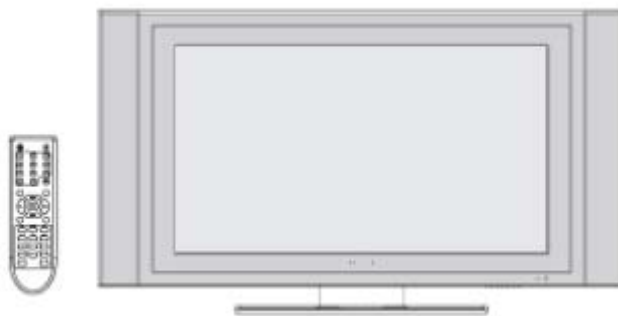




LCD TV
Service Manual

MODEL: LCT-32SK18STP



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- 1) SCHEMATIC DIAGRAM OF CHASSIS
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- 3) EXPLODED VIEW AND PART LIST

SPECIFICATION

1. Application Area:

This products standard is used to the base board of 8M 18LCDTV 32 inch

2. Specification:

All standards are measured under following conditions without other specification

- 2.1 Ambient Temperature: $20 \pm 5^{\circ}\text{C}$
- 2.2 Relative Humidity: $65 \pm 10\%$
- 2.3 Power Supply Voltage: Standard Input Voltage (110 ~ 240 V ac 50/60Hz)
- 2.4 The TV should be in ensured after working 30 minutes

3 The method of examination:

- 3.1 Capability : According to national test standard
- 3.2 Other requirements: I
 - Interference: FCC standard
 - Safety: CE standard

4. General Specification:

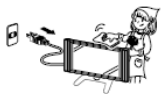
No	Item	Specification	Remark
1.	System	1)PAL/NTSC/SECAM DK/BG/=I/M/NL/L'	
2.	Channel	1)VHFL:E2~E9 VHFH:Z-7~Z-38 UHF:S41~E69	
3.	Input Voltage	AC110~240V, 50/60Hz	
4.	Market	EUROPEAN	
5.	Panel Size(inch)	32	
6.	Tuning System	FS 200 program	
7.	Operating Environment	1)Temp:0~40deg 2)Humidity:40~85%	
8.	Storage Environment	3)Temp:-20~50deg 4)Humidity:30~90%	

IMPORTANT SAFETY PRECAUTIONS

Electricity is used to perform many useful functions, but it can also cause personal injuries and property damage if improperly handled. This product has been engineered and manufactured with the highest priority on safety. However, improper use can result in electric shock and/or fire. In order to prevent potential danger, please observe the following instructions when installing, operating and cleaning the product. To ensure your safety and prolong the service life of your LCD colour TV product, please read the following precautions carefully before using the product.

1. Read instructions—All operating instructions must be read and understood before the product is operated.
2. Keep this manual in a safe place—These safety and operating instructions must be kept in a safe place for future reference.
3. Observe warnings—All warnings on the product and in the instructions must be observed closely.
4. Follow instructions—All operating instructions must be followed.
5. Attachments—Do not use attachments not recommended by the manufacturer. Use of inadequate attachments can result in accidents.
6. Power source—This product must operate on a power source specified on the specification label. If you are not sure of the type of power supply used in your home, consult your dealer or local power company.
7. AC cord protection—The AC cords must be routed properly to prevent people from stepping on them or objects from resting on them. Check the cords at the plugs and product.
8. Overloading—Do not overload AC outlets or extension cords. Overloading can cause fire or electric shock.
9. Entering of objects and liquids—Never insert an object into the product through vents or openings. High voltage flows in the product, and inserting an object can cause electric shock and/or short internal parts. For the same reason, do not spill water or liquid on the product.
10. Servicing—Do not attempt to service the product yourself. Removing covers can expose you to high voltage and other dangerous conditions. Request a qualified service person to perform servicing.
11. Repair—If any of the following conditions occurs, unplug the AC cord from the AC outlet, and request a qualified service person to perform repairs.
 - a. When the AC cord or plug is damaged.
 - b. When a liquid was spilled on the product or when objects have fallen into the product.
 - c. When the product has been exposed to rain or water.
 - d. When the product does not operate properly as described in the operating instructions.
Do not touch the controls other than those described in the operating instructions. Improper adjustment of controls not described in the instructions can cause damage, which often requires extensive adjustment work by a qualified technician.
 - e. When the product has been dropped or damaged.
 - f. When the product displays an abnormal condition. Any noticeable abnormality in the product indicates that the product needs servicing.
12. Replacement parts—In case the product needs replacement parts, make sure that the service person uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. Use of unauthorized parts can result in fire, electric shock and/or other danger.
13. Safety checks—Upon completion of service or repair work, request the service technician to perform safety checks to ensure that the product is in proper operating condition.
14. Wall or ceiling mounting—When mounting the product on a wall or ceiling, be sure to install the product according to the method recommended by the manufacturer.

- **Cleaning**—Unplug the AC cord from the AC outlet before cleaning the product. Use a damp cloth to clean the product. Do not use liquid cleaners or aerosol cleaners.



- **Water and moisture**—Do not use the product near water, such as bathtub, washbasin, kitchen sink, laundry tub, swimming pool and in a wet basement.



- Do not place vases or any other water-filled containers on this product. The water may spill onto the product causing fire or electric shock.



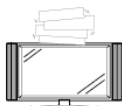
- **Stand**—Do not place the product on an unstable cart, stand, tripod or table. Doing so can cause the product to fall, resulting in serious personal injuries as well as damage to the product. Use only a cart, stand, tripod, bracket or table recommended by the manufacturer or sold with the product. When mounting the product on a wall, be sure to follow the manufacturer's instructions. Use only the mounting hardware recommended by the manufacturer.



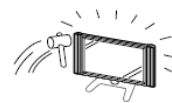
- When relocating the product placed on a cart, it must be moved with utmost care. Sudden stops, excessive force and uneven floor surface can cause the product to fall from the cart.



- **Ventilation**—The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the product. Do not place the product on a bed, sofa, rug or other similar surface, since they can block ventilation openings. This product is not designed for built-in installation; do not place the product in an enclosed place such as a bookcase or rack, unless proper ventilation is provided or the manufacturer's instructions are followed.



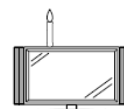
- The LCD panel used in this product is made of glass. Therefore, it can break when the product is dropped or impact applied. If the LCD panel is broken be careful not to be injured by broken glass.



- **Heat sources**—Keep the product away from heat sources such as radiators, heaters, stoves and other heat-generating products (including amplifiers).



- To prevent fire, never place any type of candle or naked flames on the top or near the TV set.



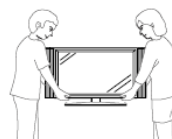
- To prevent fire or shock hazard, do not place the AC power cord under the TV set or other heavy items.



The LCD panel is a very high technology product with 3,147,264 thin film transistors, giving you fine picture details. Due to the very large number of pixels, occasionally a few non-active pixels may appear on the screen as a fixed point of blue, green or red. This is within product specifications and does not constitute a fault.

Precautions when transporting the TV

When transporting the TV, never carry it by holding onto the speakers. Be sure to always carry the TV by two people holding it with two hands—one hand on each side of the TV.



5. Feature and Function

No	Item	Specification	Remark
1.	CCD	NO	
2.	REMOCON	NEC Code	
3.	AV Input	1	
4.	Component input	3	Y Pb Pr/2 SCART
5.	DVI input	1	
6.	S-VIDEO	1	
7.	RGB Input	VGA/SCART1	
8.	AV OUTPUT	2	
9.	2 Carrier Stereo	GR STEREO	
10.	NICAM Stereo	YES	
11.	2CarrierDual	YES	
12.	4HCombFilter	YES	
13.	DCTI/DLTI/Peaking	YES	
14.	Black and white expansion	YES	
15.	Film Mode	YES	
16.	Advanced noise reduction	YES	
17.	Progressive Scan	YES	
18.	Motion Detection	X	
19.	Dolby Virtual	X	
20.	Swivel Speaker	X	

6. Safety and Regulation

No	Item	Min	Typ	Max	Unit	Remark
1.	Force Stability Incline Plane Tip Test				d e g	
2.	Force Stability Level Tip Test				N	
3.	Isolation Gap, AC-AC/ AC-DC	3			mm	
4.	Isolation Gap, -	6			mm	
5.	Power Consumption, Max		250		W	IEC 65
6.	Power Consumption, Stand by			<1	W	
7.	Power Consumption, Current harmonics					
8.	Dielectric Voltage	3			KV at 10 mA, for 1 minutes	
9.	Isolation Resistance	4			MΩ	
10.	Leakage Current			0.7	mApp	
11.	Power Cord Captivity				Kg	
12.	Flammability Back Cover			V0		
13.	Sharp Edge	none				
14.	UL Compliance				UL 6500	
15.	FCC Compliance				FCC PART 15	
16.	CDRH Radiation Compliance					
17.	CSA Compliance					
18.	CEB Compliance					
19.	CE Compliance					
20.	CB Compliance					

7. Video

No	Item	Min	Typ	Max	Unit	Remark
1.	Linearity Distortion, Vertical				%	
2.	Linearity Distortion, Horizontal				%	
3.	Trapezoidal Distortion, Vertical				%	
4.	Trapezoidal Distortion, Horizontal				%	
5.	Over Scan, Vertical				%	
6.	Over Scan, Horizontal				%	
7.	Brightness, Maximum		500		cd/m2	
8.	Video Noise Limited Sensitivity(@S/N=30 db) VHF			48	dBm	
9.	Video Noise Limited Sensitivity(@S/N=30 db) UHF			51	dBm	
10.	Selectivity 1.5M	35			dB	
11.	Selectivity +8M	40			dB	

8. Chroma

No	Item	Min	Typ	Max	Unit	Remark
1.	Purity (mislanding)				um	
2.	Convergence				mm	
3.	White Balance, X axis					
4.	White Balance, Y axis					
5.	Color Temperature			12000	kdeg	
6.	Color Sensitivity			45	dB	
7.	Color Burst Lock-in Range	+/-300			Hz	
8.	Color Killer Sensitivity			-80	dBm	

9. Audio

No	Item	Min	Typ	Max	Unit	Remark
1.	Audio Noise Limited Sensitivity, VHF-L			42	dBm	
2.	Audio Noise Limited Sensitivity, VHF-L			42	dBm	
3.	Audio Noise Limited Sensitivity, UHF			48	dBm	
4.	Buzz (S/N Ratio)	40			dB	
5.	Min. Volume Hum			20	mV	
6.	Distortion			10	%	
7.	Audio Output, L/R,at 7 % THD			10x2	W	
8.	Audio Output, Center				W	
9.	Audio Output, Woofer	W				
10.	Stereo Separation				dB	
11.	Speaker Impedance		8		ohm	
12.	Speaker Power Rating			10	W	
13.						
14.						
15.						
16.						

10. Panel

No	Item	26"	32"	Unit	Remark
1.	Aspect ratio	16:9	16:9		
2.	Resolution	1366 x 768	1366 x 768		@60Hz
3.	Pixel Pitch	0.5107 5x0.51 0751	0.5107 5x0.51 0751	mm	
4.	No. Of Colors	16.7M	16.7M		
5.	Brightness	500	450	cd/m ²	Center point
6.	Contrast Ratio	1000	1000		
7.	Viewing angle Y axis left	85	85	degree	CR>10
8.	Viewing angle Y axis right	85	85	degree	CR>10
9.	Viewing angle Y axis up	85	85	degree	CR>10
10.	Viewing angle Y axis down	85	85	degree	CR>10
11.	Life time	50000	50000	hours	
12.	Response time (rise)	10	15	ms	
13.	Response time(decay)	6	8	ms	
14.					
15.					
16.					

