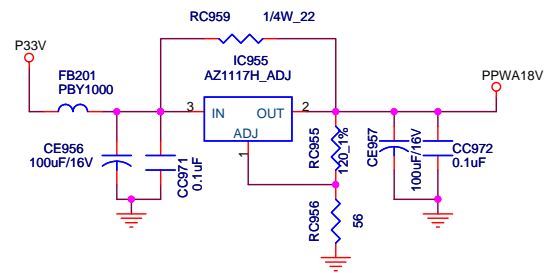




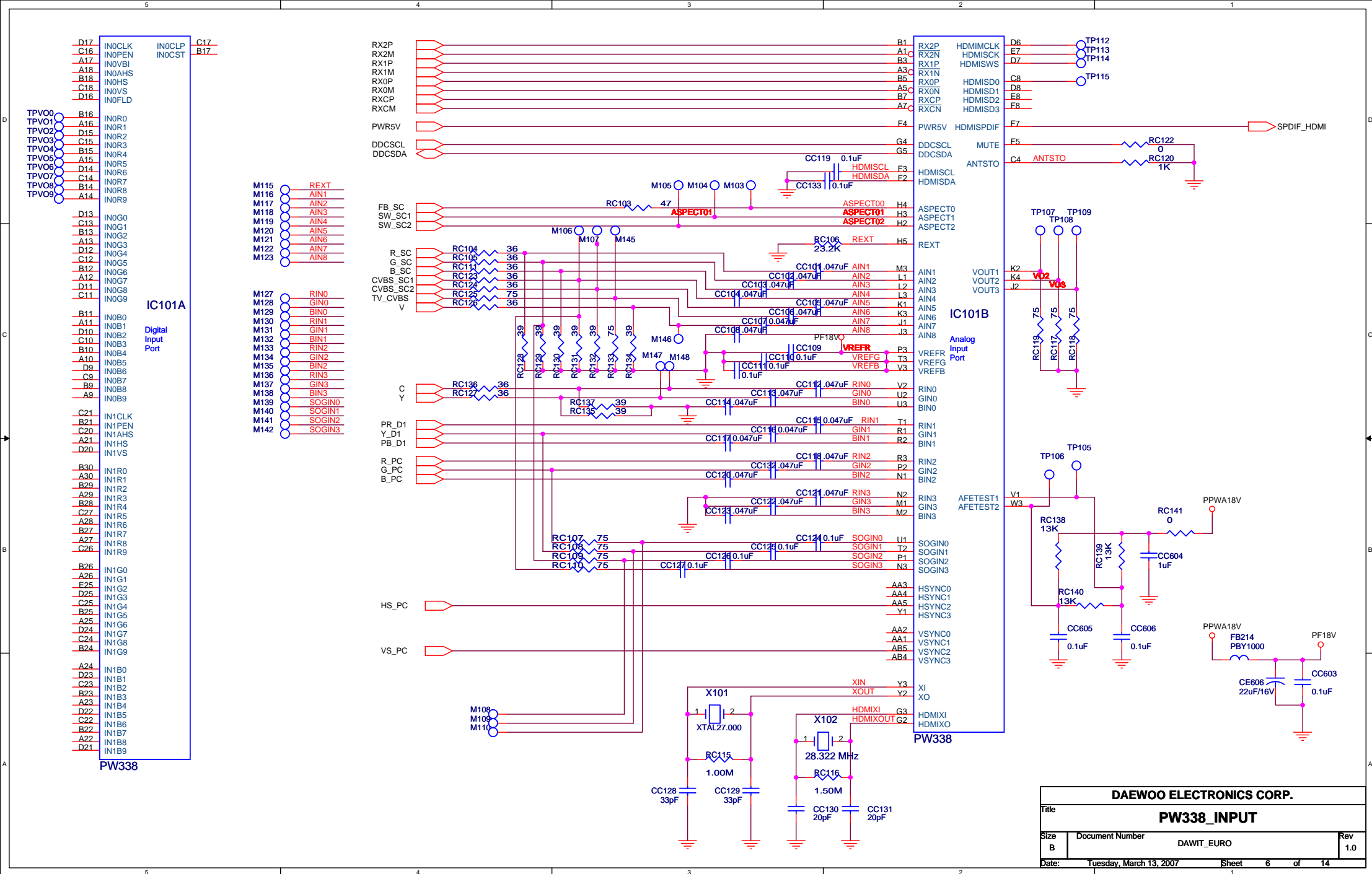
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Date:	