

Service Manual

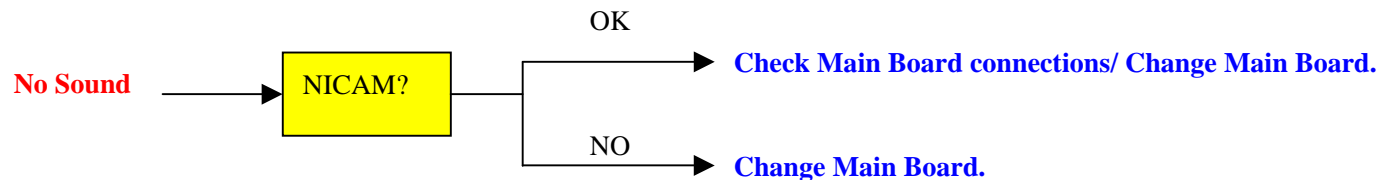
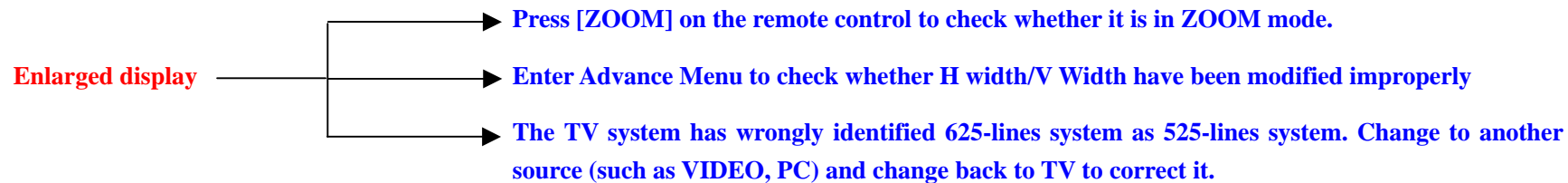
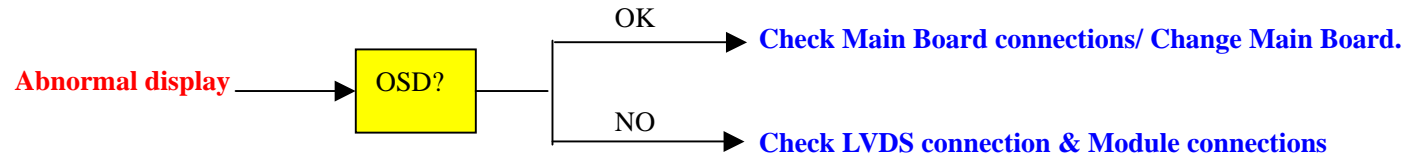
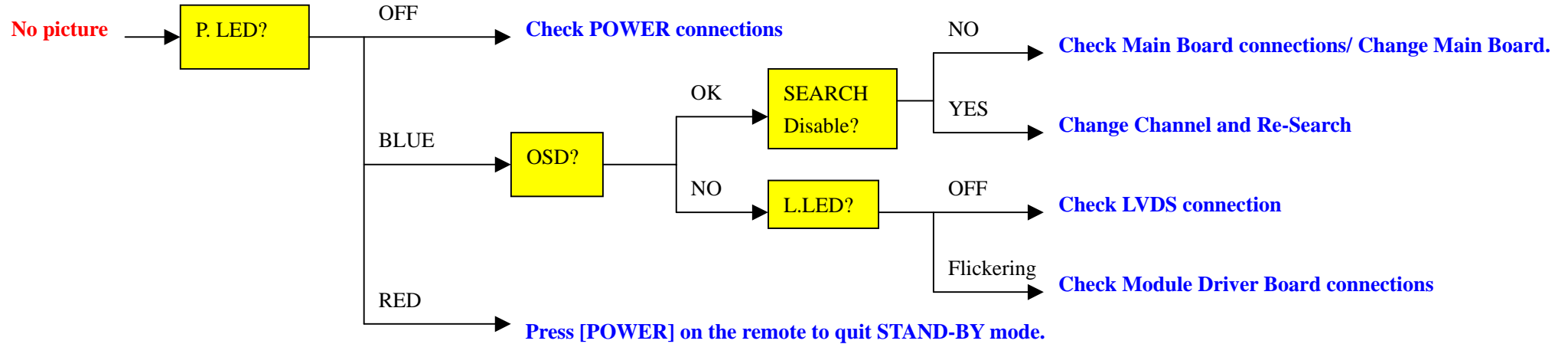
PDP4211EU

1. Specifications:

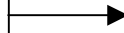
RF system	B/G, D/K, I,L/L'	
Colour system:	PAL, SECAM, NTSC (only for AV)	
Channel coverage	VHF Low channel (VL) = 48.25 to 170.00 MHz VHF high channel (VH) = 170.00 to 450.00 MHz UHF channel (U) = 450.00 to 855.25 MHz	
Power supply	AC 100~240V, 50/60Hz	
Power consumption	390W	
Audio output	7W+7W	
Speaker Impedance	8 Ω	
Connection interface:	RF input	1 CATV RF antenna input
	Video input	1 AV input 1 S-terminal (Y/C) input 1 Y Cb Cr / Y Pb Pr input SCART1 SCART2
	Graphic input	1 analog RGB D-SUB 15pin input

	Audio input	1 AV audio 1 PC audio
	OTHER	1 RS232C input interface for software updating
Dimension	1043mm × 640mm × 85mm	
Weight(net)	32.5kg	
Accessories	Remote control	1
	Batteries	2
	S cable	1
	CATV cable	1
	Power cord	1
	User's manual	1
	Desktop Stand	1
	Speakers	2
	Wall mounting bracket	(optional)

2. Troubleshooting



Black bar(s) on panel
Red(/green/blue) line(s) on panel
Red(/green/blue) stripe(s) on panel
Big noise from panel



Replace the *Plasma Display Module* with spare parts

NOTE:

P.LED^{*}?

Power indicator at the right-bottom corner of the front panel. Normal state: Blue; Remote command state: Blue flickering.

L.LED^{**}

LVDS indicator on the Logic Processing Board. Normal state: Yellow flickering

OSD?

Press [MENU] to display Main Menu on the screen

SEARCH
Disable?

Whether the AUTO-SEARCH and SEARCH selection in the CHANNEL menu have been disabled.

NICAM?

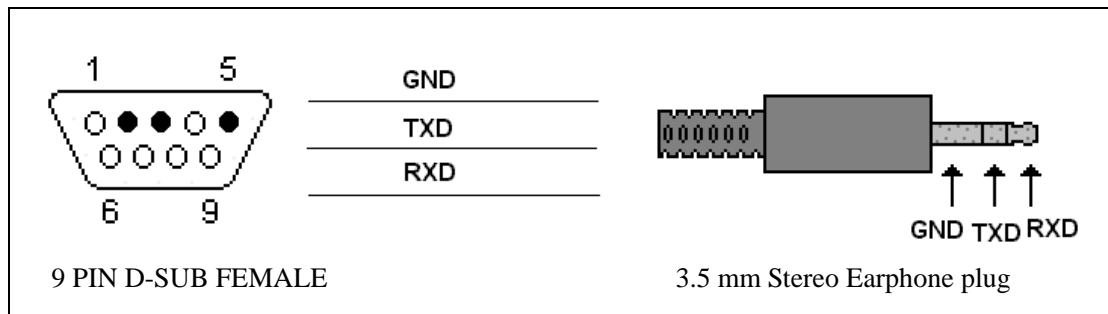
Change to a channel with NICAM or A2 and see whether the stereo MODE is identified correctly.

3. Main Spare Parts

	Name	Type	Part No.
1	Speaker set	8 Ω	104000
2	Desktop stand set	RSAG8.038.091	1008498
3	Signal Board	RSAG2.908.284	102177
4	RF connector	KP0178	1004482
5	Front Cabinet	RSAG8.074.064	1009710
6	Stand panel	RSAG8.071.006	1006524
7	Remote Control	HYDFSR-0112TY	1018624
8	Keyboard	PK-TV-6-2	1008798
9	Power Cord	HX3V-NR-3U1F	1016770
10	Carton	E/RSR8.865.1299	1017645

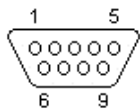
4. Software Updating

You can update our PDP's software through a special RS232 cable (shown as below).



This RS232 cable includes a 9 PIN D-SUB FEMALE, a 3.5mm Stereo Earphone plug and 3 wires. Built the cable as shown.

Serial (PC 9)



(At the Computer)

9 PIN D-SUB MALE at the Computer.

Pin	Name	Dir	Description
1	CD	←	Carrier Detect
2	RXD	←	Receive Data
3	TXD	→	Transmit Data
4	DTR	→	Data Terminal Ready
5	GND	—	System Ground
6	DSR	←	Data Set Ready
7	RTS	→	Request to Send
8	CTS	←	Clear to Send
9	RI	←	Ring Indicator

UPDATING STEPS:

1. Prepare a PC, and unzip update.zip;
2. Connect the cable:
connect the *9 PIN D-SUB FEMALE* end to a computer, and connect the *stereo earphone plug* end to RS232 terminal on the back panel of the PDP;
3. Run the application *FlashUpgrader.exe*, then choose *bootcode.inf* in the dir *bin*, appoint a correct COM port (e.g. COM1 or COM2) and click *Flash*;
4. Turn on the PDP and the updating process begins. **(Warning: Must not turn off the PDP in the updating process!)**
5. Run the application *FlashUpgrader.exe*, then choose *pwSDK.inf* in the dir *bin*, and click *Flash*;
6. Restart (power off and power on) the PDP and the updating process begins. **(Warning: Must not turn off the PDP in the updating process!)**
7. When the updating finishes, the PDP will restart and work with a new version of firmware.

Turn off the TV first, and then disconnect the RS232 cable (to avoid damage to the RS232 of the PC).

5 Display Cell Defect Specification

In some cases, a panel may have defective cells that cannot be controlled.

These defective cells can be categorized into three types;

- (1) Non-lighting cell defect : defect in which the cell is always off
- (2) Non-extinguishing cell defect : defect in which the cell is always on
- (3) Flickering cell defect : defect in which the cell is flickering

The display cell defect specifications define the allowed limits for display cell defects and are used as the criteria in determining weather a panel is shipped.