11. External Interface

No	Item	Min	Typ	Max	Unit	Remark
1.	Video Input Level	0.85	1	1.15	Vpp	EN-50049
2.	Video Input Frequency Response	4.5			MHz	
3.	Video Input S/N	40			dB	
4.	Audio Input Level	0.4	0.5	0.6	Vrms	
5.	Audio Input Frequency Response	0.1		7	kHz	
6.	Audio Input S/N	40			dB	
7.	Audio Input Distortion			2	%	
8.	Audio Input Dynamic Range	2			V	
9.	Video Output Level	0.85	1	1.15	Vpp	EN-50049
10.	Video Output Frequency Response	3.8			MHz	
11.	Video Output S/N	40			dB	
12.	Audio Output Level	0.4	0.5	0.6	Vrms	
13.	Audio Output Frequency Response	0.1		7	kHz	
14.	Audio Output S/N	40			dB	
15.	Audio Output Distortion			2	%	
16.	Video Input Level, R/G/B				Vpp	
17.	Video Input Level, Component(Y, Pb, Pr)	0.6	0.7	0.8	Vpp	75 ohm
18.	RGB Input Resolution, Vertical				pixel	
19.	RGB Input Resolution, Horizontal				pixel	
20.	RGB Input Horizontal Frequency				kHz	
21.	Rate Frame Input RGB					

12. Other

No	Item	Min	Typ	Max	Unit	Remark
1.	Search Sensitivity	-95	-90	-85	dBm	
2.	Heating Time			7	sec	
3.	Soft Ware Functionality Test					SMI Specification
4.	REMOCON Working Sensitivity, Straight	8			m	
5.	REMOCON Working Sensitivity, T/B/L/R	6			m	30 degree
6.	Closed Caption Sensitivity			-70	dBm	
7.	Teletext Sensitivity				dBm	
8.	Resonance of unit (Sweep freq: 50 ~ 1000)	None				
9.	Clock, real time gain or loss (sec per day)	sec				
10.						

13. Customer Menu Setup (Pre factory set-up)

No	Item	Min	Typ	Max	Unit	Remark
1.	PSM	Movies				
2.	SSM	Music				
3.	Volume					
4.	Mute	Off				
5.	Input Mode					
6.	Customer Menu Language	English				customer define
7.	AVL	Off				
8.	Auto Sleep	Off				
9.	Blue Back	On				
10.	Caption	Off				
11.	Noise Reducer	Auto				

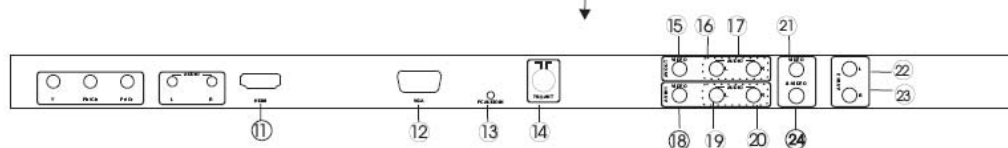
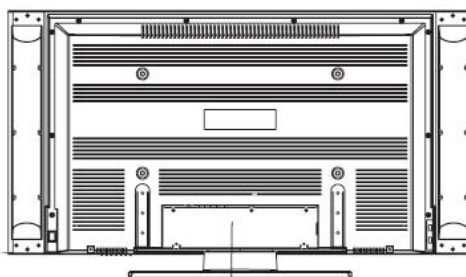
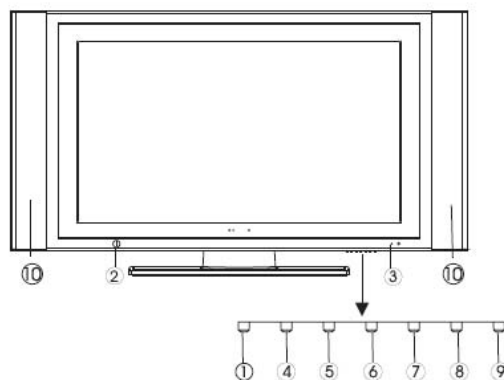
14. Reliability

No	Item	Min	Typ	Max	Unit	Remark
1.	ESD	4		12	kV	IEC-1000-4-2

No	Item	Min	Typ	Max	Unit	Remark
2.	EFT/Burst	2			kV	IEC-1000-4-4
3.	Surge Immunity	4			kV	IEC-1000-4-5
4.	Voltage Dip Test, 10ms	30			%	IEC-1000-4-11
5.	Voltage Dip Test, 100ms	100			%	IEC-1000-4-11
6.	Laser arcing Test				times	each Polarization
7.	CST					
8.	Abnormal Test					
9.	Operation Temperature	0	25	45	deg	
10.	Operation Humidity	10		90	%	
11.	Storage Temperature	-20		60	deg	
12.	MTBF (Confidence Level : 90 %)	10000			hours	
13.	Ship Test					

APPEARANCE & CONTROL FUNCTION

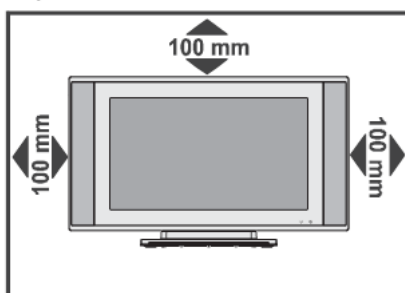
1. Power ON / OFF
2. Power Indicator
3. Remote Sensor
4. AV / TV
5. MENU
6. CH.-Button
7. CH. + Button
8. VOL.-Button
9. VOL. + Button
10. Speakers
11. HDMI
12. VGA
13. PC AUDIO IN
14. 75Ω ANT
15. AV OUT VIDEO
16. AV OUT AUDIO L
17. AV OUT AUDIO R
18. AV IN 1 VIDEO
19. AV IN 1 AUDIO L
20. AV IN 1 AUDIO R
21. AUDIO
22. AUDIO IN L
23. AUDIO IN R
24. S-VIDEO



OPERATION INSTRUCTION

Installation

Install Display on solid horizontal surface such as a table or desk. For ventilation, leave a space of at least 10 cm free all around the set. To prevent any fault and unsafe situations, please do not place any objects on top of the set. This apparatus can be used in tropical and/or moderate climates.



- Locate the receiver in the room where direct light does not strike the screen.
Total darkness or a reflection on the picture screen can cause eyestrain. Soft and indirect lighting is recommended for comfortable viewing.
Allow enough space between the receiver and the wall to permit ventilation.
- Avoid excessively warm locations to prevent possible damage to the cabinet or premature component failure.
- This TV operates on AC supply directly, connect the AC plug to the socket at the back of the TV. Insert the mains plug in the socket having a mains voltage of 110-260V AC.
- Do not install the receiver in a location near heat sources such as radiator, air ducts, direct sunlight, or in a place somewhere like close compartment and close area.
Do not cover the ventilation openings when using the set.
-

Features

- Up to 200 programme memory.
- Twin Scart connections.
- Teletext (Fastext,500pages)
- Headphone socket.
- A.P.S(Automatic programming system)
- Programme swapping.
- Sleep timer.
- 4:3,16:9,Zoom1,Zoom2,panorama and Full
- screen picture modes.
- When no TV signal is detected,after 5
- minutes the TV switches itself automatically
- to stand-bymode.
- CYS: PAL /SECAM
- SYS: BG / DK / I/L / L'
- HDMI Input (support up to 1080i)
- PC Input (support up to 1080i)
- PIP
- NICAM Stereo

Panel Features

- High resolution (1336x768),32 TFT LCD display.
- Brightness: 500cd/m²
- High-speed response time <30 msec.
- 8-bit color depth,display 16.7M colors.
- High contrast ratio (1600:1 Typital)
- Wide viewing angle(typical):178°(horizontal) and 178°(vertical).

MENU BUTTON

1. Press menu button to display menu, and press "VOL.+" or "VOL.-" to select sub menu.



Menu button has two functions: First is opening or closing the menu, and the second is closing the current menu and then opening the previous menu.

The menu will time out automatically after several seconds if it is left on the screen.

Press the "MENU" key on the remote control unit to cancel the menu function.

2. After entering an item, you can select the desired adjusting item by the "VOL.+" / "VOL.-" buttons, and adjust it by the "PROG.+" / "PROG.-" buttons.

Picture menu



Enter Picture menu, you can select Brightness, Contrast, Colour, Sharpness, Colour Temp and N.R. items by pressing "PRGO.+" or "PROG.-" buttons.

Brightness

Using the "VOL.+" / "VOL.-" button lighten/darken the picture.

Contrast

Press the "VOL.+" / "VOL.-" key to enhance/reduce the contrast of the picture.

Colour

Press the "VOL.+" / "VOL.-" button to increase/decrease the colour saturation.

Sharpness

Utilize the button to sharpen or soften the picture.

Colour Temp

Make use of the button to select a suitable colour temperature to display. The choices are Normal, Cooler, Cool, Warm, Warmer.

N.R.

Press the button to adjust noise reduction, The options are Off, Low, Middle, High.

Sound menu



Enter Sound menu, you can select Volume, Balance, Surround, MSS and Equalizer items by pressing "PRGO.+" / "PROG.-" Buttons.

Volume

Press the "VOL.+" / "VOL.-" button to adjust the sound volume.

Balance

Choose the "VOL.+" / "VOL.-" button to adjust to the left to right sound channel volume.

Surround

Press the key to select surround mode, on/off.

MSS

Press the button to get bass or treble. The choices are on and off.

Equalizer

A tone control system designed to compensate for frequency distortion in audio systems. Enter Equalizer, you can select 120HZ, 500HZ, 1.5KHZ, 5KHZ and 10KHZ items by pressing "PROG.+" / "PROG.-" Buttons and change the corresponding value of volume by pressing "VOL.+" / "VOL.-" Buttons.

Tuner menu



Followed by the Tuner menu, Program, Colour System, Sound System, Auto Tune, Tuning, Fine Tune, Prog. Sort and Skip are the items, which can be selected by pressing "PROG.+" / "PROG.-" buttons.

Program

Using the "VOL.+" / "VOL.-" buttons change program you expect.

Colour System

Press the button to select a new colour standard value in TV. The Choices are AUTO, NTSC, SECAM, PAL.

Sound System

Press the button to select a new sound standard value in TV.

The options are I,M,L,L',DK,BG.

NOTE: This TV factory set to "I" UK sound. If changed to another setting whilst receiving a UK TV station this will result in loss of sound. Change back to "I" to restore the sound.

APS AUTO Tune

1. Press MENU button.
2. Press VOL+/- button and highlight the TUNING icon.
3. Press PROG - button and highlight AUTO TUNE (APS).
4. Press VOL+ button to start the automatic tuning process.
5. After a few minutes the tuning will end and the first station stored will show on the TV screen.
6. Change channels by pressing the PROG+/PROG- buttons.

Notice: Only after finishing APS auto tune, channels will be sorted. If you stop the process during the auto tune period, channels will be searched and stored, however, the channel will not be sorted into their correct channel order.