Monday, March 12, 2007	Sheet	3 of 14



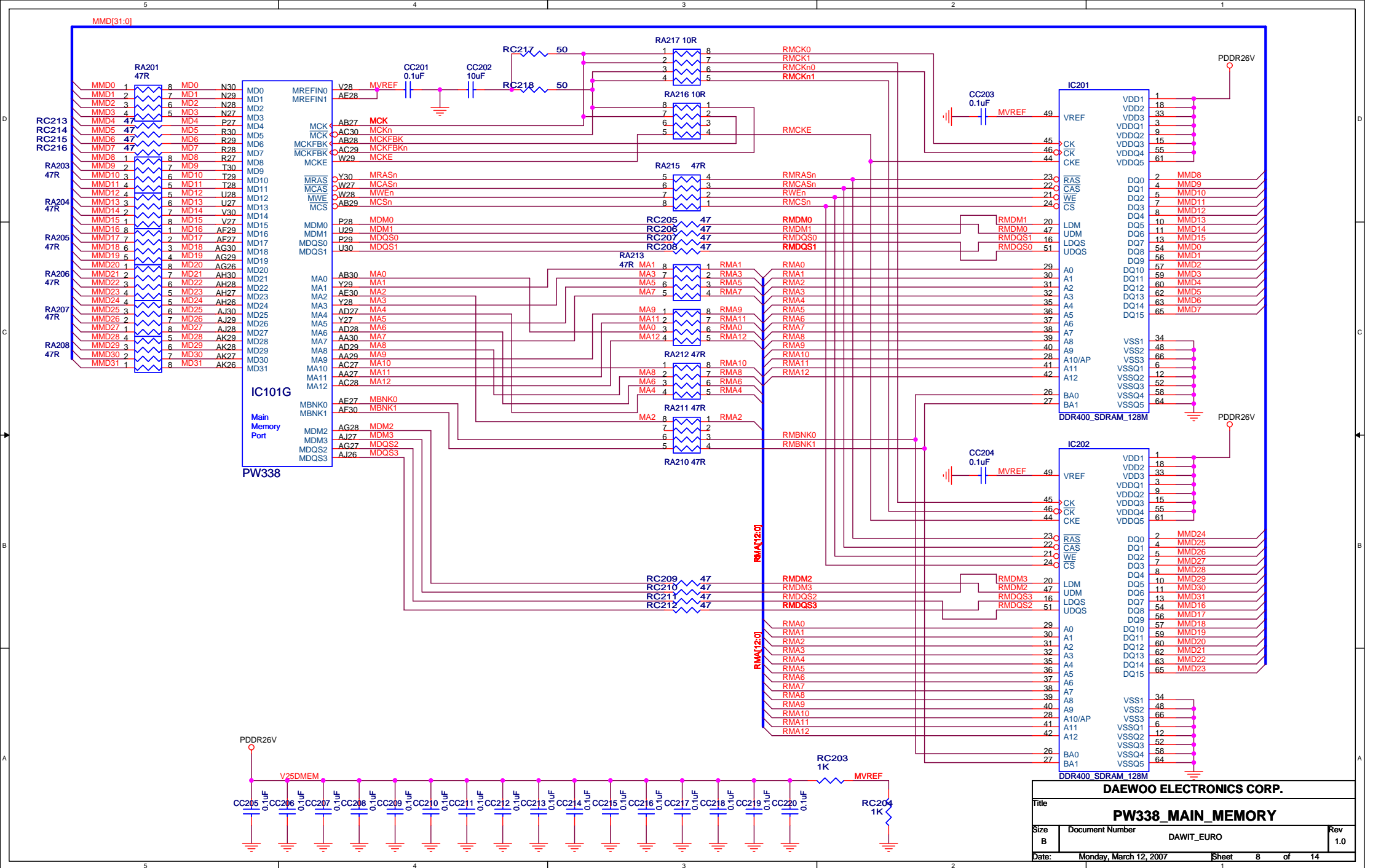
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Date:	