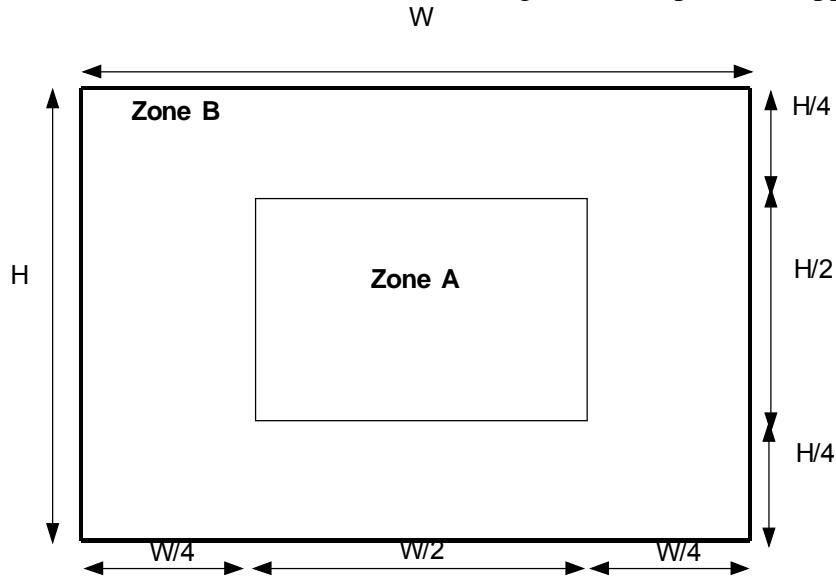
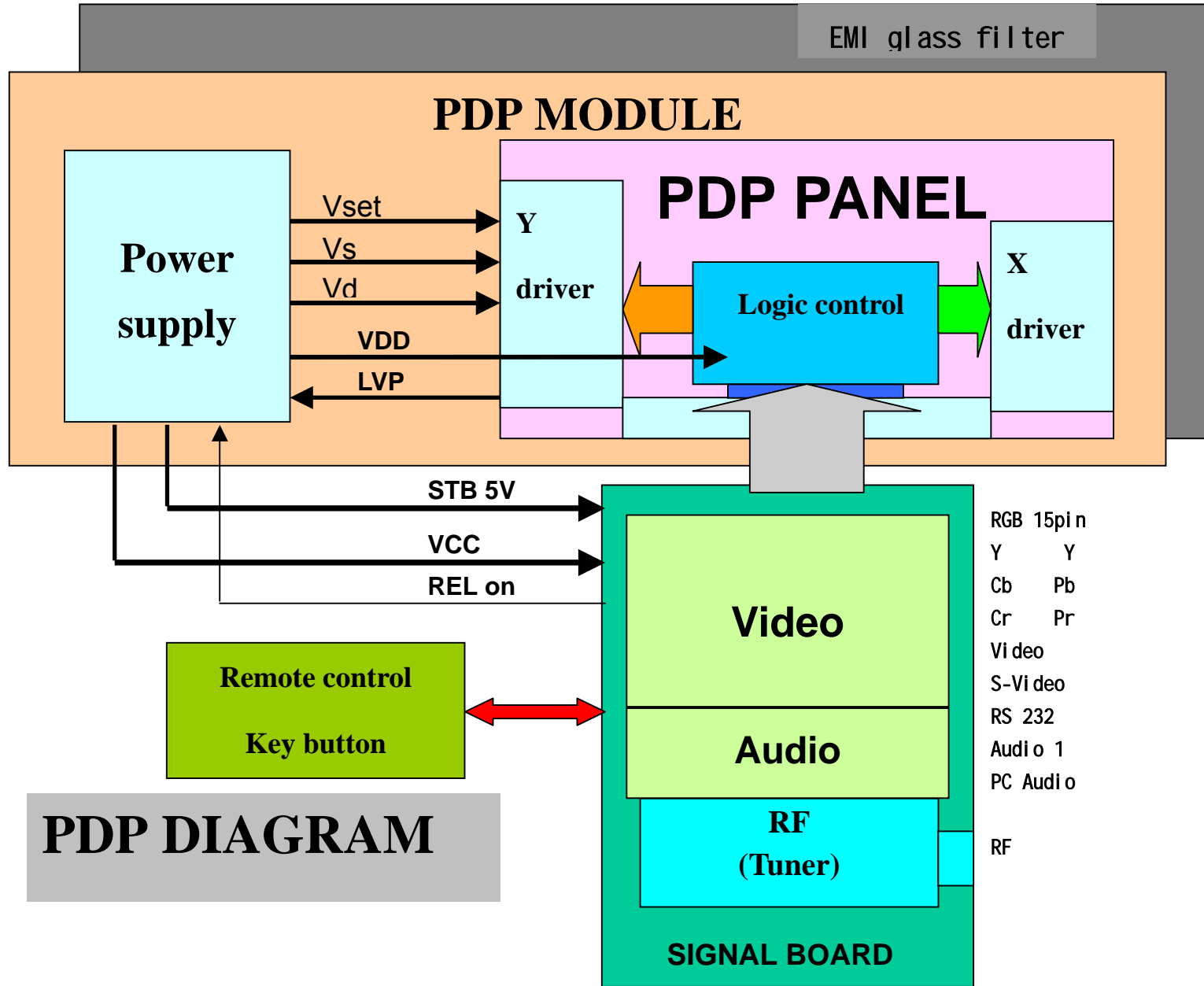


Figure-5. Measuring Area

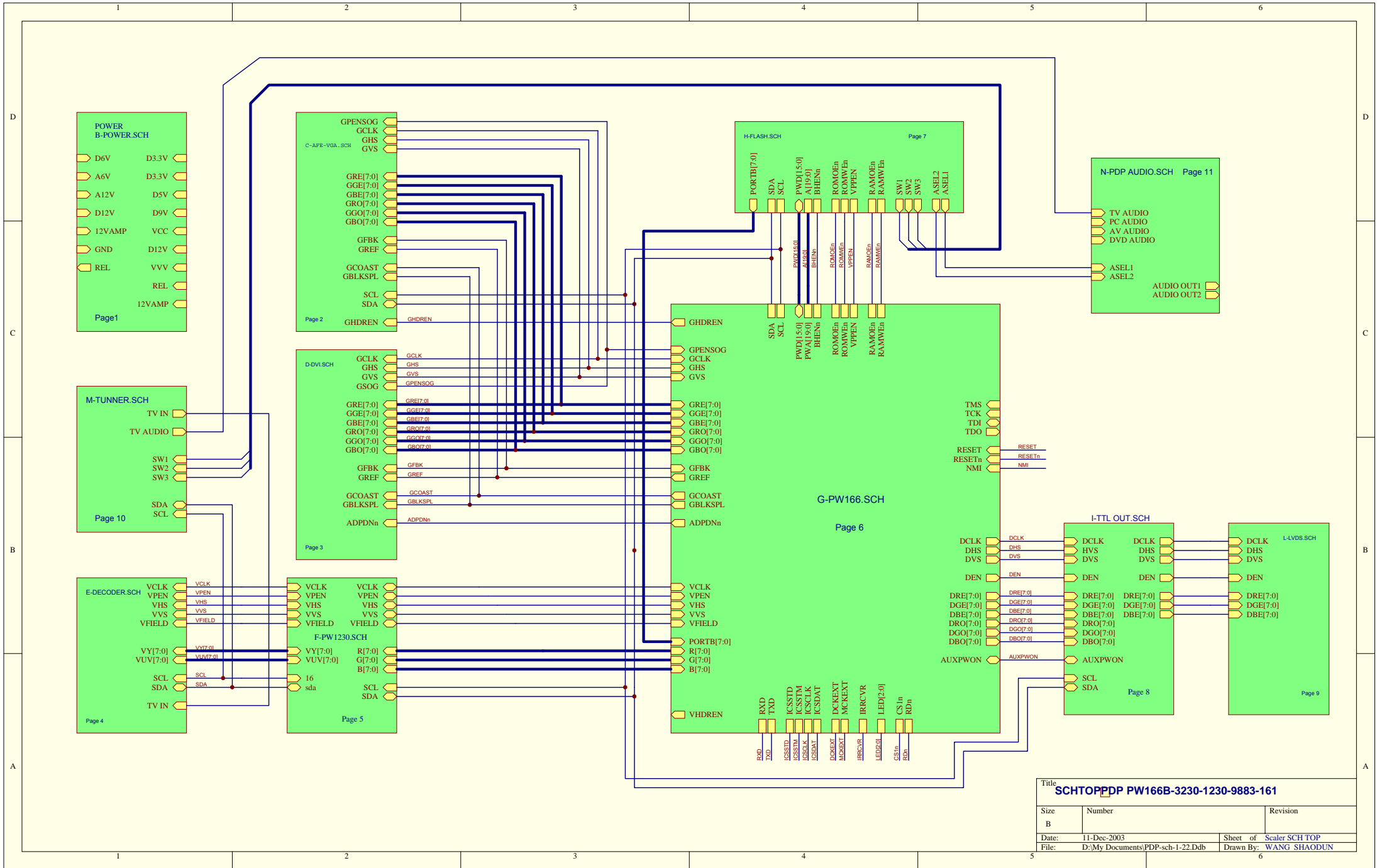
Specification

	Specification	
	Number of cell defects	Distance between cell defects
cell defect	Zone A: 2 and less Zone B: 8 and less	- Distance between the cells is over 15mm
Non-extinguishing cell defect	Zone A: 1 and less Zone B: 2 and less	
cell defect	Zone B: 2 and less	
	Total number of cell defects in Zone A and B is less than 8	