Manual Tuning

1. Press Menu button.
2. Press Vol+ or - button repeatedly until the TUNER icon is highlighted.
3. Press the PROG- button and highlight Program and change the Channel number showing to the number that you wish to store or change the TV station showing by pressing Vol+/- button.
4. Press Prog - button repeatedly and highlight MANUAL TUNE.
5. Start the manual tuning process by pressing the VOL+ or VOL- button.
6. When the desired TV station is showing press the MENU button to return the TV to its normal operation. The TV station will be automatically stored into the channel number that was previously inputted.
7. To store further channel repeat above steps but this time change the channel number in step 3 to your next desired stored channel number 2,3, etc.

Fine Tune

Press "VOL.+" / "VOL.-" button to adjust the little change of frequency.

Function menu



In the Function Menu, OSD languages and APS related options are displayed on the screen.

Menu Language

The Language is English only.

Country

Select your location country: UK / Greece / Hungary / Italy / Norway / Netherlands / Portugal / Poland / Sweden / Slovenia / Slovakia / Turkey / Austria / Belgium / Switzerland / Czech / Germany / Denmark / Spain / France / Finland.

Notice: Different countries will effect the sort process in APS AUTO TUNE.

Factory Reset

Press "VOL+" key to delete all previously stored program information.

PIP menu



The last Menu is PIP menu, you can select Mode, PIP H-POS, PIP V-POS, Brightness, Contrast, Sub Source and Swap items by pressing PRGO+/- Buttons.

Mode

The choices are PIP and Off. Only by choosing PIP, you can enter PIP H-POS, PIP V-POS, Brightness, Contrast, Sub Source and Swap items.

PIP H-POS

Press the button to change horizontal position.

PIP V-POS

Press the button to change vertical position.

Note PIP (Picture In Picture) is used to display an external source such as PC/DVD/Skybox/Freeview box at same time as displaying the TV channel that you are watching.

Brightness

Press the "VOL.+" / "VOL.-" button to lighten/ darken the picture in PIP state.

Contrast

Press the "VOL.+" / "VOL.-" button to increase/ decrease the contrast of the picture in PIP state.

Sub Source

The choices are VGA,HDMI,YPbPr.

Swap

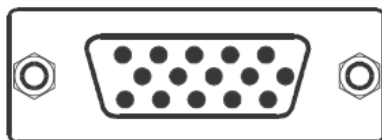
Press "VOL.+" button to swap the picture between PIP and TV state.

PC MODE

Installation

- Power off both Computer and Display before making any connections.
- The monitor comes with a 15-pin PC cable. Connect end of the signal cable to the 15-pin connector on the rear of the Computer.

15 Pin Mini D-Sub Connector



- Tighten the screws of the Display cable until the connectors are fastened securely at both ends (finger-tighten only).
- If you are using Windows operating system running on a PC with a Microsoft Plug & Play compatible video card, your system **will** select the appropriate timing for your monitor.

MENU in PC Mode

Enter menu by pressing the "MENU" button on the remote control.

Picture menu



Sound menu



Adjust menu



Using "PROG.+" / "PROG.-" to select different items, press "VOL.+" / "VOL.-" to set different values in Frequency, phase, H-position and V-position.
When you select Auto adjust pressing "VOL.+" to adjust different picture modes automatically.

Function menu



PIP menu



In PC modes, the sub source options are TV, AV, SCART 1, SCART 2, S-VIDEO, which are different from TV mode.

PC Input typical display modes.

The following table is an illustration of some of the typical video display modes.

1	640X480(recommend 60Hz)
2	800X600(recommend 60Hz)
3	1024X768(recommend 60Hz)
4	480i
5	480p
6	576i
7	576p
8	720i (50/60Hz)
9	720p(50/60Hz)
10	1080i(50/60Hz)

HDMI Input Resolutions

PIP menu



In the PIP menu, the external sources that can be used source are AV, SCART 1, SCART 2, S-Video.

HDMI Input typical display modes.

The following table is an illustration of some of the typical video display modes.

1	640X480(recommend 60Hz)
2	800X600(recommend 60Hz)
3	1024X768(recommend 60Hz)
4	480i
5	480p
6	576i
7	576p
8	720i(50/60Hz)
9	720p(50/60Hz)
10	1080i(50/60Hz)

YPb Pr Mode(Component input)

The menu of YPb Pr mode is exactly same as the menu of HDMI mode.

YPbPr Input typical display modes.

The following table is an illustration of some of the typical video display modes.

1	480i
2	480p
3	576i
4	576p
5	720i(50/60Hz)
6	720p(50/60Hz)
7	1080i(50/60Hz)

Teletext

Teletext is an information system that displays text on the TV screen. Using the Teletext information system you can view a page of information on a subject that is available in the list of contents (index).

On screen display is not available in text mode.

Contrast, brightness or colour control is not available, but volume control is available in text mode.

To operate Teletext

- Select a TV station on which Teletext is being transmitted.
- Press "Text" button. Usually the list of contents (index) is displayed on the screen.

To select a page of Teletext

- Press the appropriate digit buttons for the required Teletext page number.

The selected page number is displayed at the top left corner of the screen. The Teletext page counter searches until the selected page number is located, so that the desired page is displayed on the screen.

- Press "PROG.+" button to move the Teletext screen forward one page at a time.
- Press "PROG.-" button to move the Teletext screen backward one page at a time.

To Select Index Page

- To select the page number of the index (generally page 100), press "MIX" button.

To mix Teletext with a TV Programme

- Press "MIX" button. The text is now superimposed over the programme on the screen.
- Press "MIX" button again to return to the Teletext page.

To Select Double Height Text

- Press " SIZE " button for the top half of the in- formation page to be displayed in double height text.
- Press " SIZE " button again for the bottom half of the information page to be displayed in double height text.
- Press "SIZE" button once more for the full page of normal height text.

To Reveal "concealed" Information

- Pressing "REVEAL" button once will reveal answers on a quiz or games page.
- Pressing " REVEAL" button again will conceal the revealed answers.

To Stop Automatic Page Change

The teletext page selected may contain more information than that shown on the screen; the rest of the information will be displayed after a period of time.

To Select a Subcode Page

Subcode pages are subsections of long Teletext pages that can only be displayed on the screen one section at a time.

- Select the required Teletext page.
- Press "SUB.PAGE" button.
- Select the required subcode page number by pressing four digit buttons (e.g. 0001).
- If the selected subcode page is not displayed in a short time, press "SUB.PAGE" button. TV programme will be displayed on the screen.
- Teletext page number will be displayed on the upper left corner of the screen when the selected page is found.

Fastext

This TV supports a 500 page Teletext system. When the page number of any of the 7 pages in memory is entered, the system will not search for the requested page; instead it will display the page automatically.

- Press " PROG.+ " button to move the Teletext screen forward one page at a time.
- Press " PROG.- " button to move the Teletext screen backward one page at a time.

For Fastext

The subject-heading for the information may have a particular colour.

- Press an appropriate **Red, Green, Yellow** or **Blue** button in order to reach the relevant page quickly.

To Cancel TEXT

- Press "CANCEL" button to clear the TEXT. But the page number is still displayed on the left top of the screen. **NOTICE:** However, Teletext is playing all the same on the background at the time.
- Press "CANCEL" button again to resume the TEXT.

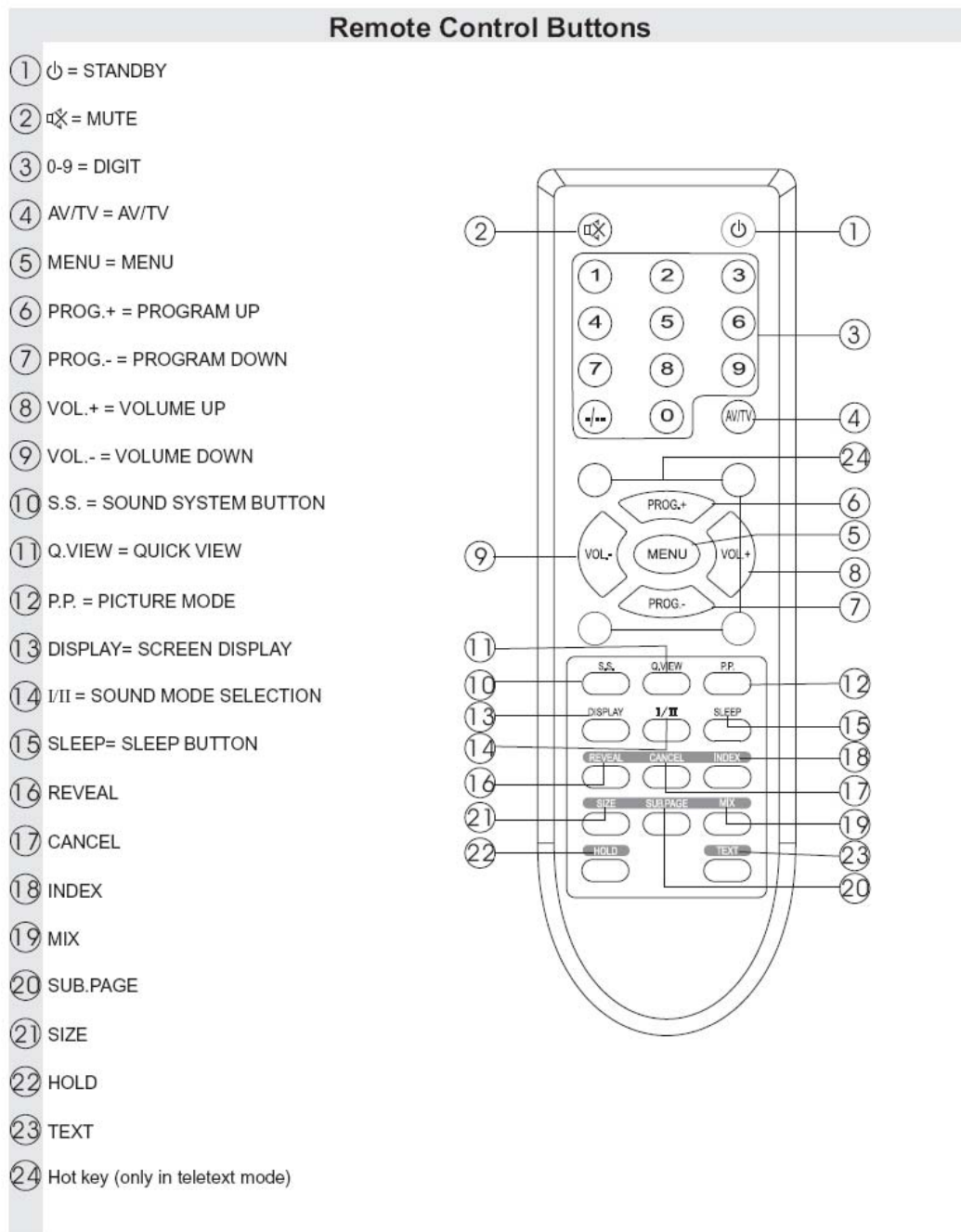
To Freeze TEXT

Press "HOLD" button to hold a Text page. This means the page will not change and refresh. Press the button again to release the hold state.

To exit Teletext

- Press the "TEXT" button. The screen will switch to TV mode.

REMOTE CONTROL



The following page will show the remote control functions.

Remote control functions

1. POWER (STAND BY) BUTTON ()

Press this button to turn the TV on/stand by.

2. MUTE BUTTON ()

Press once to mute the sound, press again to return to preset sound level.

3. PROGRAM SELECTION BUTTONS (0-9, -/-)

Use 0-9 digit buttons, you can directly call one or two digits program number that you want. Press -/- after the screen display --or ---, You can press digit number button directly to select two / three digit numbers.