Monday, March 12, 2007	Sheet 4 of 14	



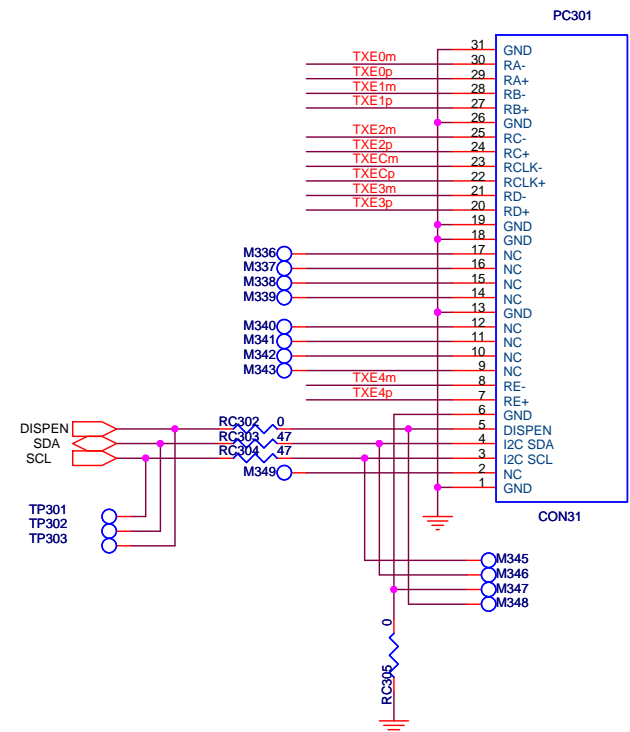
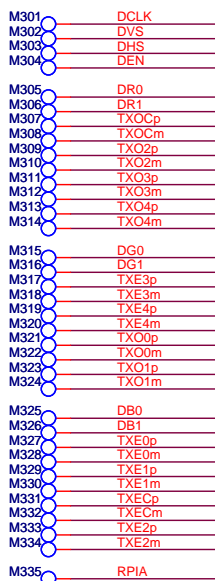