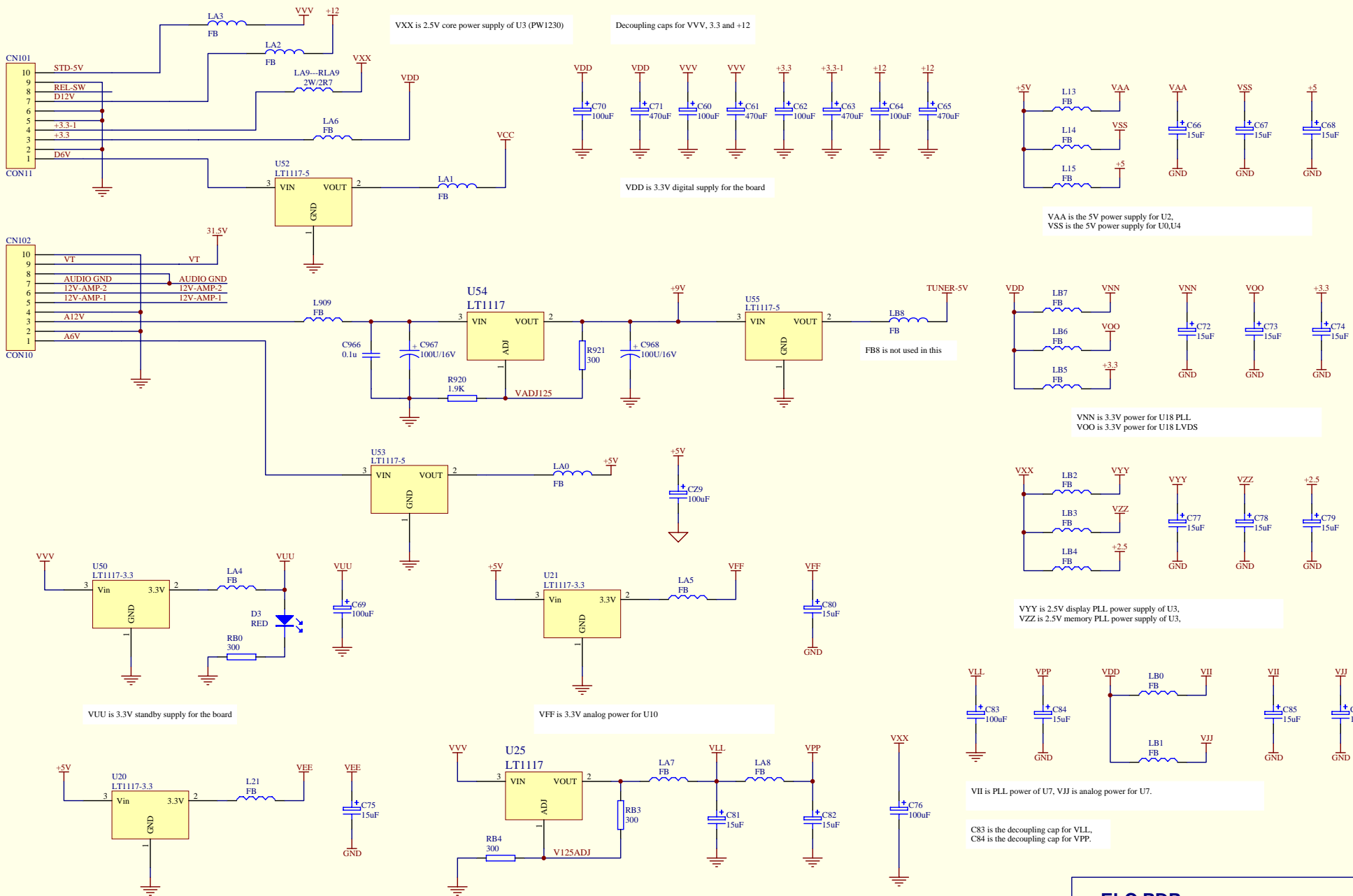
Quick reference IC data

POS No.	Type	Function	Remarks
U0	PI5V330	Quad 2-Channel MUX/DEMUX	Demux: YUV input ->YCbCr & YPbPr
U1	VPC3230D-C5	multi-standard Decoder	4H comb filter
U3	PW1230	De-interlacer	
U4	PI5V330	Quad 2-Channel MUX/DEMUX	Mux: YPbPr & RGB(VGA) -> MST9883B
U5	MST9883B	Triple Video A/D Converter	Interface for YPbPr & RGB(VGA)
U6	SN74LVC126AD	Quad buffer/line driver	
U9	ST232CD	RS-232 DRIVERS	
U10	PW166B	Scaler	On-Screen Display On-Chip Microprocessor
U11	39VF800A	Flash Memory	8 Megabit
U12	PI5V330	Quad 2-Channel MUX/DEMUX	Mux: & RGB(VGA) -> R/G/B/FB
U13	SN74LV245ADBR	Octal bus transceiver	Keyboard interface
U14 U15	SN74LV273ADBR	Octal D-type flip-flop	I/O expansion
U17	DS1708SESA	MicroMonitor for microprocessor	
U20 U22 U27		3.3V regulator	See schematic for detailed power supply
U28 U29 U31		5V regulator	
U23 U33		2.5V regulator	
U30		8V regulator	
U24	DS90C385A	LVDS Transmitter	24-Bit
U21	AT24C16	16K I2C™ Serial EEPROM	System's and User's data
UT1	AT24C16	16K I2C™ Serial EEPROM	To store TELETEXT data
U25	IS42S16400-7T	64-MBIT SDRAM	To store video fields and motion data.
U701	MSP3410G	Multi-standard Sound Processor	NICAM and FM Stereo (A2)
U804	TDA7266	Audio amplifier	2*7W (8 ohm)
UT2	SAA5264	Teletext decoder	10 pages

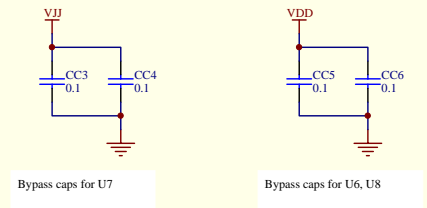
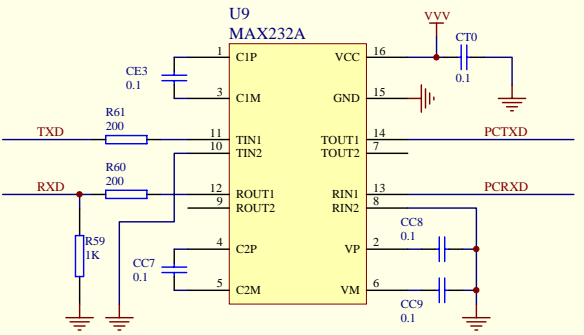
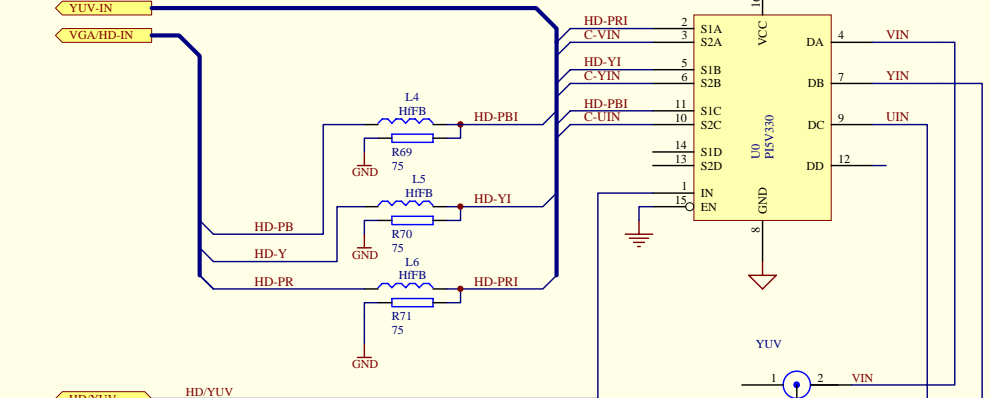
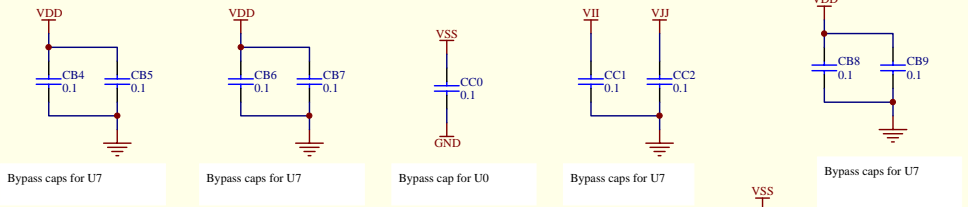
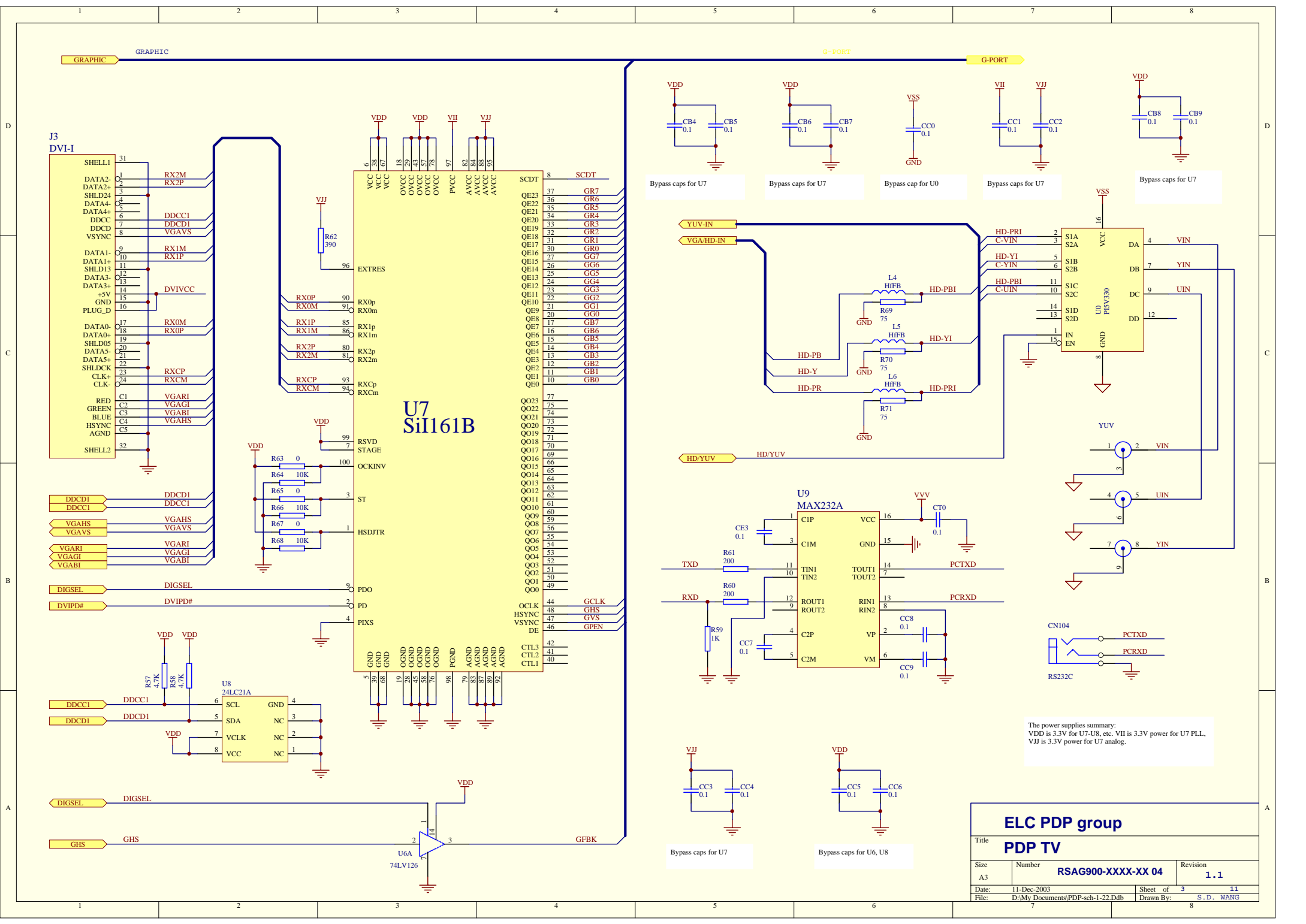


Title: **SCHTOPPDP PW166B-3230-1230-9883-161**

Size	Number	Revision
B		
Date:	11-Dec-2003	Sheet of Scaler SCH TOP
File:	D:\My Documents\PDP-sch-1-22.Ddb	Drawn By: WANG SHAODUN