In CATV system if you want to watch the channel from 100 to 125, such as channel 123, please press

"-/-" first, and press 2 and 3 in turn.

4. AV/TV BUTTON

Press this button to display external video signal such as SCART1 /SCART2/AV/S-VIDEO/YPbPr/VGA/HDMI/TV.

Using "PROG.+" / "PROG.-" Button select item and press "VOL.+" / "VOL.-" button to enter selected item.

5. MENU BUTTON (MENU)

Press this button to enter the menu mode for various Optional adjustable settings. To look for more information, Please turn to page 10.

6-7. "PROG.+" / "PROG.-" BUTTONS

Press PROG. + or PROG. - button to select the program forwards or backwards.

8-9. VOL. + / VOL. - BUTTONS

Press "VOL.+" / "VOL.-" Buttons to adjust sound level. Or adjust the volume of each item in the menu status.

10. SOUND SYSTEM BUTTON (S.S.)

Set the correct sound system in TV mode. Such as DK, BG, I, M, L, L by pressing this key.

11. QUICK VIEW BUTTON (Q.VIEW)

This button toggles between the current programme and the previously watched programme. Pressing "Q. VIEW" swaps between the two last watched programmes.

12. PERSONAL PRESETS BUTTON (P.P.)

You can set the picture mode in User, Standard, Soft, Bright mode by pressing this button.

13. DISPLAY BUTTON

Press this button to display the program information on the screen. (e.g. Channel number for TV input, sound mode, colour system).

14. STEREO/BILINGUAL SOUND () BUTTON (OPTION)

When stereo program is received, press this button to select STEREO or MONO. When bilingual program is received, press this button to select NICAM DUAL-1, NICAM DUAL-2, NICAM MONO.

15. SLEEP BUTTON

Press this button to set the sleep timer. When the preset length of time has passed, the TV set

Enters standby mode. The sleep timer values are follows: off, 15, 30, 60, 90, 120.

16. REVEAL BUTTON

Press this button to reveal the hidden information for some Teletext pages press again to hide the information.

17. CANCEL BUTTON

Press this button to appear the TV signal on the background.

18. INDEX BUTTON

Press this button to enter the Teletext's Index MENU.

19. MIX BUTTON

The button is used as closing /opening the teletext background..

20. SUB.PAGE BUTTON

Subcode mode, gives, the possibility to select certain subcode pages of a teletext page.

21. SIZE BUTTON

In Teletext mode press this button to change the Teletext size. If not in teletext mode, press size button change image size.

In other modes, press this button you can select different image sizes: 4:3 / Zoom 1 / Zoom 2 / Panorama / Full Screen.

22. HOLD BUTTON

Press this button to hold the Teletext page no display to prevent the page from changing. Press again to release the hold state.

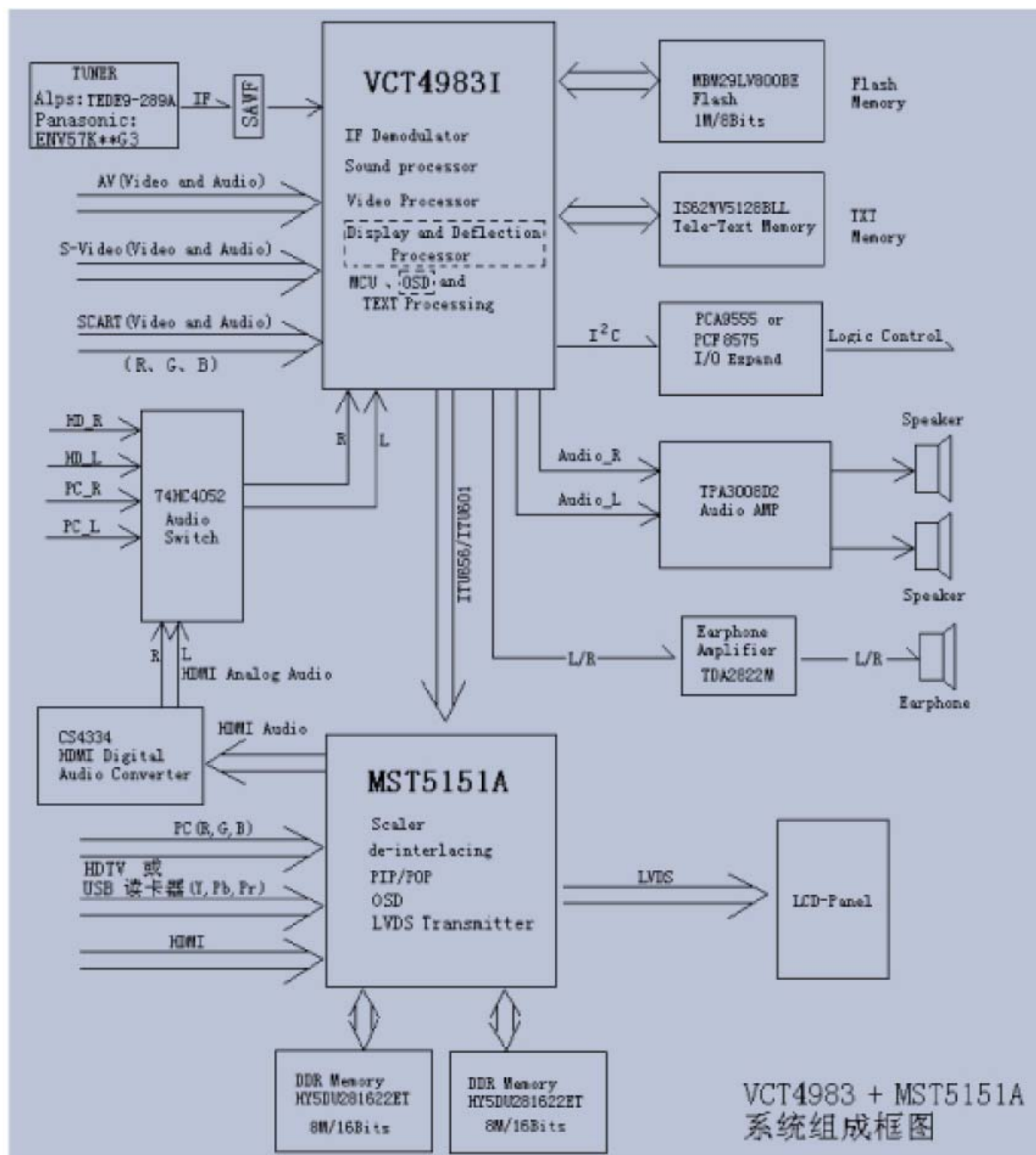
23. TEXT BUTTON

This button is used for entering the teletext MENU.

24. HOT KEY

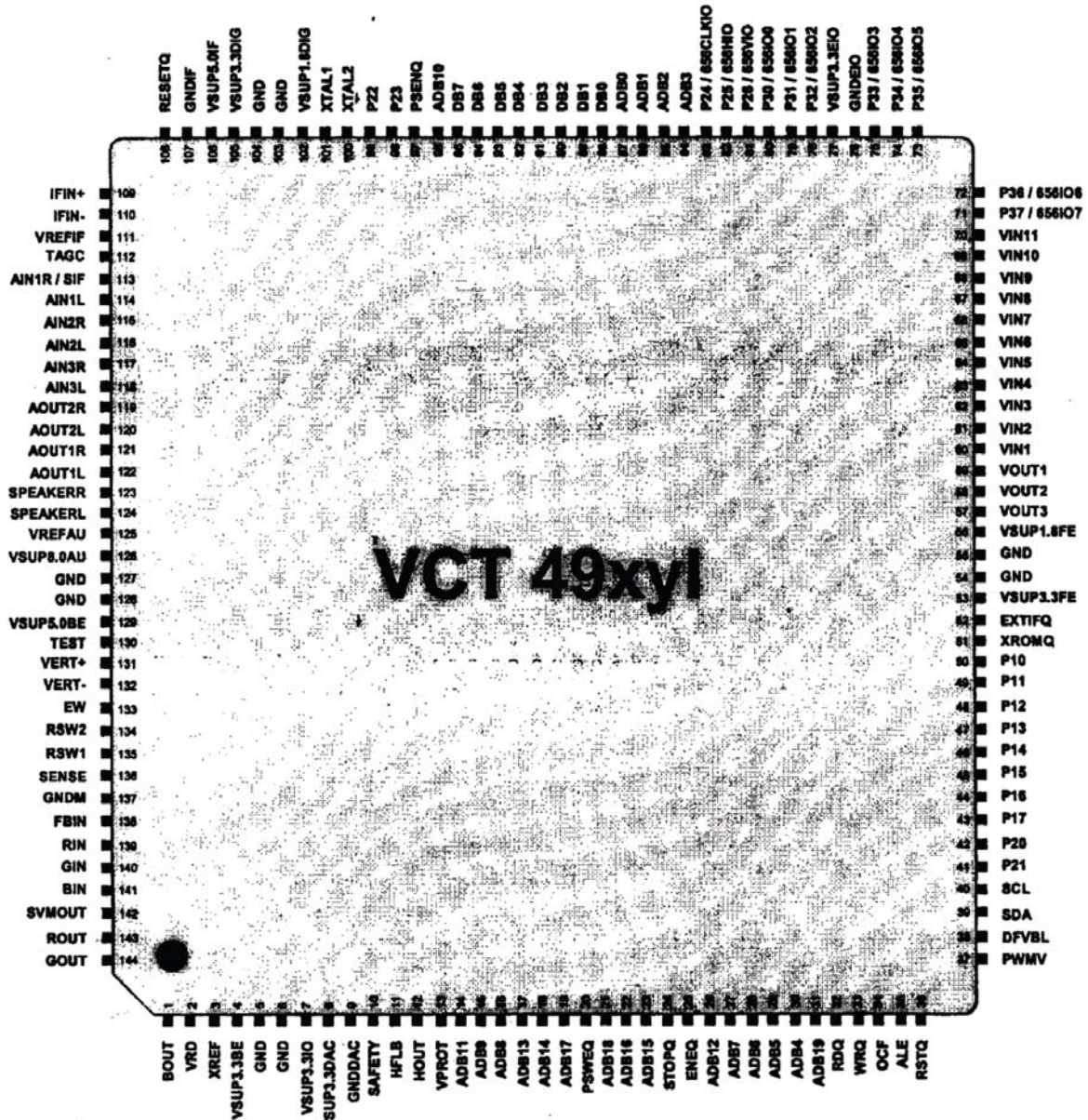
The four buttons are provided as a quick way to enter some pages.