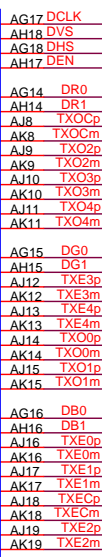
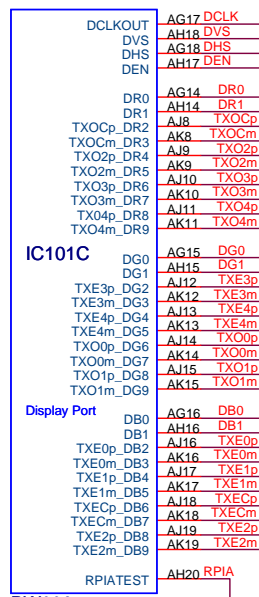
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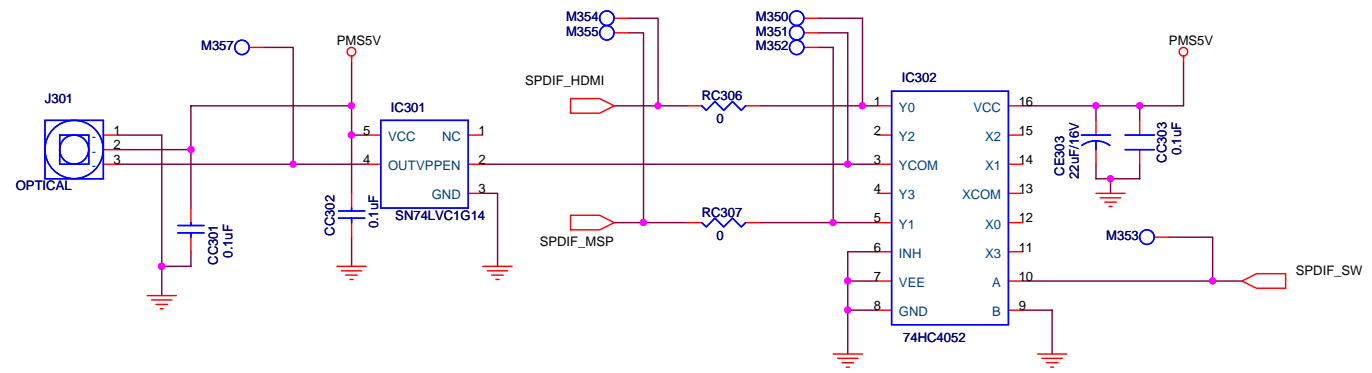




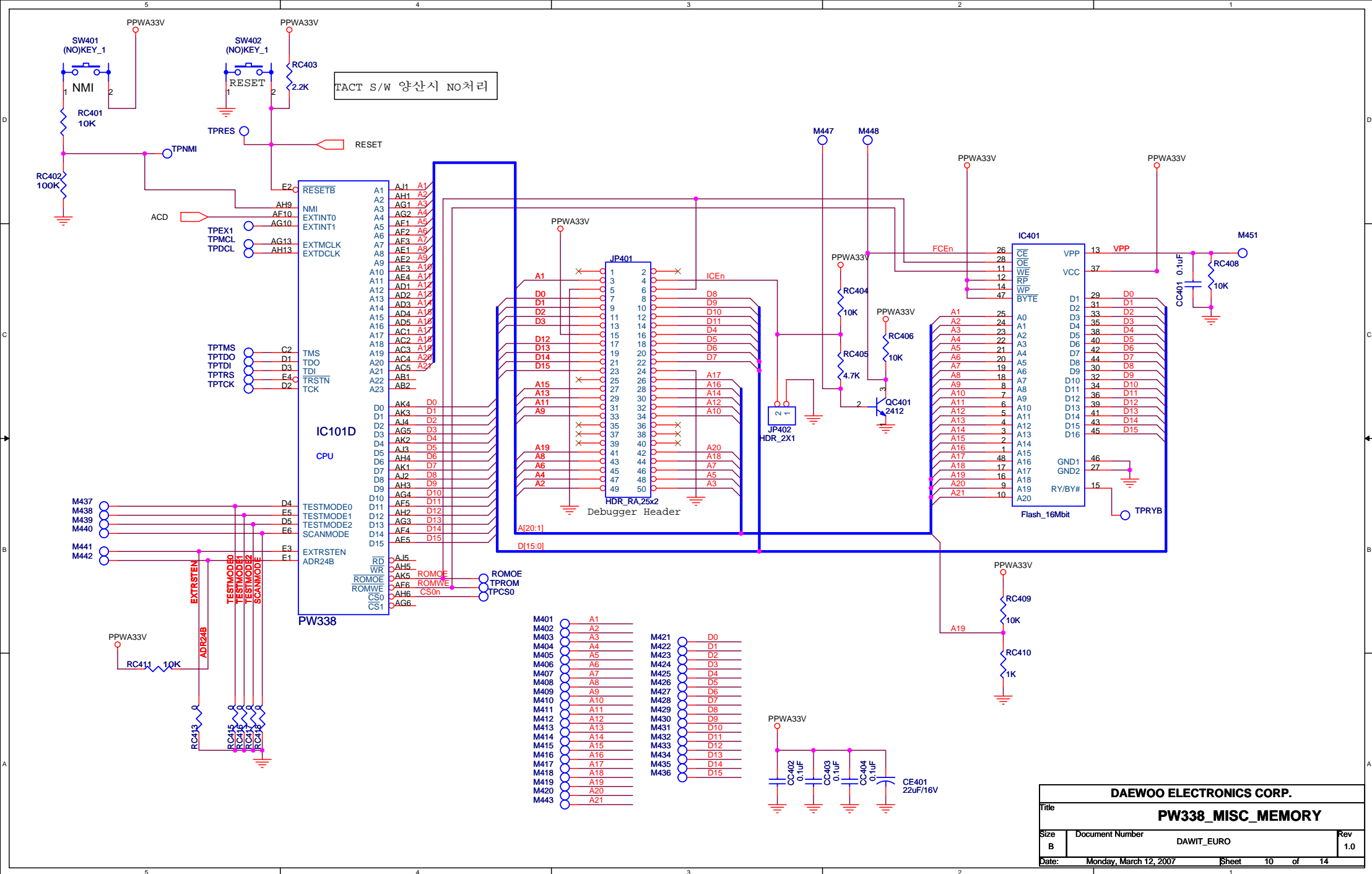


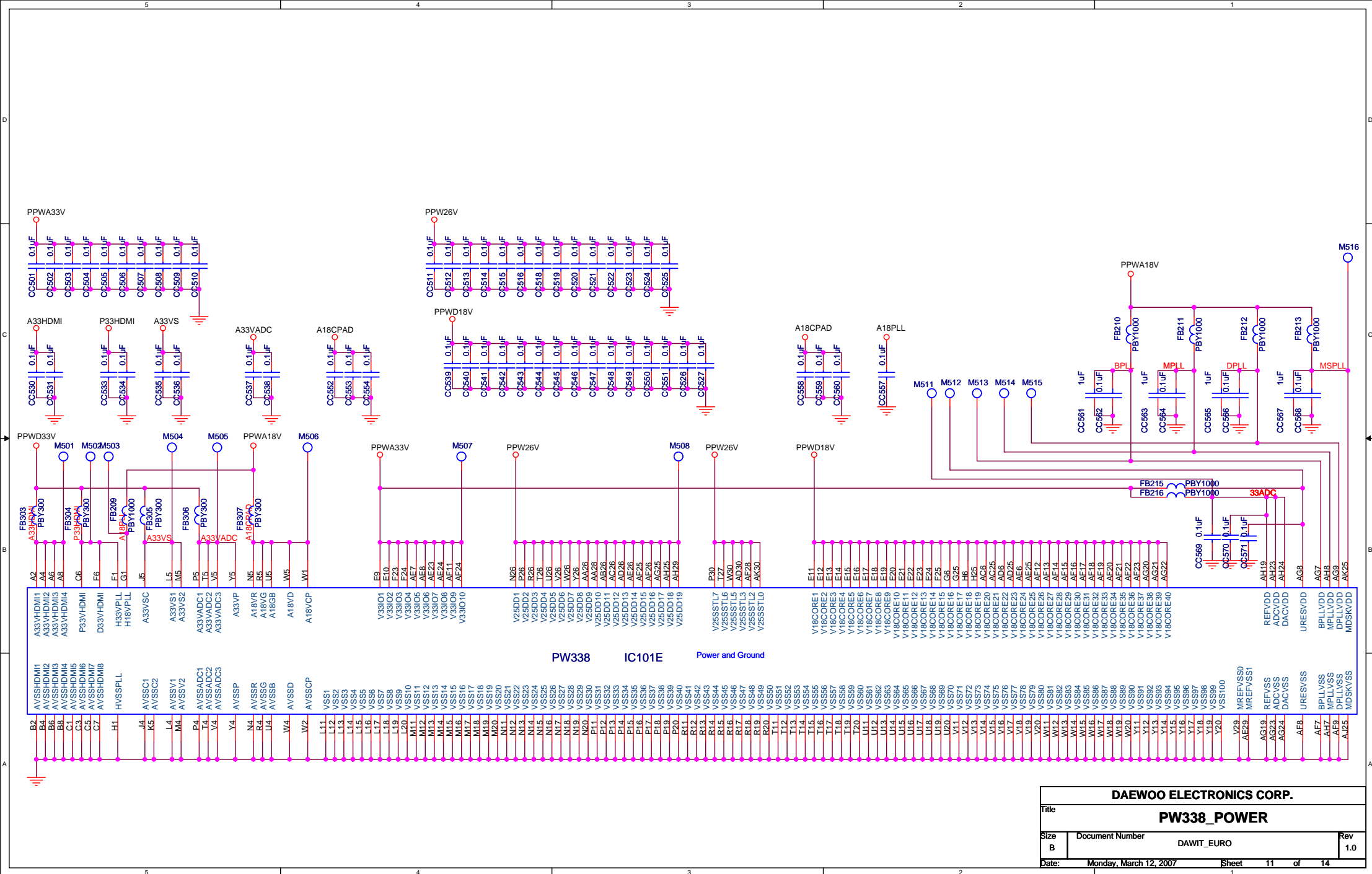