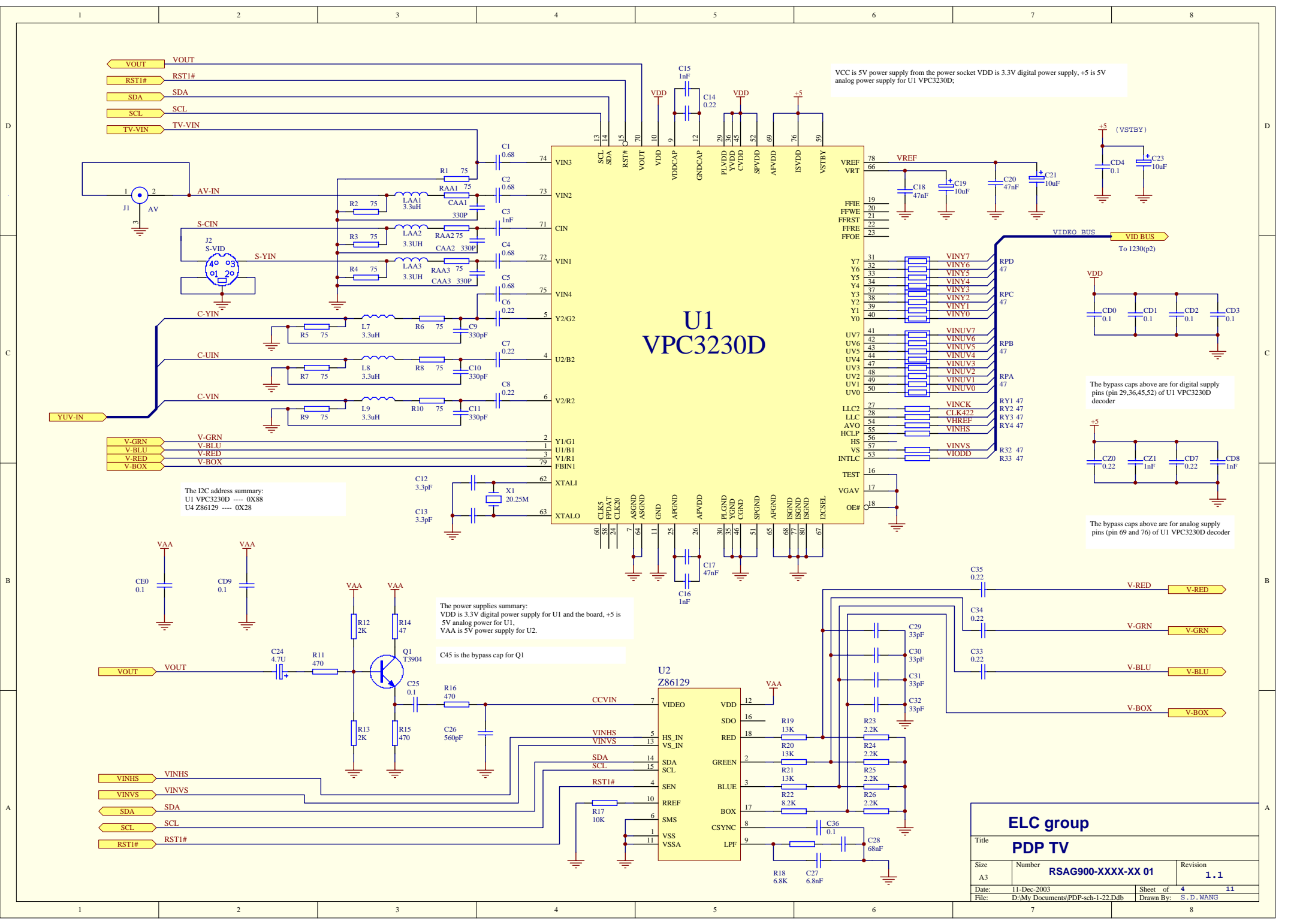


ELC PDP group		
PDP TV daigram		
Title		
Size A3	Number RSAG900-XXXX-XX 08	Revision 1.1
Date: 11-Dec-2003	Sheet of 1	11
File: D:\My Documents\PDP-sch-1-22.Ddb	Drawn By:	



The power supplies summary:
 VDD is 3.3V for U7-U8, etc. VJJ is 3.3V power for U7 PLL.
 VJJ is 3.3V power for U7 analog.

ELC PDP group		
PDP TV		
Title		
Size A3	Number RSAG900-XXXX-XX 04	Revision 1.1
Date: 11-Dec-2003	Sheet of 3	11
File: D:\My Documents\PDP-sch-1-22.Ddb	Drawn By: S.D. WANG	



VCC is 5V power supply from the power socket VDD is 3.3V digital power supply, +5 is 5V analog power supply for U1 VPC3230D.

The I2C address summary:
 U1 VPC3230D ---- 0X88
 U4 Z86129 ---- 0X28

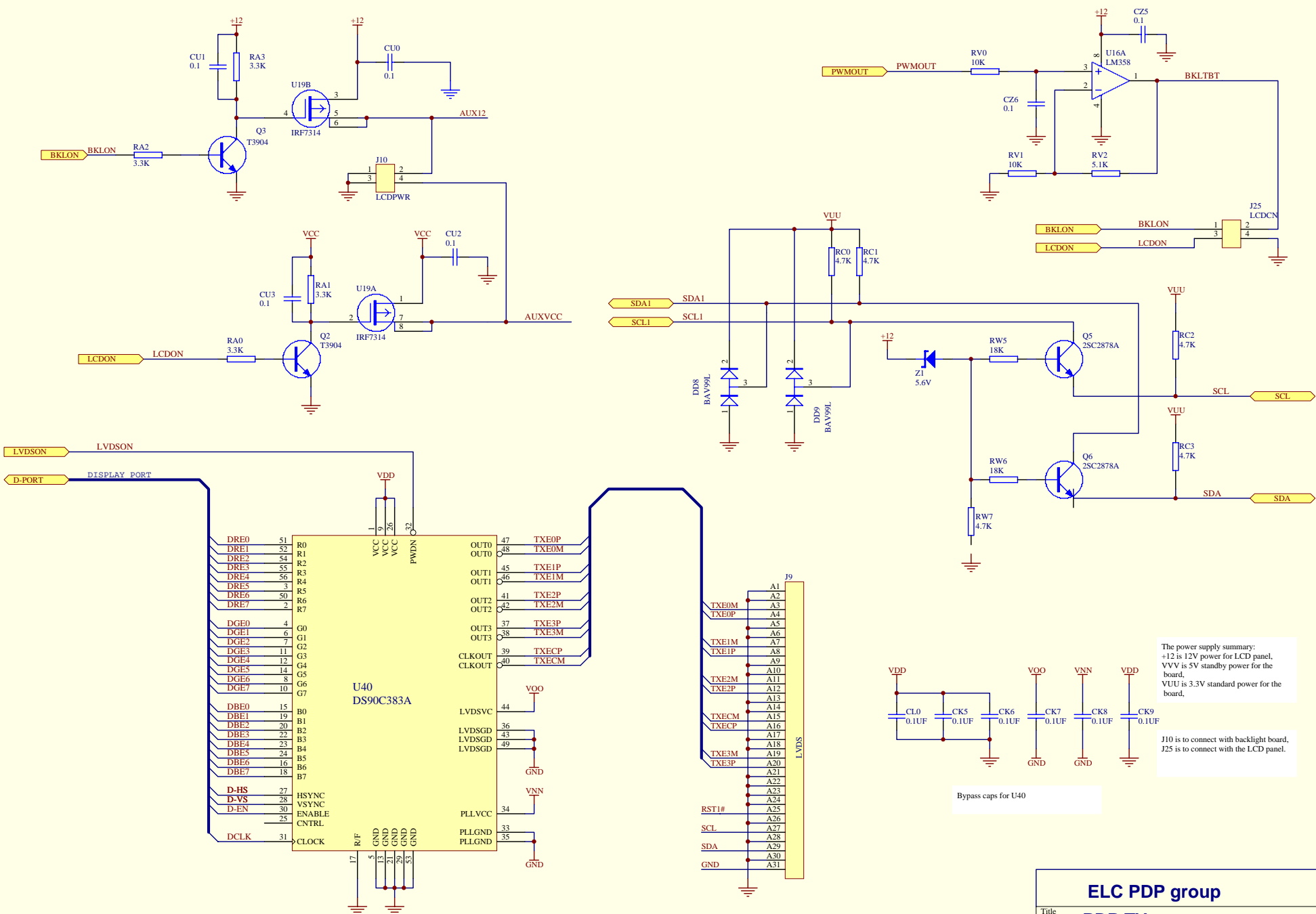
The power supplies summary:
 VDD is 3.3V digital power supply for U1 and the board, +5 is 5V analog power for U1, VAA is 5V power supply for U2.
 C45 is the bypass cap for Q1

The bypass caps above are for digital supply pins (pin 29,36,45,52) of U1 VPC3230D decoder

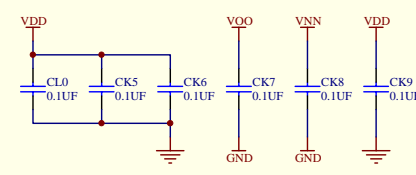
The bypass caps above are for analog supply pins (pin 69 and 76) of U1 VPC3230D decoder

ELC group PDP TV

Title		
Size A3	Number RSAG900-XXXX-XX 01	Revision 1.1
Date: 11-Dec-2003	Sheet of 4	11
File: D:\My Documents\PDP-sch-1-22.Ddb	Drawn By: S. D. WANG	

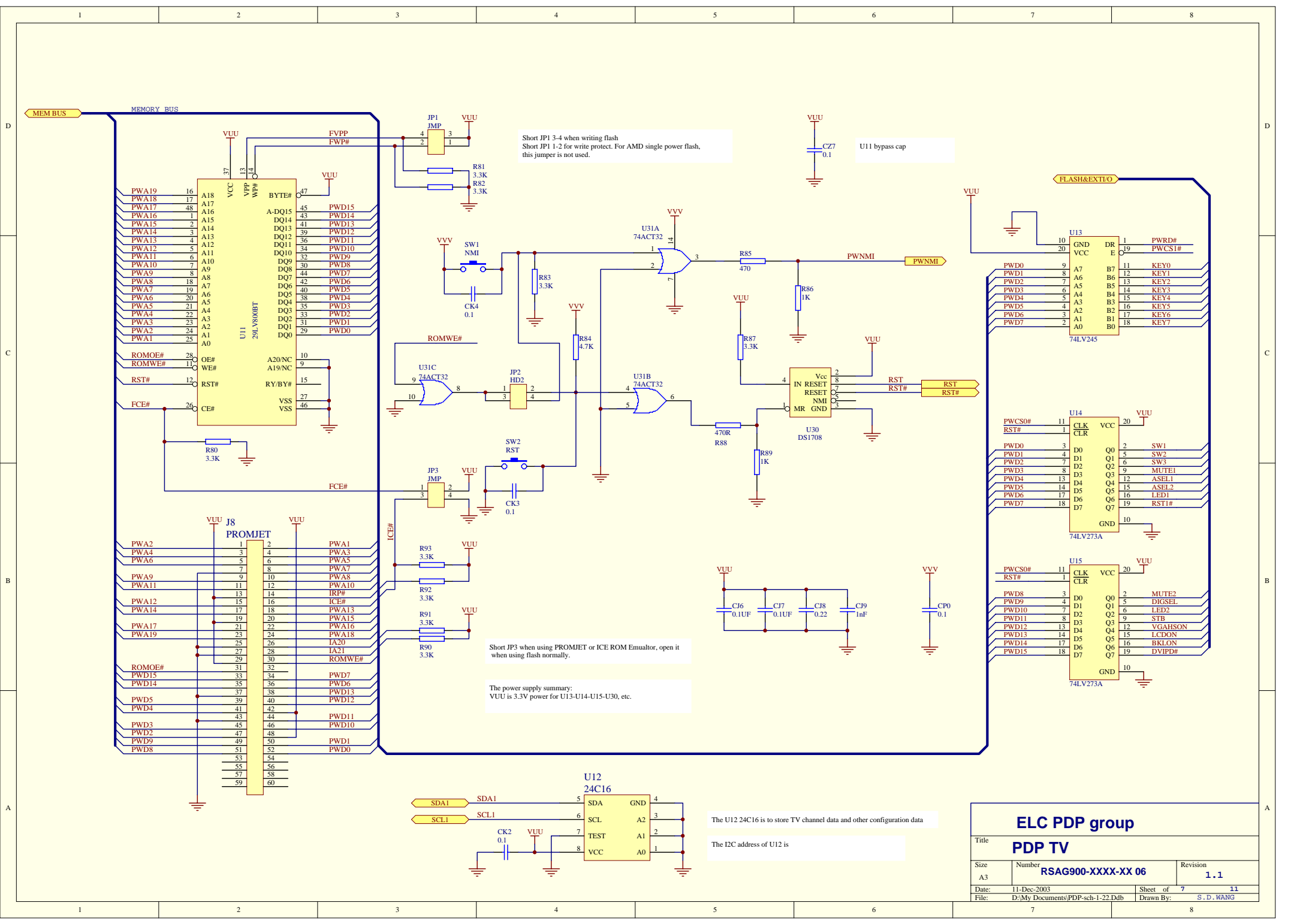


The power supply summary:
 +12 is 12V power for LCD panel,
 VVV is 5V standby power for the board,
 VUU is 3.3V standard power for the board.