BLOCK DIAGRAM



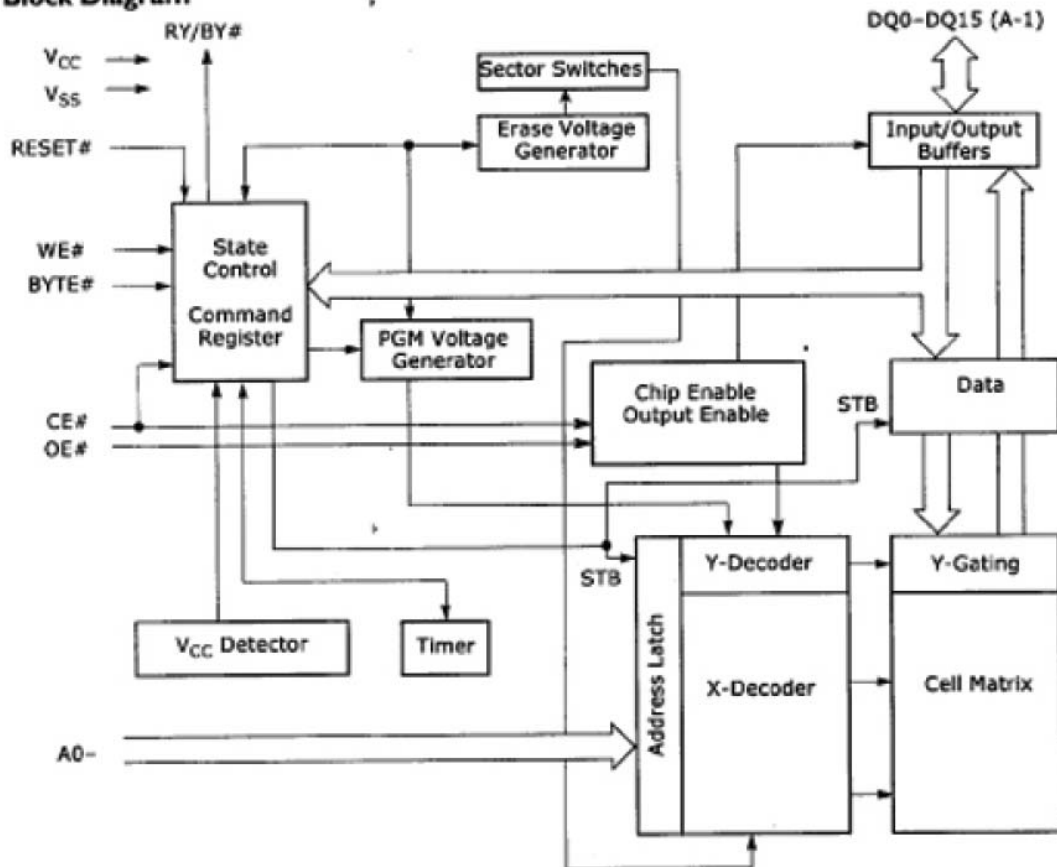
IC BLOCK DIAGRAM

U603 (Video Controller) VCT49X3R-XX-F2

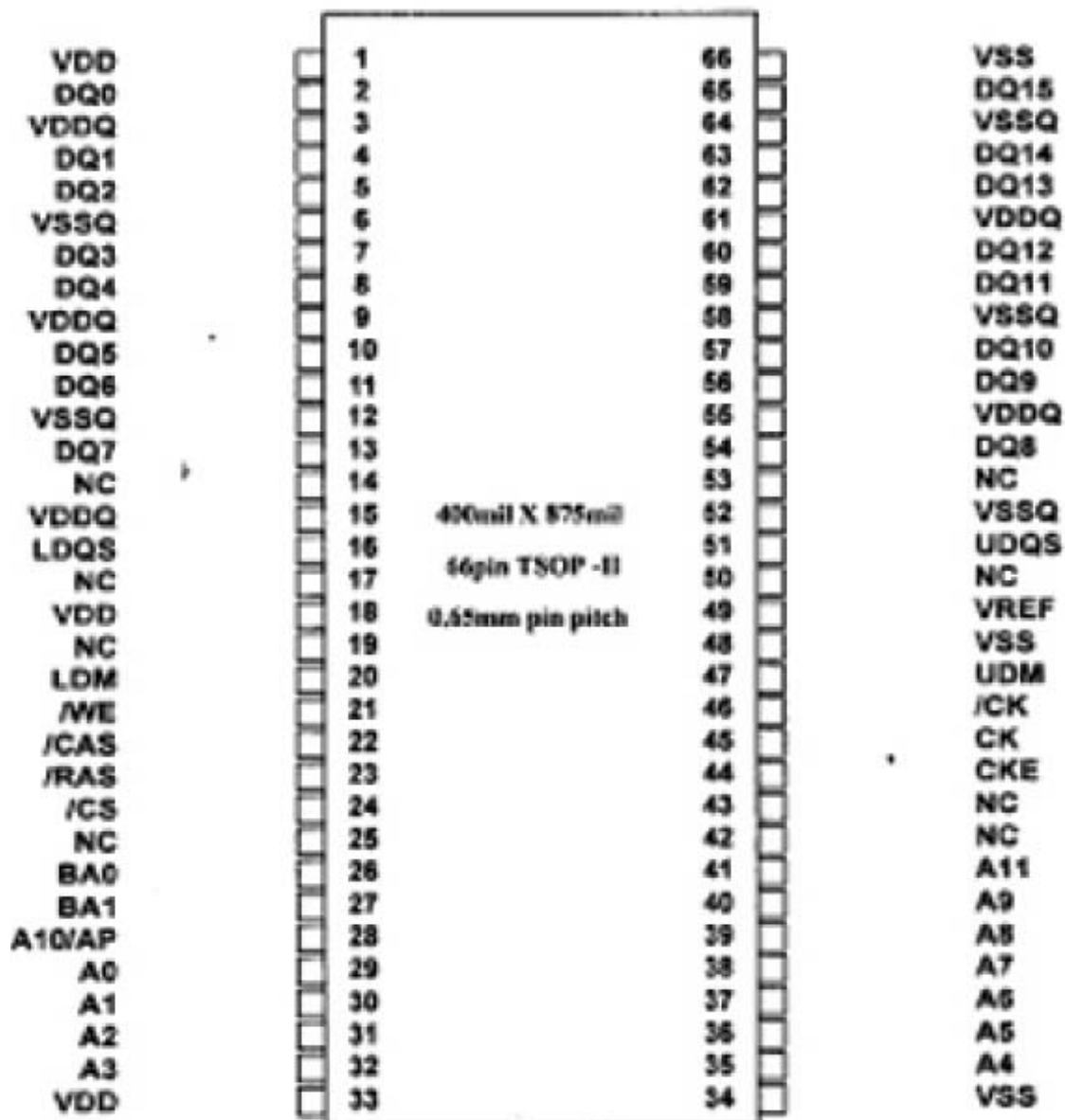


U606 (8M CMOS 3V Boot Flash Memory) AM29LV800D-90EC

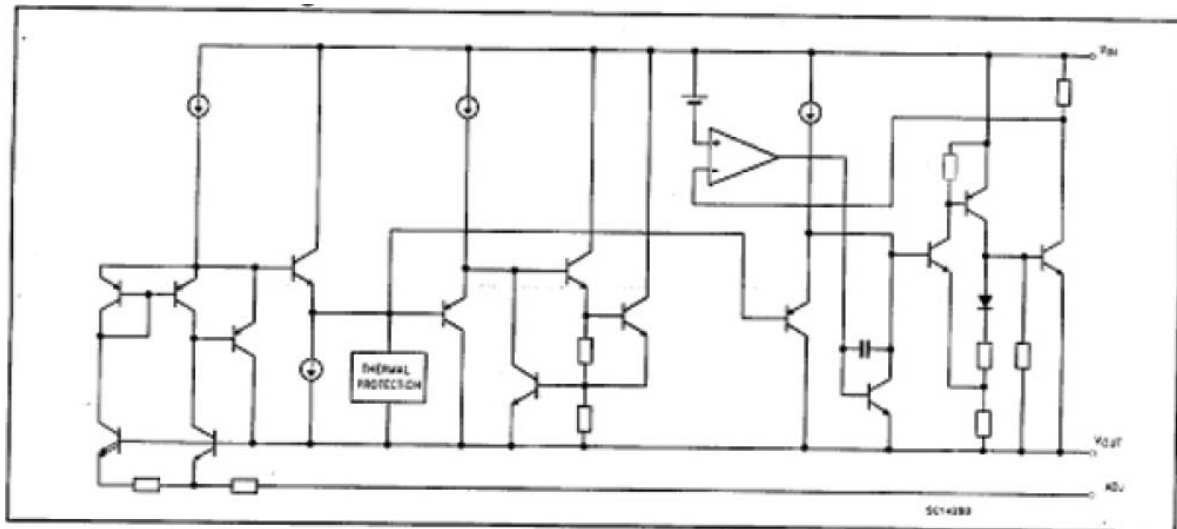
Block Diagram

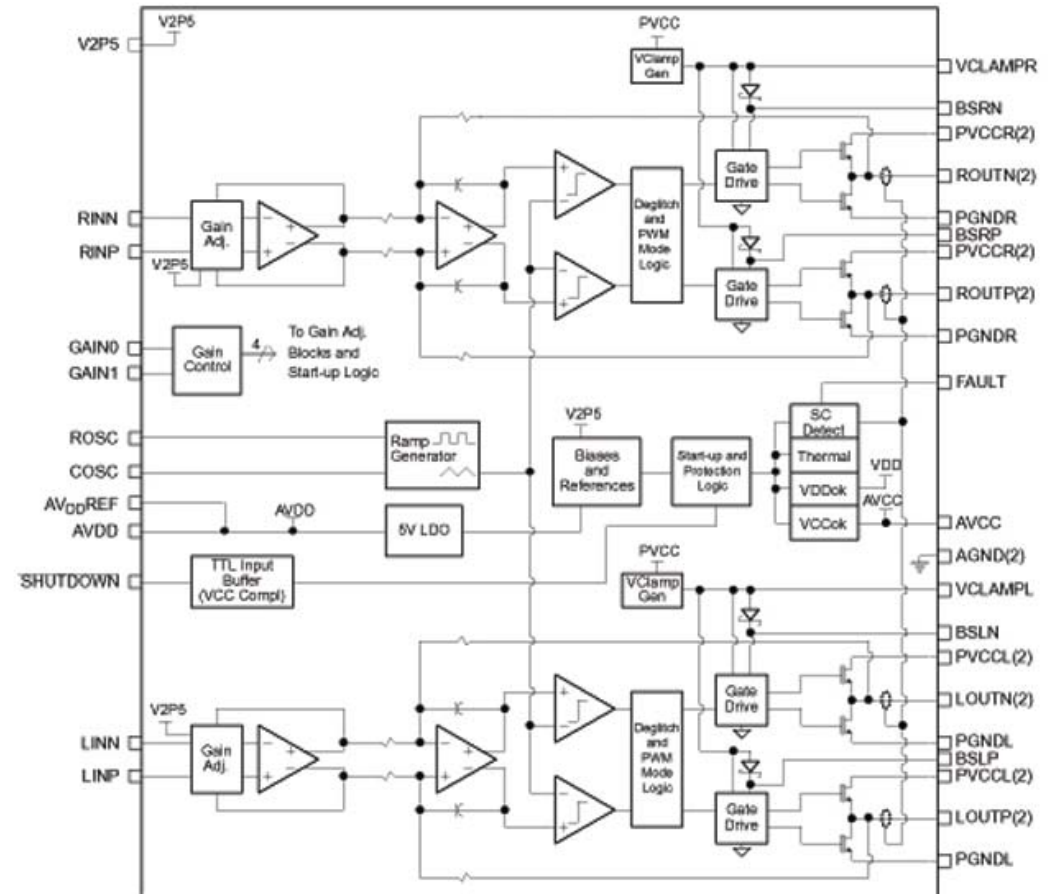
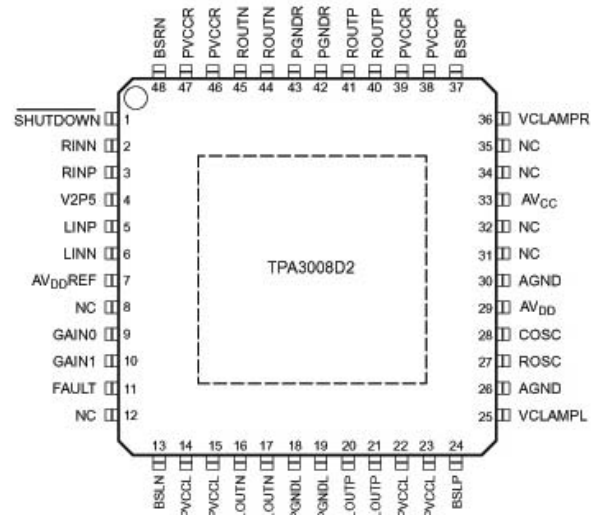