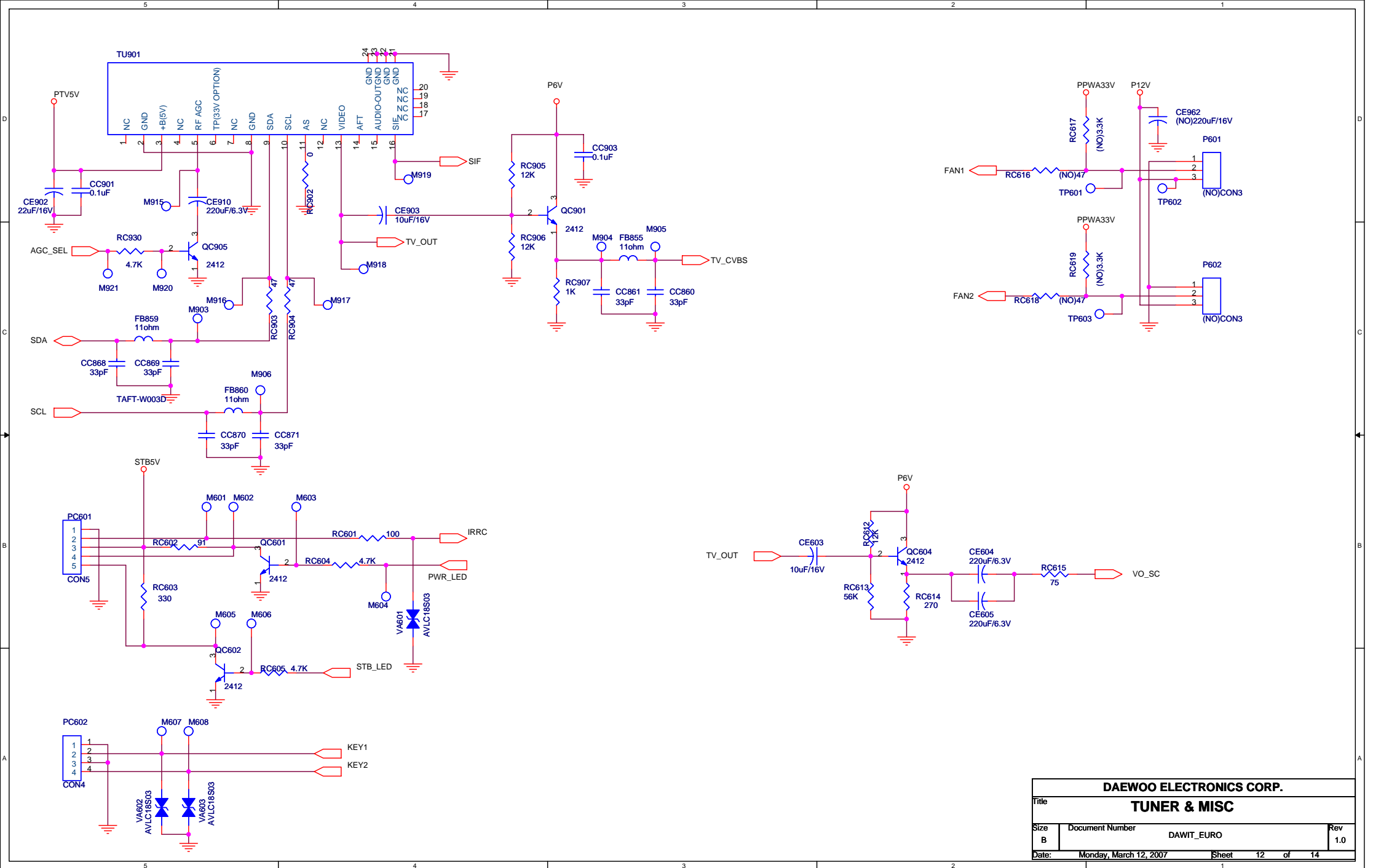
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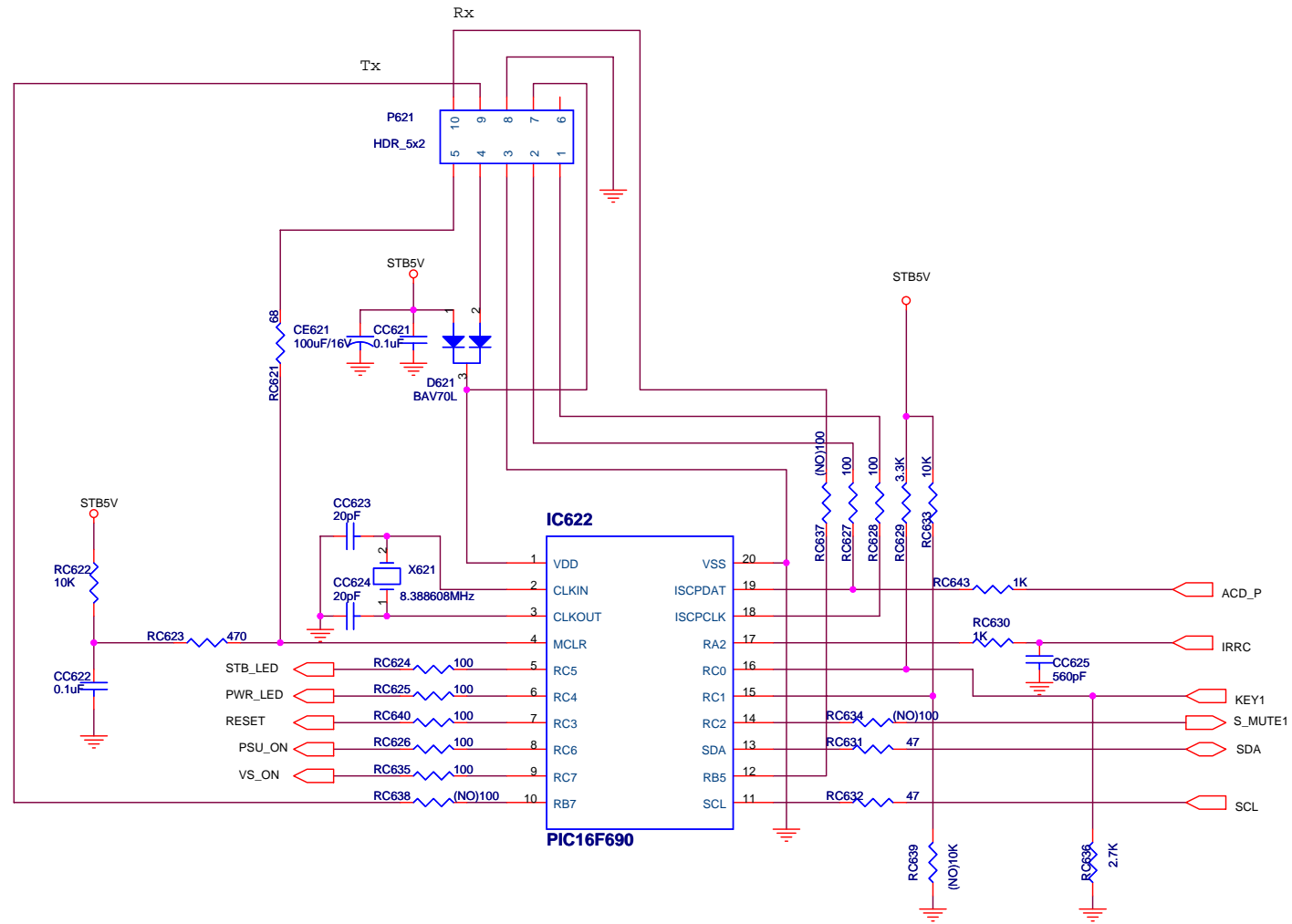
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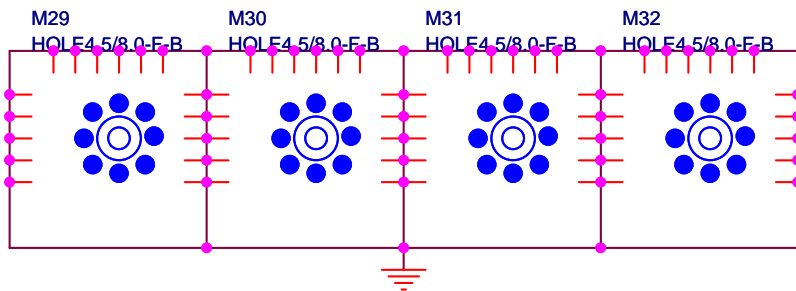
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