Bypass caps for U40

ELC PDP group		
Title PDP TV		
Size A3	Number RSAG900-XXXX-XX 07	Revision 1.1
Date: 11-Dec-2003	Sheet of 9	11
File: D:\My Documents\PDP-sch-1-22.Ddb	Drawn By:	



Short JP1 3-4 when writing flash
Short JP1 1-2 for write protect. For AMD single power flash, this jumper is not used.

U11 bypass cap

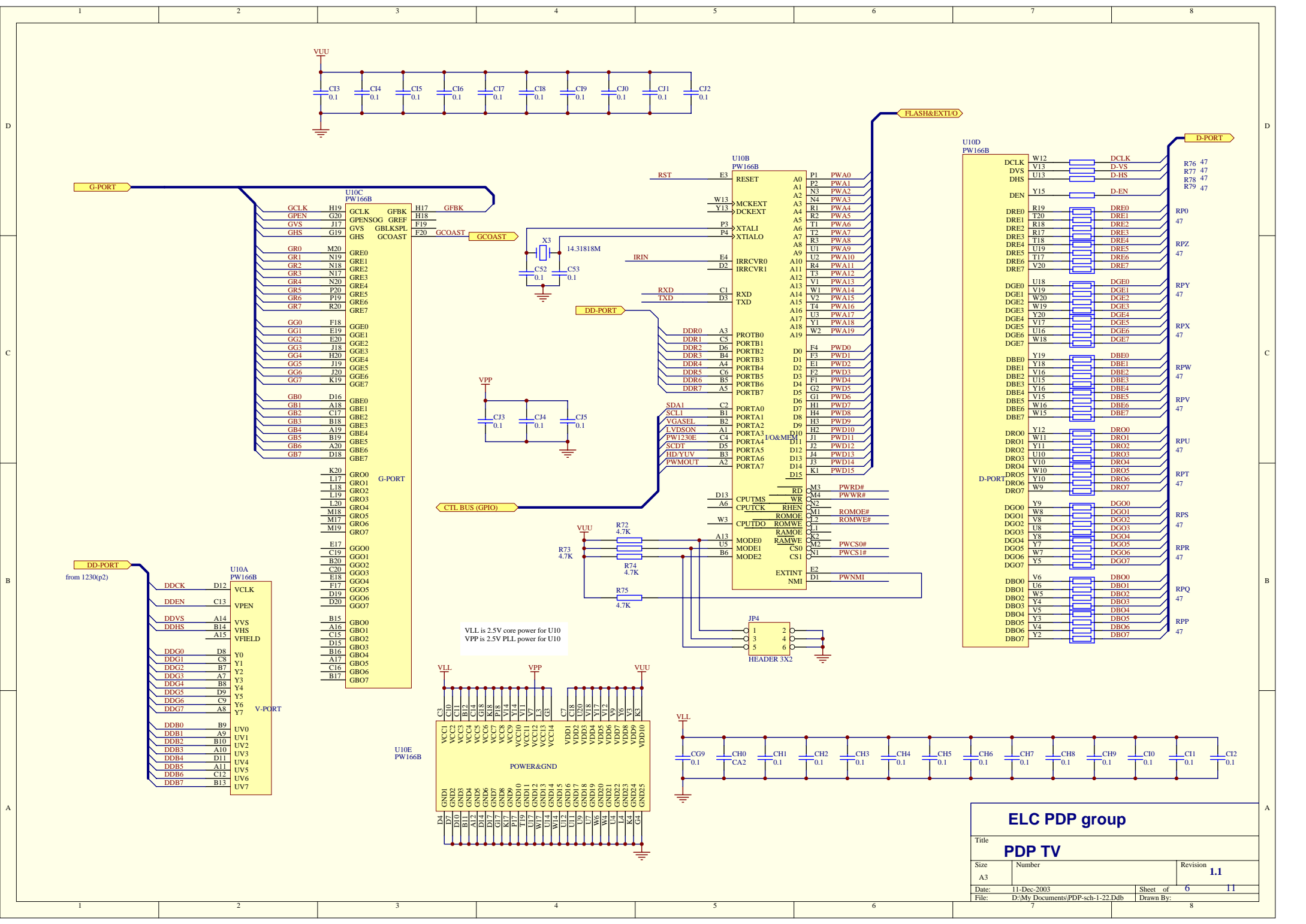
Short JP3 when using PROMJET or ICE ROM Emulator, open it when using flash normally.

The power supply summary:
VUU is 3.3V power for U13-U14-U15-U30, etc.

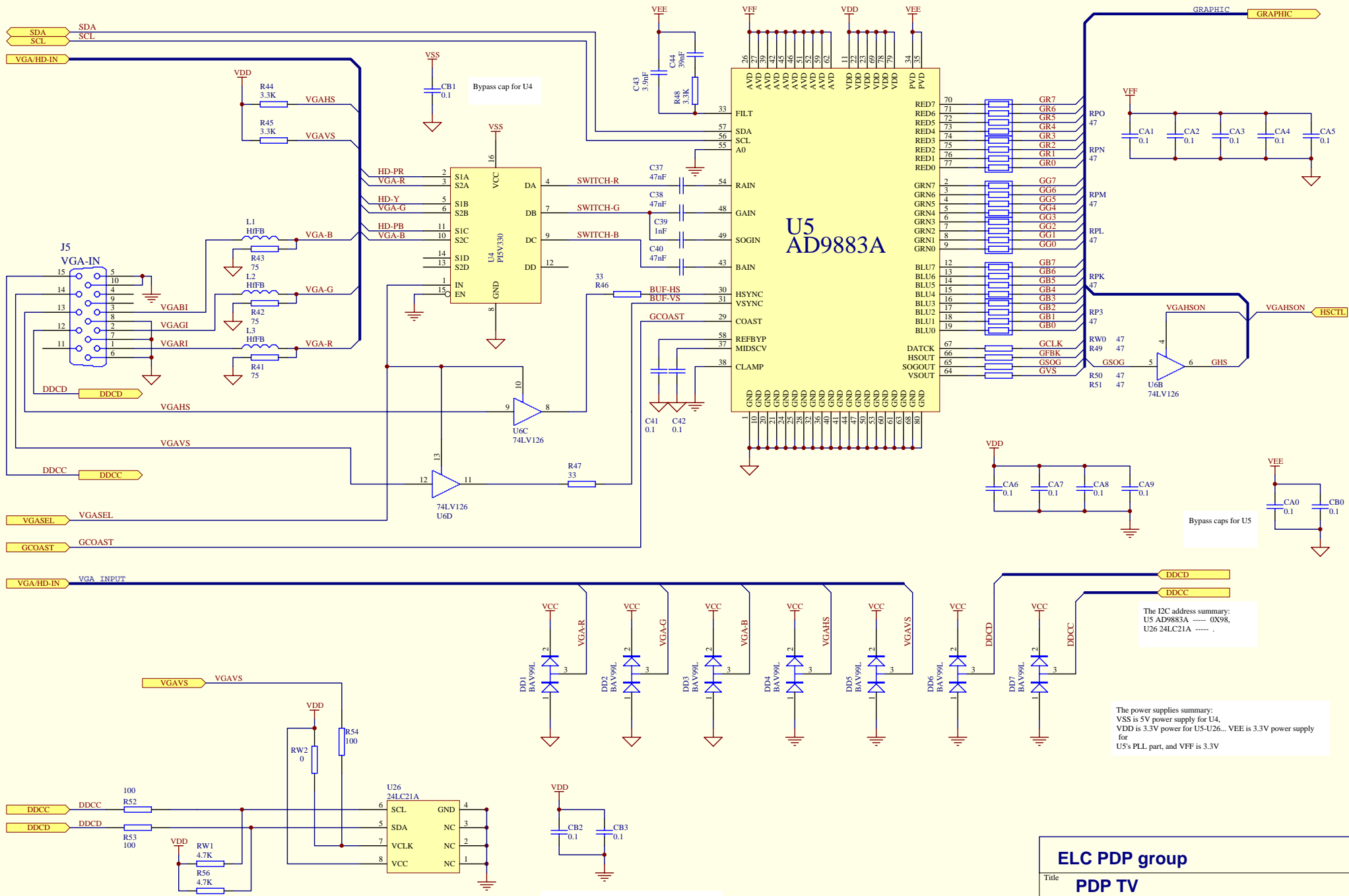
The U12 24C16 is to store TV channel data and other configuration data

The I2C address of U12 is

ELC PDP group		
PDP TV		
Title		
Size A3	Number RSAG900-XXXX-XX 06	Revision 1.1
Date: 11-Dec-2003	Sheet of 7	11
File: D:\My Documents\PDP-sch-1-22.Ddb	Drawn By: S. D. WANG	



ELC PDP group		
PDP TV		
Title		
Size	Number	Revision
A3		1.1
Date:	11-Dec-2003	Sheet of 6 11
File:	D:\My Documents\PDP-sch-1-22.Ddb	Drawn By:



U5
AD9883A

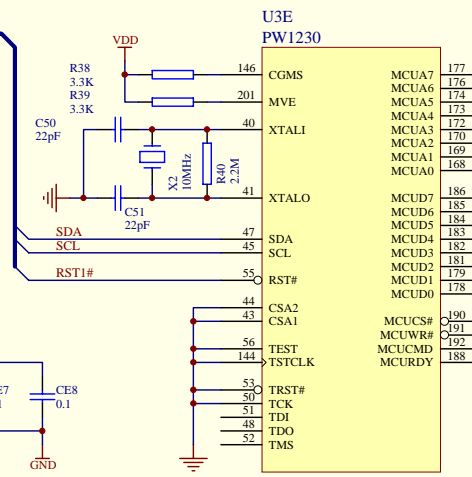
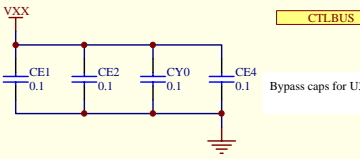
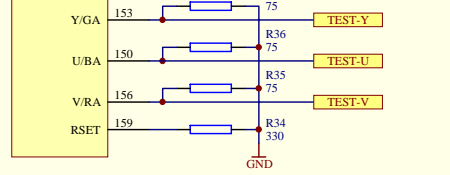
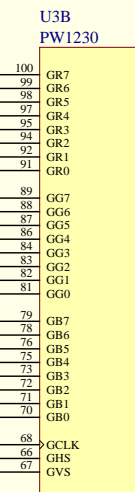
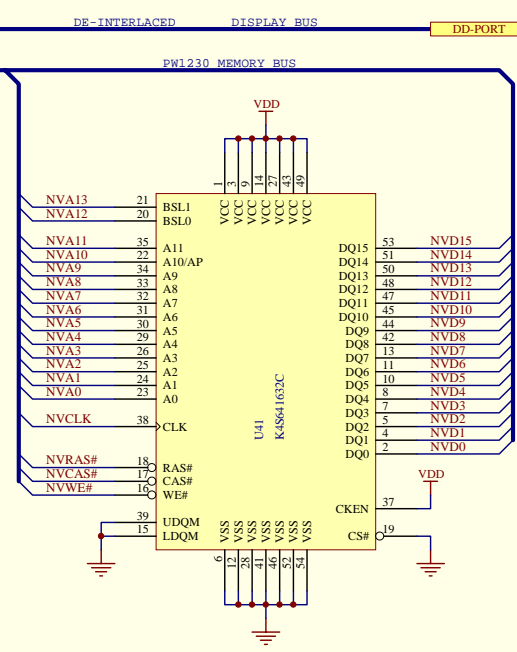
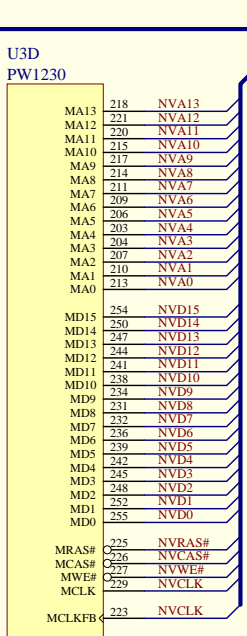
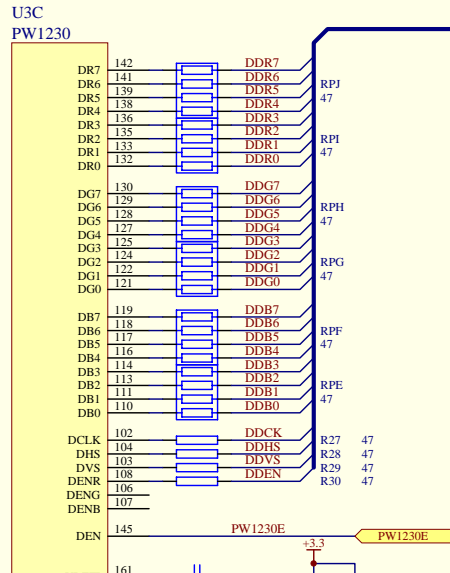
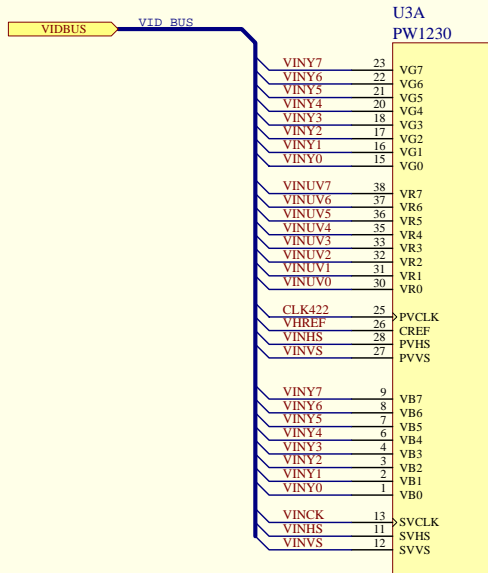
Bypass caps for U5

The I2C address summary:
U5 AD9883A ----- 0X98,
U26 24LC21A ----- .

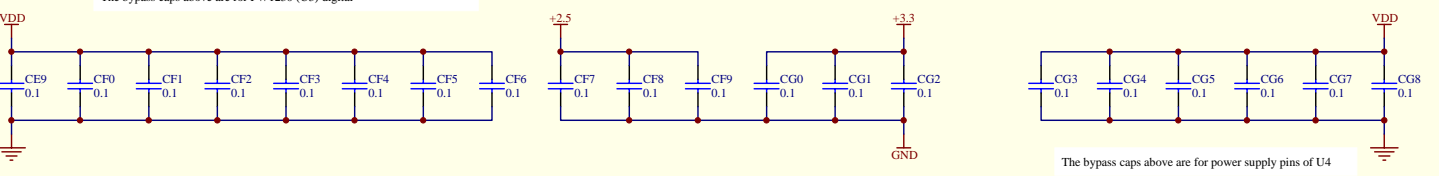
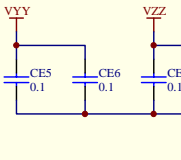
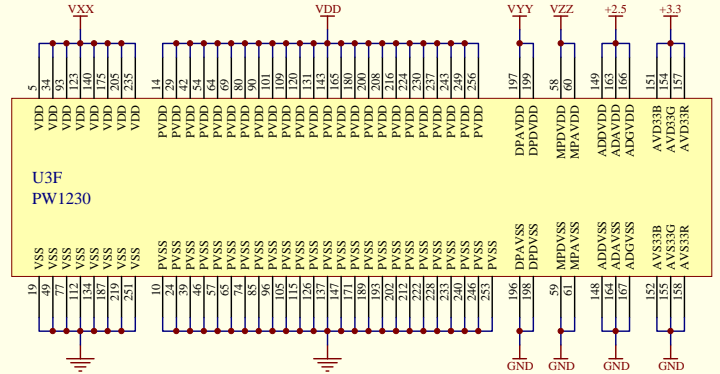
The power supplies summary:
VSS is 5V power supply for U4,
VDD is 3.3V power for U5-U26..., VEE is 3.3V power supply
for U5's PLL part, and VFF is 3.3V

Bypass caps for U26

ELC PDP group		
PDP TV		
Title		
Size	Number	Revision
A3	RSAG900-XXXX-XX 03	1.1
Date:	11-Dec-2003	Sheet of 2 11
File:	D:\My Documents\PDP-sch-1-22.Ddb	Drawn By:



The power supplies summary:
 VDD is 3.3V power for U3, U4, etc.
 +3.3 is 3.3V analog supply for U3.
 VXX is 2.5V digital supply for U3.
 VYY is 2.5V D-PLL supply for U3.
 VZZ is 2.5V M-PLL supply for U3.