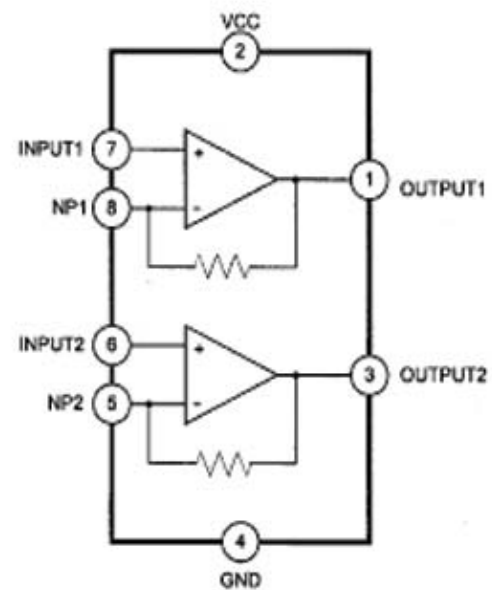
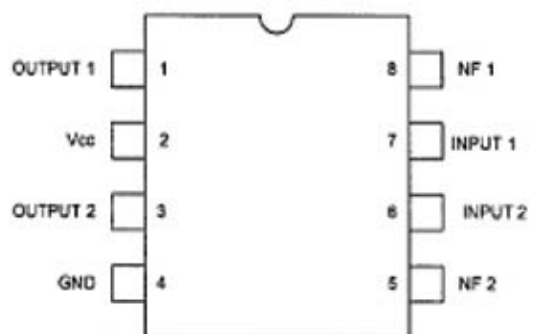
U213 (128M<8M*16>g DDR SDRAM) HY5DU281622ET-5



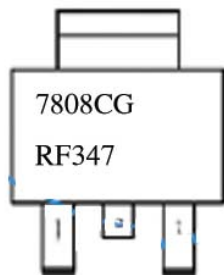
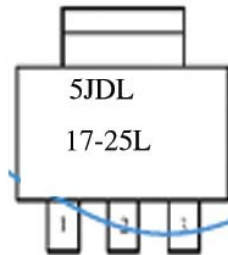
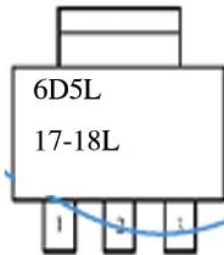
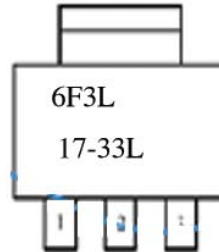
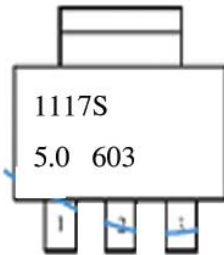
U203 (3A 1.8V FIXED REGULATOR) LD1085D2M18







TRANSISTOR MARK



SERVICE ADJUSTMENT

1. Enter the factory mode:
Press the “menu” key on the remote control unit, move to SOUND submenu, choose Balance (the character “Balance” turn pink), press the number keys 9883 in turn.
2. The factor main menu:

```

Service Mode
Language Option 1
Language Option 2
Hotel Option
Deviation Settings
DRX
NVM Edit
Initialize NVM from ROM
MinMidMax Init
Scaler

```

3. Use PROG+/PROE- to choose the options, the option which has been choosed display red.
4. After choosing the option, press VOL+ to enter the option, then you can set differernt parameter.
5. System option:

```

Option PAL                < Yes >
Option NTSC                < Yes >
Option SECAM               < Yes >
Option BG                  < Yes >
Option DK                  < Yes >
Option I                   < Yes >
Option M/N                 < Yes >
Option L                   < Yes >
Option LL                  < Yes >
Option Naming              < Yes >
Option APS                 < Yes >
Powerup ATS                < Yes >

```

The options in system mainly contain the switch of some color and sound sys, set “yes” or “no” with the VOL+ key. Option Naming can be used to switch the naming of saving programs in APS, Option APS can switch the function of searchand compositor in the searching state. Powerup ATS can switch the Factory Reset in theFUNCTIONMENU. The word in the < > at the right side of options shows the current option state, <yes> means”on”and <no> means”off”.

The default state is <yes>.

6. IC Option:

```

Option HDMI                < Yes >
Option HDCP                < Yes >
Option DVI and HDMI        < Yes >

```

When Option HDMI displays “yes”,HDMI is open and DVI is off ,when it displays “no”, the action is opposite. Option HDCP means to turn HDCP on/off(High-bandwidth Digital-Content Protection). The third item shows to turn on/off the interface of Hi-Fi digital. All of the default states is “yes”

7. Teletext Option:

Teletext On/Off	< Yes >
Teletext Language	< UK >

The first item shows the on/off state of Teletext function, the second item, the choice of language, available languages for selecting: UK, East Eu, Greece, Cyrilli, Arabic.

8. AV Option:

Option SCART1	< Yes >
Option SCART2	< Yes >
Option AV	< Yes >
Option SV	< Yes >
Option DVD	< Off >
Option SCART Output	< TV >

The items 1~4 can be set to “ yes” or “ no” which show the switches ofSCART1, SCART2,AV, S-VIDEO. There are three states can be set in Option DVD, they are Off, DVD and DTV, they show off, turn on DVD and turn on DTV. Option SCART Output can be set to AV or TV, they show SCART output signal or AV signal. The default setting is the same as the state above.

9. Language Option1&Language Option2:

The two options are menu language setting, each of them has “yes” and “no” state. You can set Menu language in FUNCTION MENU when the language is set to “yes”.English is only set in the default setting, others are off.

10. Hotel Option:

Search Menu Display	< Yes >
Blue Screen	< Yes >
Option Reset	< Yes >
Fixed Volume	< No >
Max Volume	< +100 >
Local Key Operation	< Yes >
Power On Program	< REM >
Power On Source	< TV >
Power On Status	< REM >
Logo Edit	
APS As Philips	< Yes >

Search Menu Display shows turn on/off the search menu. The volume will stop at the prior setting and can't be changed by pressing VOL+ or VOL- when the Fixed Volume is set to "yes". Local Key Operation shows whether the key-board is in effect. Power On Program can be set to REM, +1~+200, corresponds to channel 1~200 in under memory state. Power On Source is the setting of boot-strap input fountain, TV and AV. There are REM, On and Off three settings under Power On Status, they show:

Press VOL+, enter Logo Edit, two options:

Logo Edit	-----
LogoFontSize	< + 2 >
LogoOnOff	< Yes >

The first item can edit the menu in turning on to set, you can use two number keys under LogoFontSize menu to input twenty-six letters and Space, you can edit ten letters at most. Use LogoFontSize to set the size of Logo, There are +1, +2, +3, +4 available. LogoOnOff shows the switch of Logo.

APS As : according to the standard of Philips.
The default value is the same as the state above.

11. Deviation Settings

M Japan	< +24 >
BTSC	< +24 >
DK Dual	< +24 >
BG	< +24 >
NICAM L	< +10 >
NICAM I	< +24 >
DK NICAM	< +24 >
FM Radio	< +24 >

12. DRX

Standard Select	< B >
TOP Setting	< +8 >
Video Peaking	< -1 >
SIF Reference	< +2 >
Subcarrier adjustment	< +20 >

13. NVM Edit

NVM—edit addr. (hex)	---
NVM—edit data (hex)	--
Write	

Choose the edit address in NVM-edit addr, the value will display in the data item. Simultaneously, use VOL+ and VOL- to change the values, use VOL+ to write the address.

In the White item.

14. Initialize NVM from ROM

Initialize EEPROM, press VOL+ to enter the option, Initialize NVM from ROM menu will show the clew, press VOL+ to go on and press it again to initialize EEPROM.

15. MinMidMax Init

Volume0	< -99 >
Volume1	< -85 >
Volume10	< -45 >
Volume25	< -25 >
Volume50	< -10 >
Volume75	< -3 >
Volume100	< +2 >

Set sound curve in the option, the default setting is the same as the state above.

16. Scaler

ADC Rgain	< +128 >
ADC Ggain	< +128 >
ADC Bgain	< +128 >
ADC Roffset	< +128 >
ADC Goffset	< +128 >
ADC Boffset	< +128 >
Rgain	< +128 >
Ggain	< +128 >
Bgain	< +128 >
Roffset	< +128 >
Goffset	< +128 >
Boffset	< +128 >

17. After setting the parameters, press MENU to save the setting and exit from the factory submenu.

TROUBLESHOOT

Before calling for service, you can check the following items on symptoms and solutions.

No picture:

Check other channel, maybe station problem.
Adjust the tuning control.
Ensure that the input setting is at TV state.
Ensure that the LCD is on.
Ensure that the equipment is connected properly.

No sound and distorted sound:

Ensure that the input settings for the TV and sound are proper.
Adjust the tuning control.
Probably local interference, such as an appliance.
Re-orient aerial(if indoor type).
Ensure that the equipment is connected properly.

No remote Control:

Check the battery are installed with the correct polarity.
Point the remote control unit at the remote control sensor and operate.
Remove the obstacles between the remote control and the remote control sensor.
Operate the remote control unit at a distance of not more than 8 meters from the remote control sensor.

Troubleshooting tips(PC mode):

“NO SYNC SIGNAL” or “POWER SAVE” displayed

Check if the wire is connected correctly.
Ensure the computer or other equipments are at power on mode.
Ensure the computer is not at power save mode.
Ensure the TV input setting is at pc mode.

“Invalid Scan Fred” displayed

Check if the input setting is compatible to the monitor specification.
Check if the wire is connected correctly.

Led lamp indicator on but no picture

Check the monitor setting :contrast ,brightness.
Check if the wire is connected correctly.

Some unusual spots on screen:

Some dot defects may appear on the screen, like red, green or blue, Spots, However, this will have no impact or effect on the monitor performance.

CAUSE OF INTERFERENCE

Incorporated in your TV receiver are the most up-to-date devices to eliminate interference. Local radiation however, can create disturbances which visibly affect your picture. Proper installation, a good aerial are your best safe-guards against these disturbances.

RF INTERFERENCE

Moving ripples across the screen are caused by nearby transmitting or receiving short-wave radio equipment.

DIATHERMY

Herringbone pattern and partial picture loss can result from the operation of diathermy equipment from a nearby doctor's surgery or hospital.

SNOW

Weak TV signals from long distant stations result in an instead picture and give the effect of falling snow. An antenna adjustment or antenna amplifier may be needed.

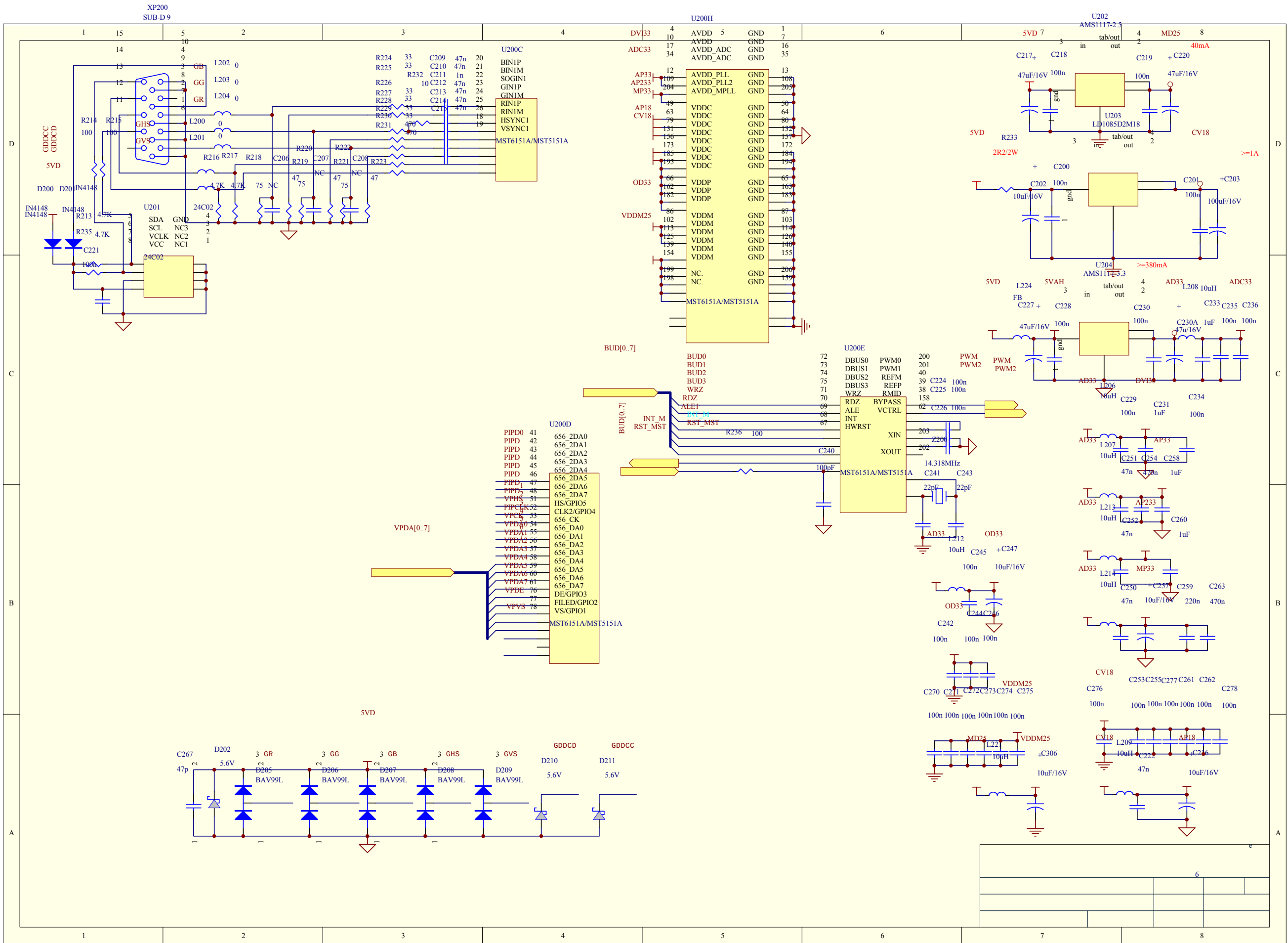
GHOST

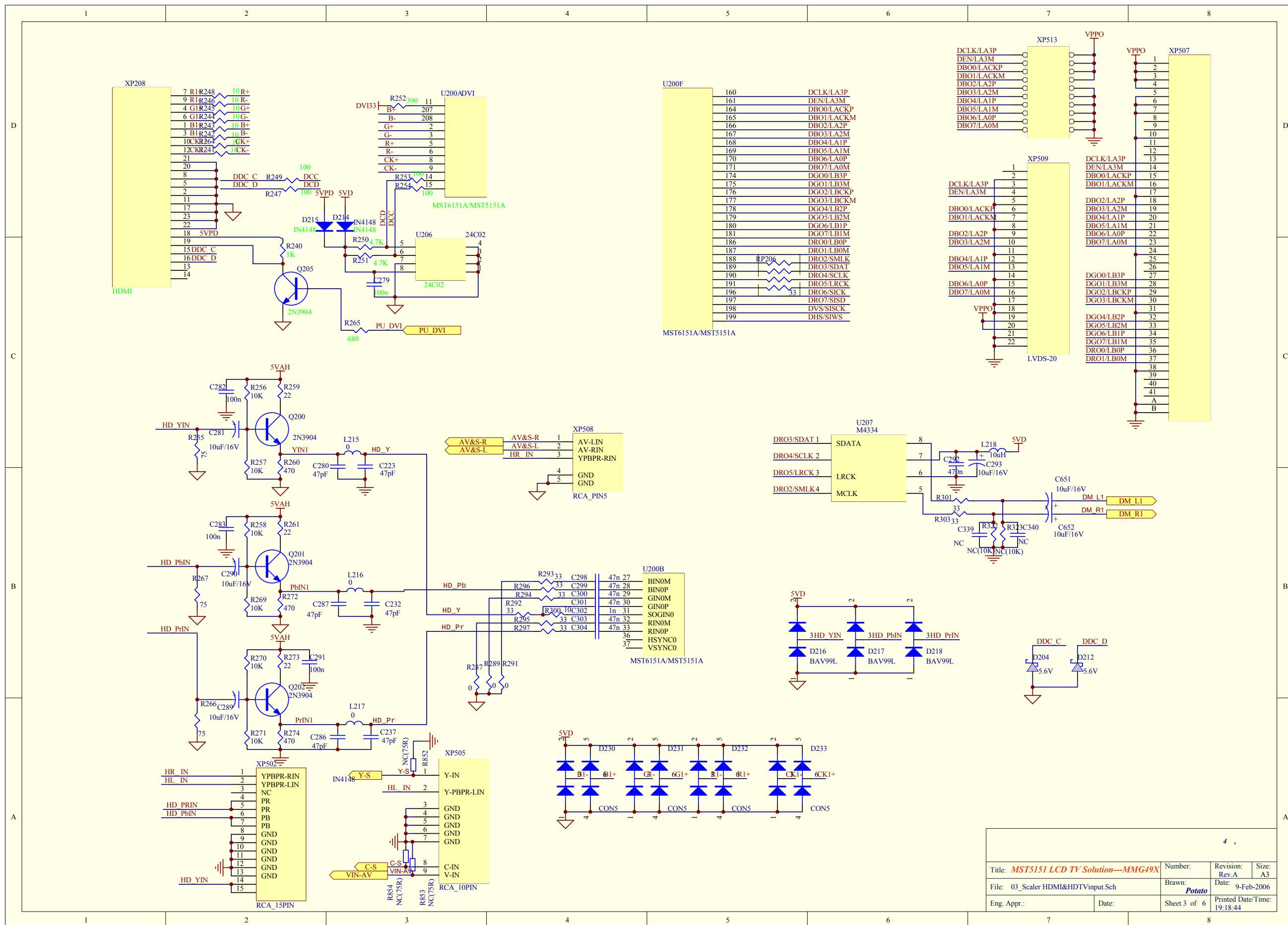
Multiple image caused by TV signals reflected back from surrounding buildings, hills, aircraft, ect. Is minimized by correct aerial positioning.