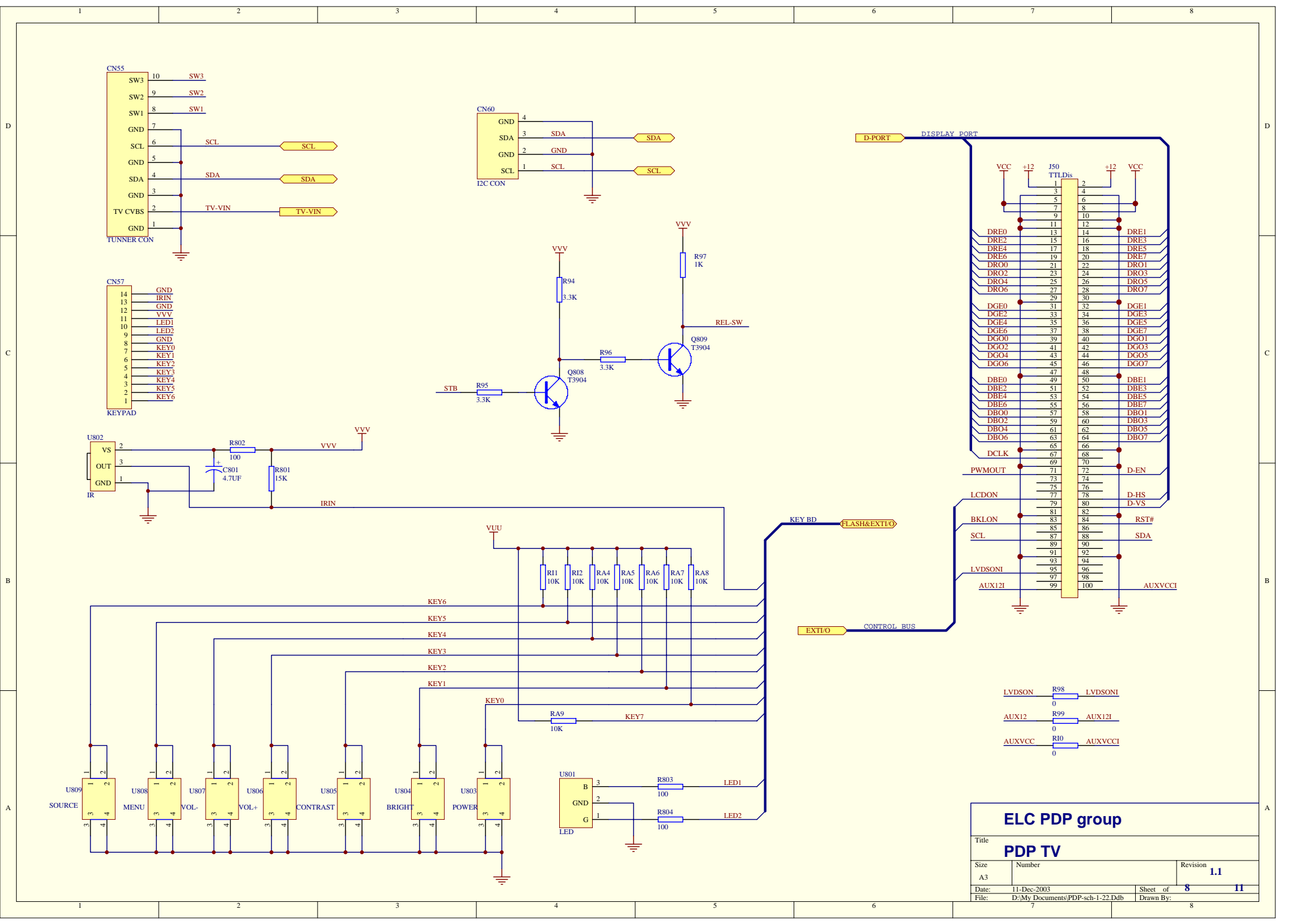


The I2C address of U3 PW1230 is 0X60

The bypass caps above are for PW1230 (U3) digital

The bypass caps above are for power supply pins of U4

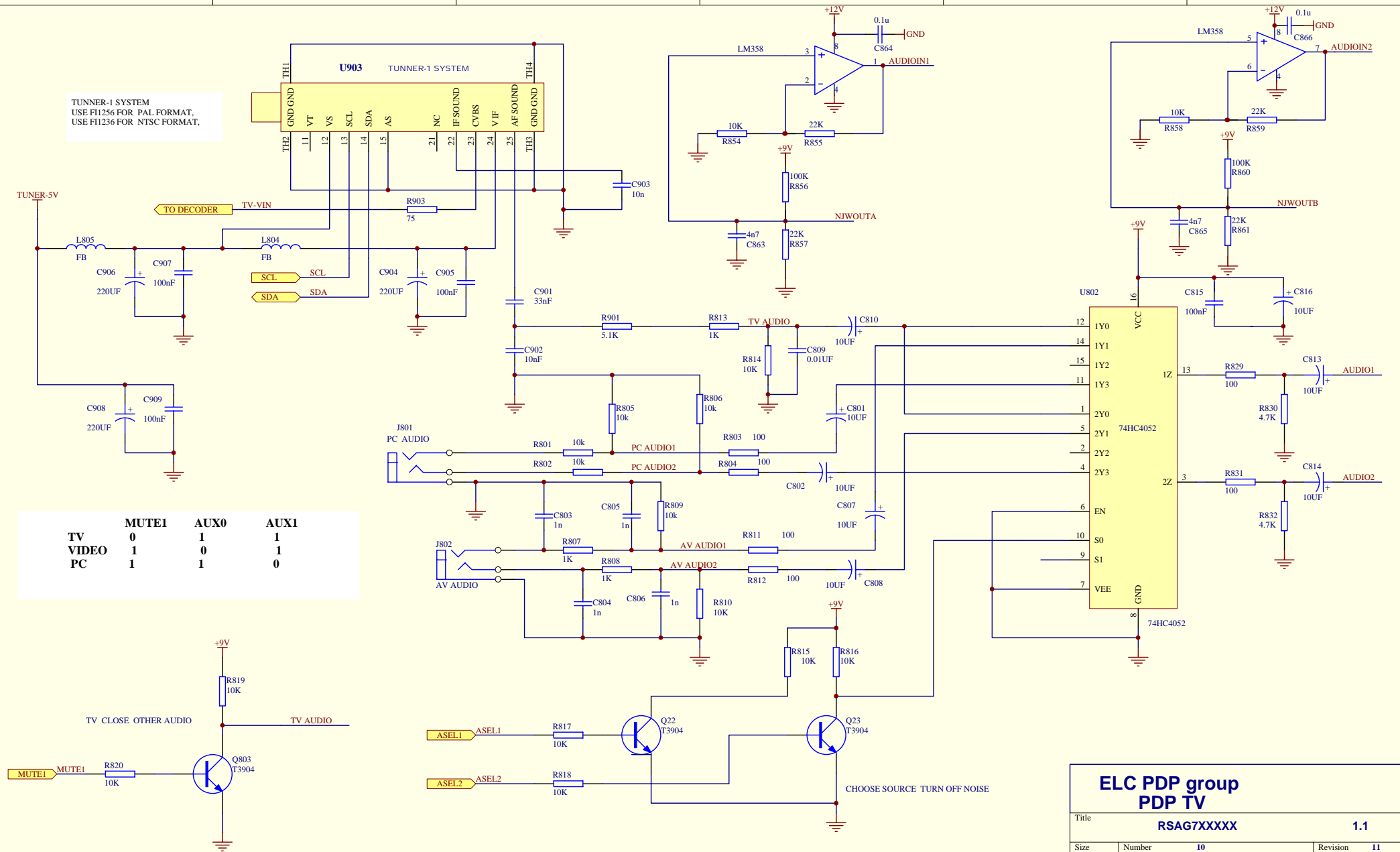
ELC group		
PDP TV		
Title	Revision	
Size	Number	Revision
A3	RSAG900-XXXX-XX 02	1.1
Date:	11-Dec-2003	Sheet of 5 11
File:	D:\My Documents\PDP-sch-1-22.Ddb	Drawn By:



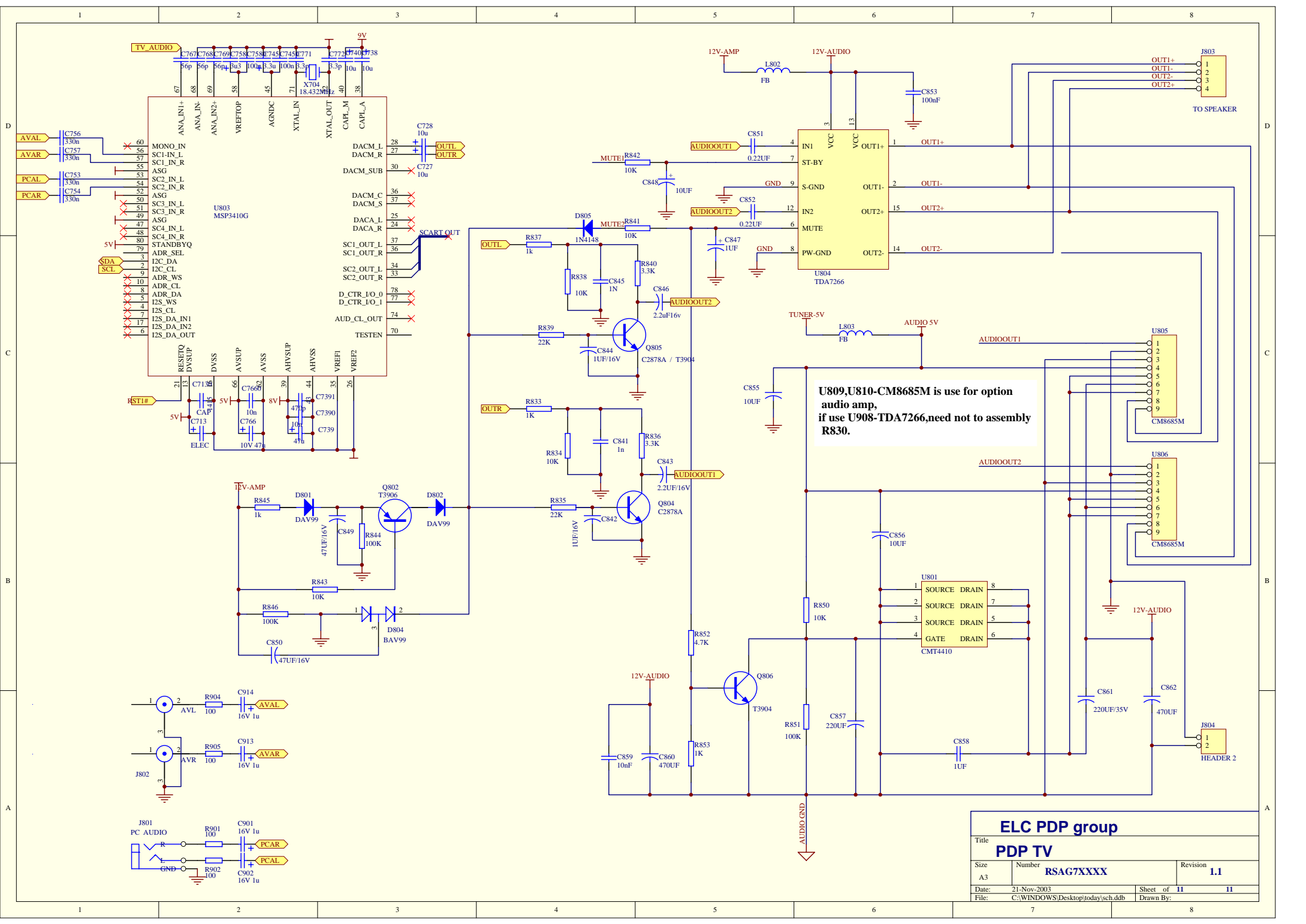
ELC PDP group		
PDP TV		
Title		
Size	Number	Revision
A3		1.1
Date:	11-Dec-2003	Sheet of 8 11
File:	D:\My Documents\PDP-sch-1-22.Ddb	Drawn By:

TUNNER-1 SYSTEM
 USE FI1256 FOR PAL FORMAT,
 USE FI1236 FOR NTSC FORMAT.

	MUTE1	AUX0	AUX1
TV	0	1	1
VIDEO	1	0	1
PC	1	1	0



ELC PDP group PDP TV		
Title	RSAG7XXXXX 1.1	
Size	Number 10	Revision 11
Date:	21-Nov-2003	Sheet of
File:	C:\WINDOWS\Desktop\today\sch.ddb	Drawn By:



U809,U810-CM8685M is use for option audio amp, if use U908-TDA7266,need not to assembly R830.

Title		
ELC PDP group		
PDP TV		
Size	Number	Revision
A3	RSAG7XXXX	1.1
Date:	21-Nov-2003	Sheet of 11 11
File:	C:\WINDOWS\Desktop\today\sch.dtb	Drawn By:

Desktop Quick Installation Guide:desktop

1. If the TV is to be desktop mounted,
 - a. Fasten two aluminum brackets to the plastic mounting base using six ST4*16C bolts as shown in fig.2.
 - b. Insert the brackets into the aluminum holder at bottom of the TV.
 - c. Place the TV upright, and then fasten the TV to the stand from backside using two M4*35 bolts.
2. If you want to fit the loudspeakers together with the TV,

Fasten the aluminum connectors (already assembled on the speakers) to the TV as shown in fig.1 using six M4*10 bolts (three for each speaker), leaving alone the speaker stands.
3. If you want to place the loudspeakers separately,
 - a. Dismantle the connectors from the speakers as fig.1.
 - b. Fasten the loudspeakers to the speaker-stands using four M4*16 bolts in the specified place (two for each stand).

Example: M 4 * 16

M: Flush bolt, ST: Pointed bolt

4: Diameter (mm)

16: Length (mm)

Fig. 1

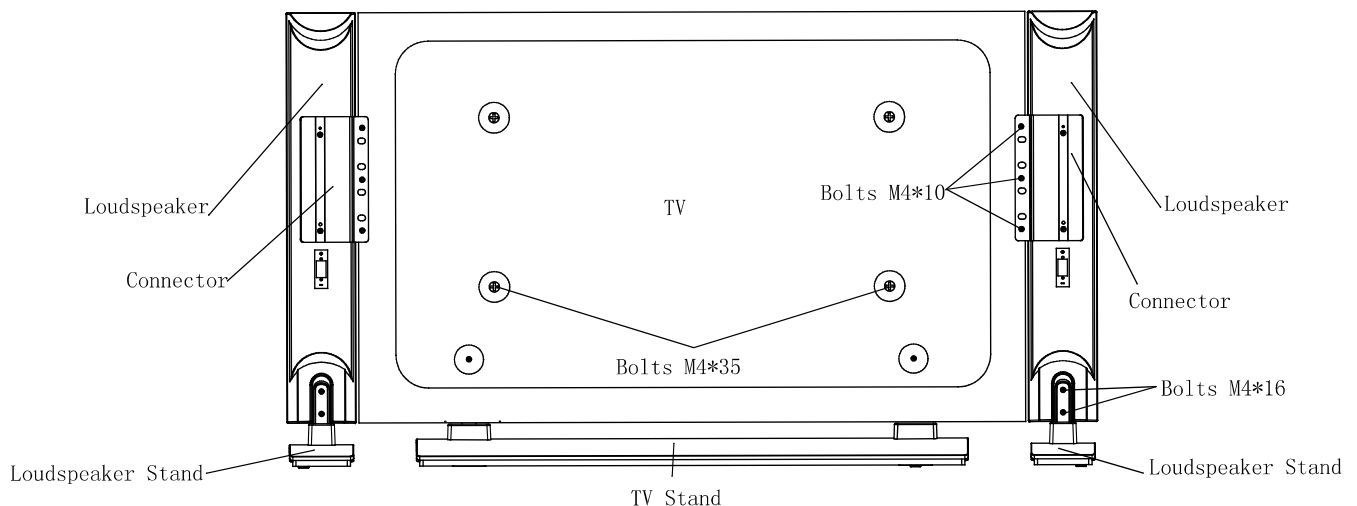
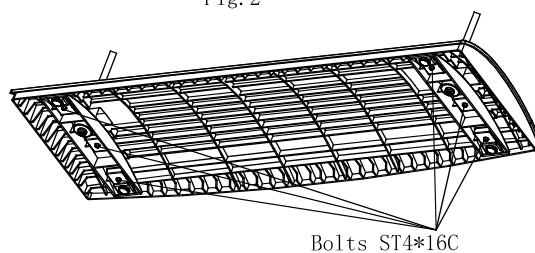


Fig. 2



Wallmounting

PDP Wall-mounting Bracket Installation Guide

Read carefully before installation!

The installation guide should be retained for future reference.

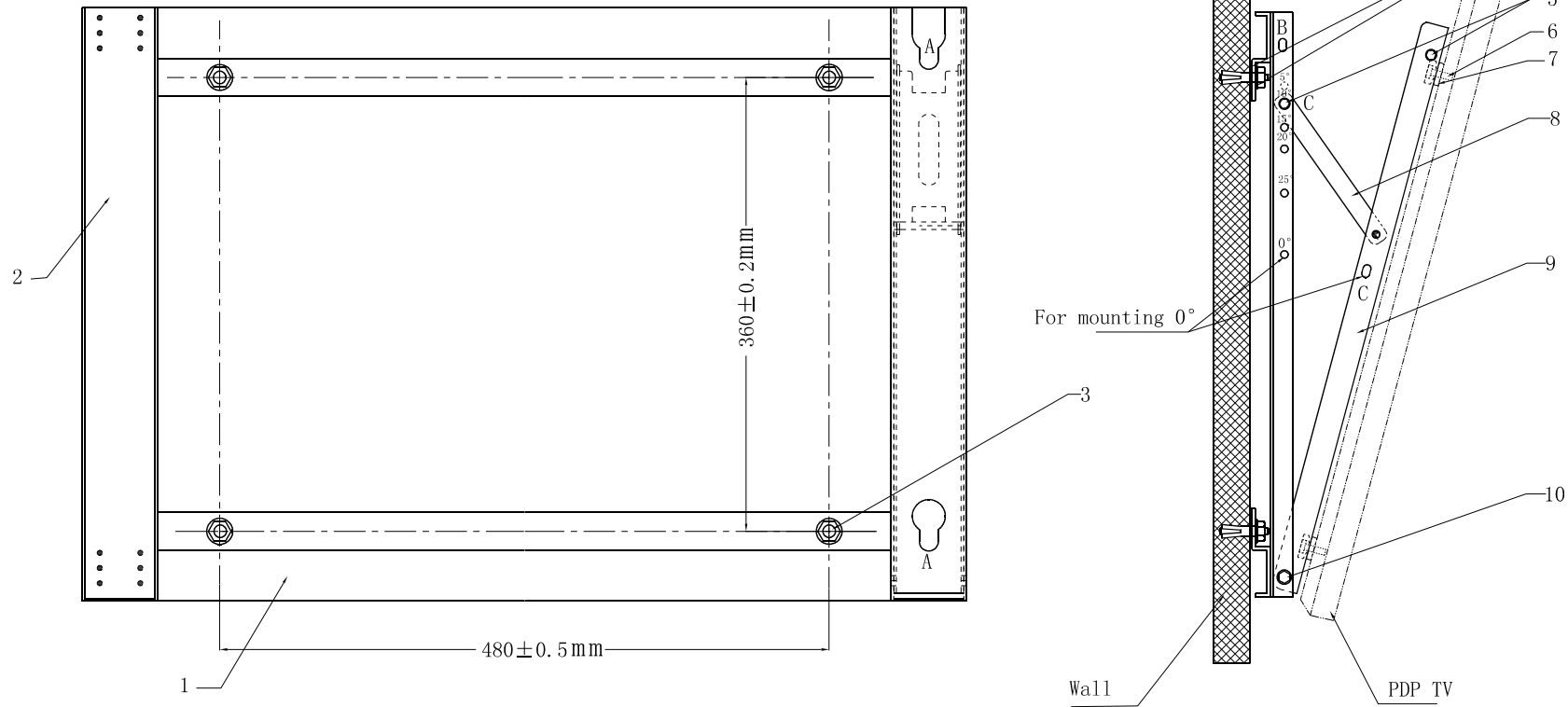
Caution:

1. To avoid mistakes or hazards, do NOT attempt to install the TV by yourself. Refer all installation to qualified servicing personnel.
2. Do NOT install the TV on a sloping wall that makes the TV screen slant over 25 degrees from the vertical or it may tumble or cause injury.
3. The instructions in this guide must be followed to correctly install the TV.
4. It requires more than one person to install the TV.
5. Before installation, examine whether the wall conforms to the specifications and whether the supplied parts can be fixed to it. The wall for mounting should sustain the weight of TV and speakers, e.g. cement wall or brick wall. Do NOT attempt to install the TV on a flexible wall such as sheetrock wall or plaster wall, unless the bolts are fixed on an area with standard building rigidity which sustains the weight of the TV and speakers. If the rigidity of the wall can not be measured, every mounting hole should sustain a frontal force of over 100N and a shearing force of over 200N.
6. Use the specified electric drill and drill bit for drilling. The drilling holes should conform to the specifications.
7. To avoid fire and shock, do NOT place a radiator, heater or humidifier below the installed TV.
8. The TV should be kept away from moisture, sensors and power line. The TV should be kept away from impact and vibration.
9. Be sure that the power supply is disconnected before installation for fear of fire and shock.

Wall-mounting Installation Steps:

1. Take the brackets from the package, and check if there are serious defects (e.g. defective junctures).
2. Adjust the bracket to the desired angle. Use the bolt 5 to adjust the angle by joining the holes of column beam 2 and holes of lever 8.
3. Drill locating holes of the specified dimension in a vertical wall of concrete or brick. The hole size should be 11mm. The hole depth should accommodate the expanding tube of the bolt.
4. Fix the bolts into the drilled holes in step 3, and then cover each bolt with a metal washer. Join the four mounting holes in the bracket to the four bolts in the wall, cover each bolt with a metal washer, and then fasten with a screw nut. Check its rigidity by pulling the bracket.
5. Fix the fixture disk to the back cover of the TV using four M8*40 bolts.
6. Wall-mount the TV by putting the four fixture disk into the four mounting holes A.
7. If the customer is not satisfied with the mounting angle, take down the TV and adjust the angle before re-mounting.
8. After wall-mounting the TV, use bolts 5 to fix the fixture disk to avoid accidental slide.

Wall-mounting Quick Guide

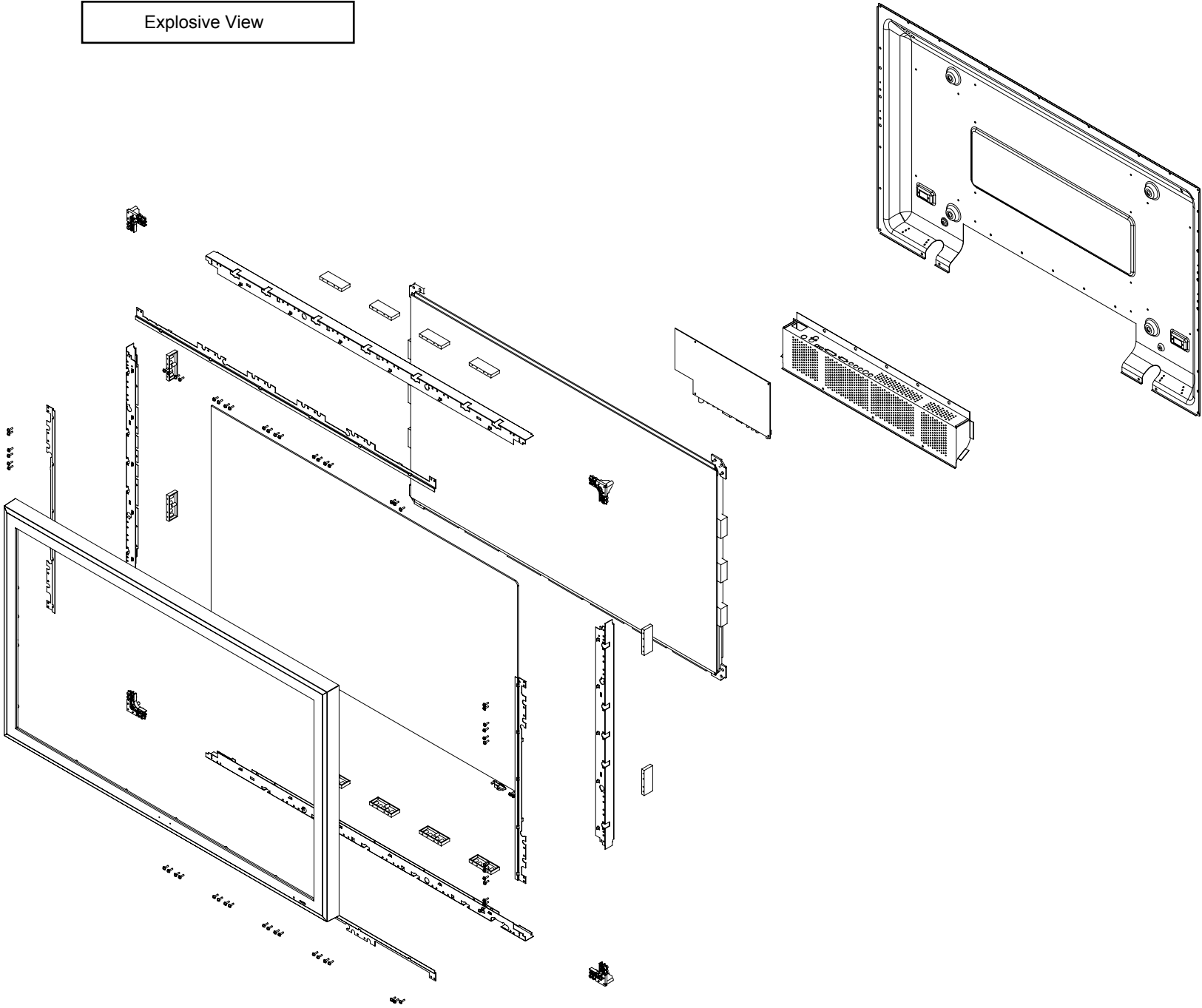


To mount vertically,

1. meet holes H of vertical beam 2 and holes C of vertical beam 9, using two cross recessed countersunk hexagon head bolt & plain washer assembly M6X70.
2. Wall-mount the TV.
3. Put two cross recessed countersunk hexagon head bolt & plain washer assembly M6X70 through holes of vertical beam 9 to fix the TV firmly.

No.	Name	Mat'l	Quantity	Remarks	No.	Name	Mat'l	Quantity	Remarks
1	Cross beam	A3	2		6	Bolt		4	M8X40 (B)
2	Vertical beam	A3	2		7	Fixture disk	Nylon	4	RSAG8. 079. 013
3	Expanding bolt		4		8	Lever	A3	2	
4	Plain Washer		8	RSR8. 949. 0110	9	Vertical beam	A3	2	
5	Cross recessed countersunk hexagon head bolt & plain washer assembly		4	M6X70 (B)	10	Cross recessed countersunk hexagon head bolt & plain washer assembly		2	M8X70 (B)

Explosive View



Factory remote

Factory remote HYDFSR-0087B/C

			STANDBY
1 (Roffset+)	2 (Goffset +)	3 (Boffset +)	FREEZE
4 (Roffset-)	5 (Goffset -)	6 (Boffset -)	SAP (NO FUNCTION)
7	8	9	
0		DISPLAY (OK)	MUTE (BURNING)
ALT			OSD (NO FUNCTION)
P+	V+	P-	V-
MENU			CCD (M)
VIDEO (Rgain+)	S-VIDEO (Ggain+)	Y Cb Cr (Bgain+)	Y Pb Pr (W/B H)
P.MODE (Rgain-)	S.MODE (Ggain-)	TEXT (Bgain-)	TIME (W/B L)
BRIGHTNESS (NICAM)			CONTRAST (NOFUNCTION)

1. To enter the factory mode with factory remote:

Press "Brightness"、"M" and "ALT" keys sequentially(the red parts).

2. To quit the factory mode with factory remote:

Press "M" key