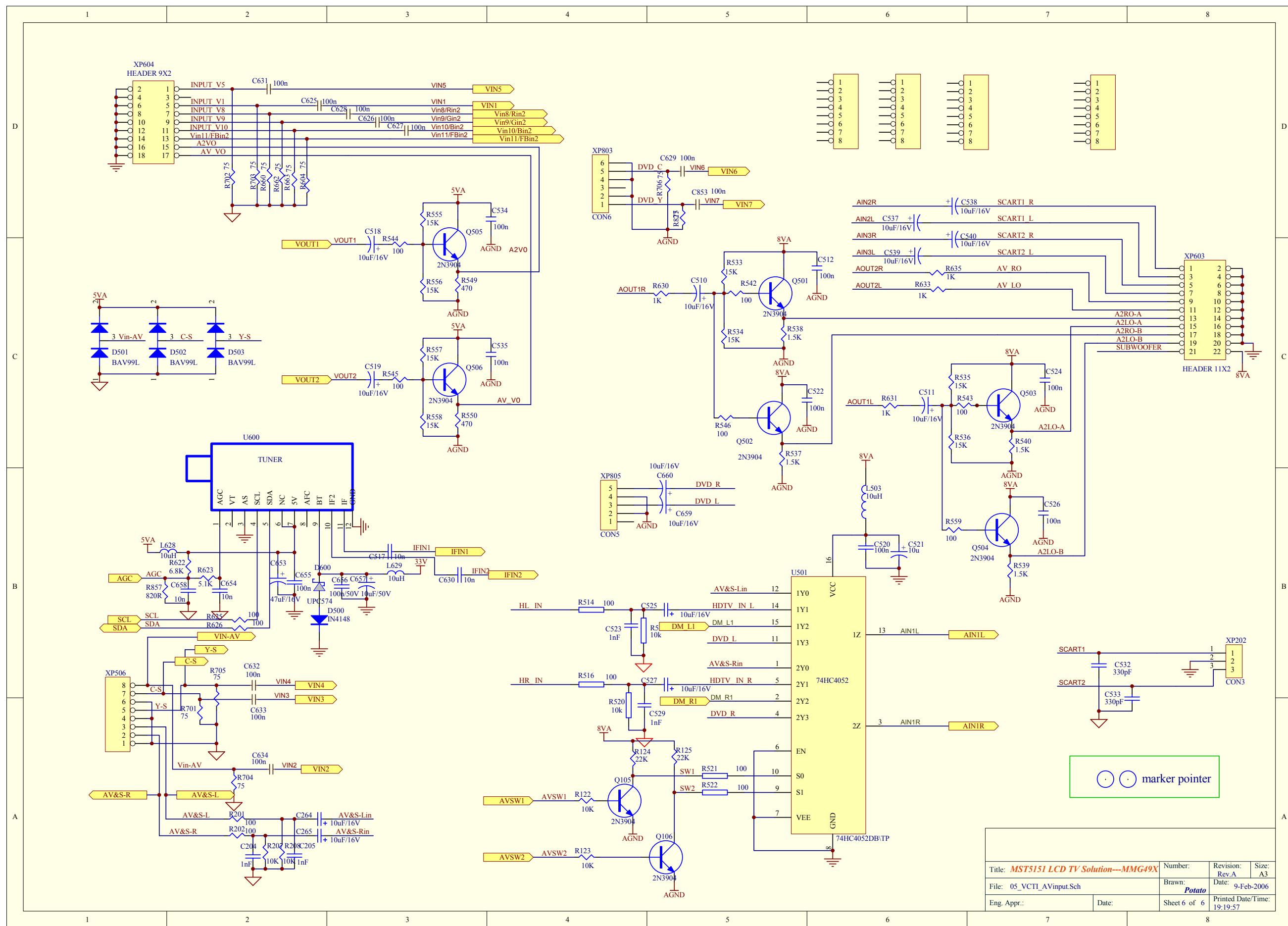
CAR IGNITION

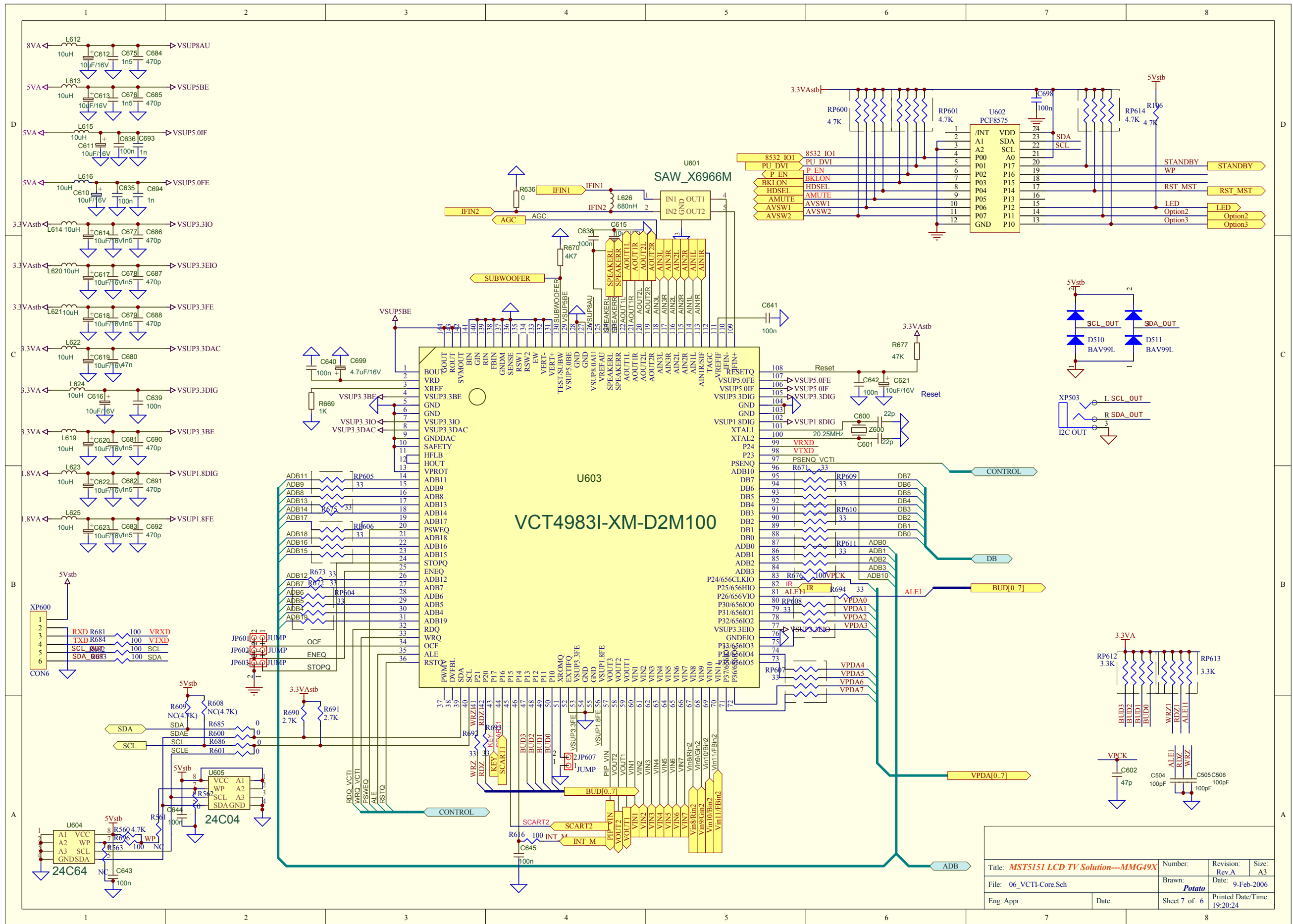
Nearby cars and electrical motors can cause small streaks across the picture or make the picture roll.

APPENDIX

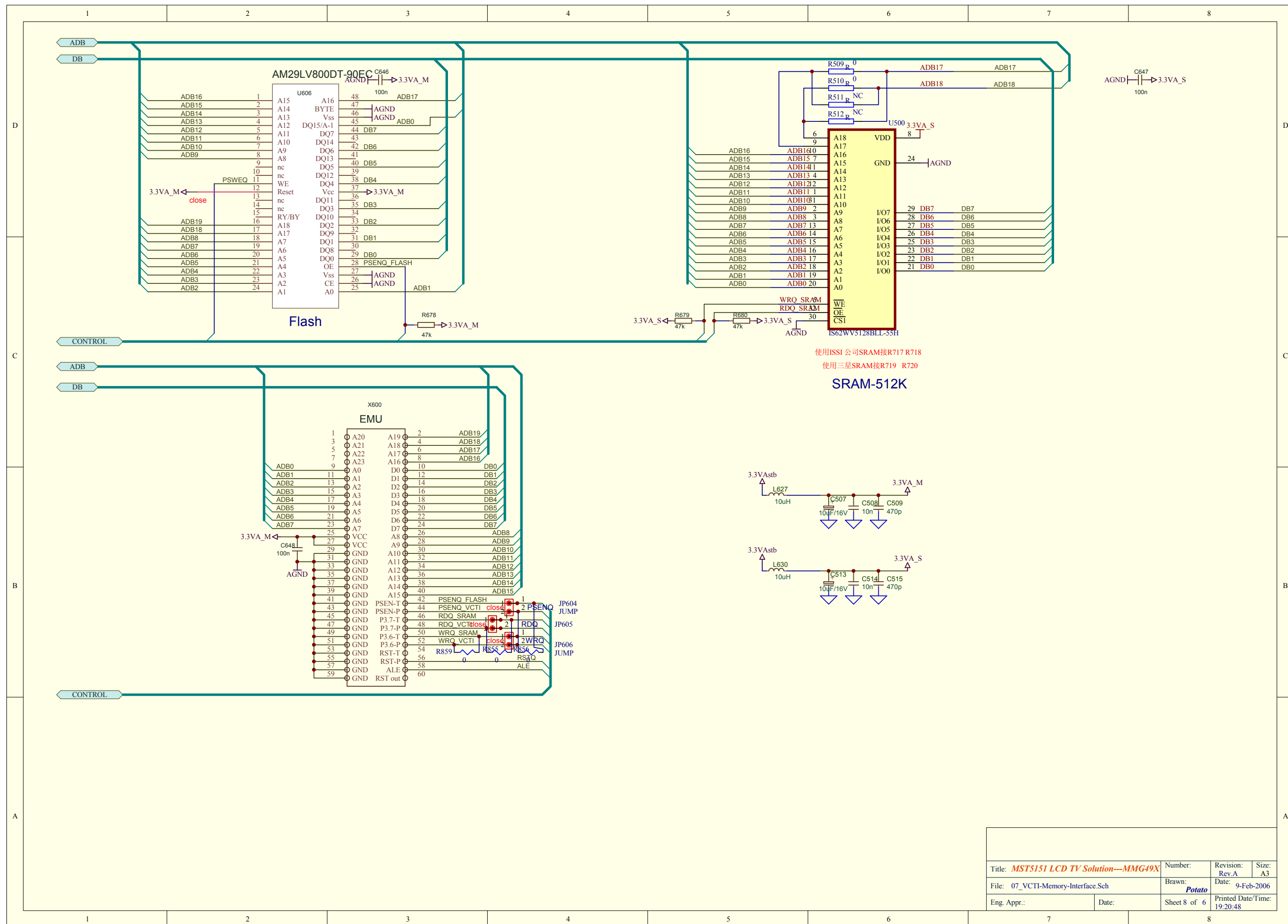


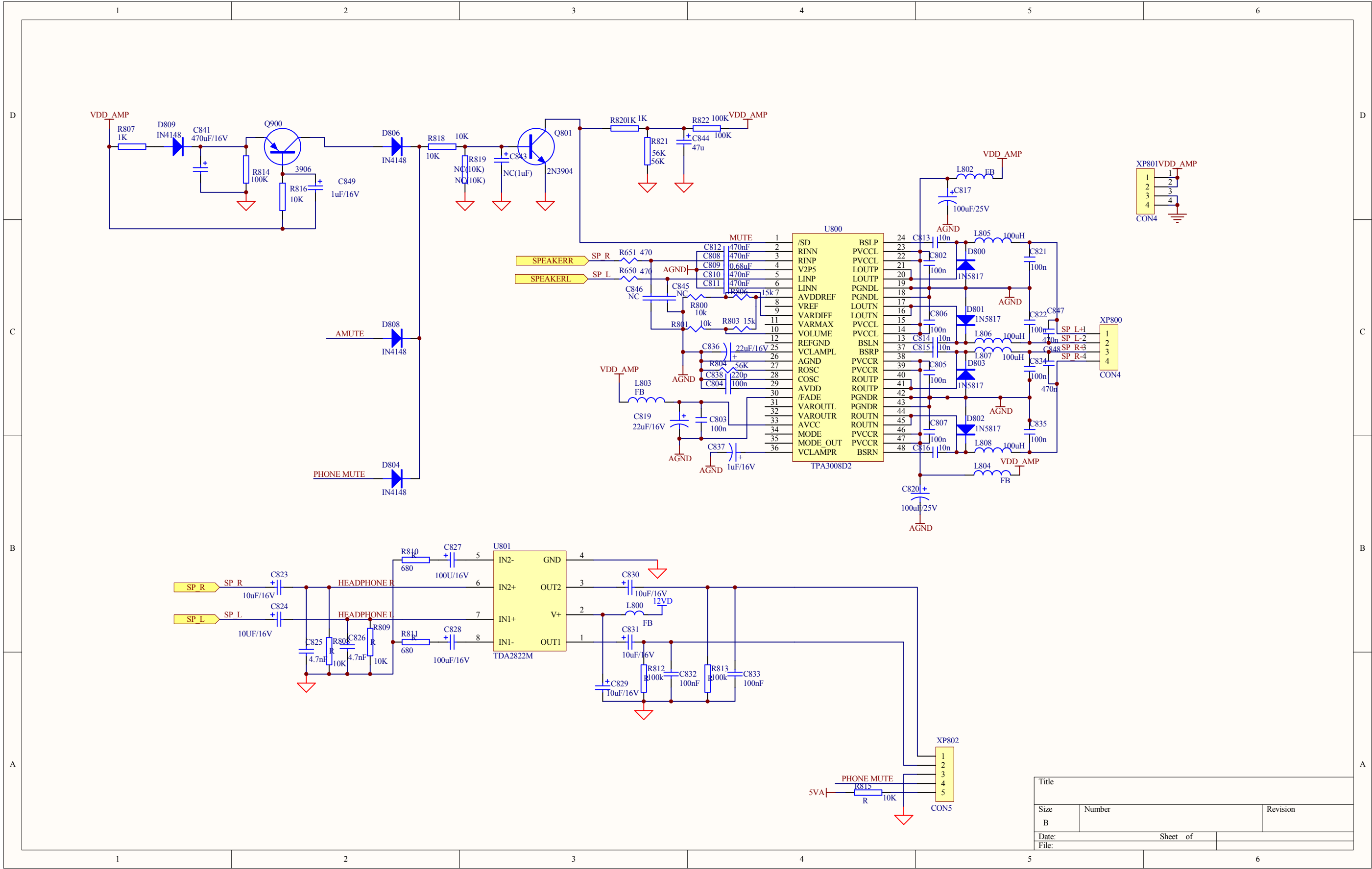






Title: MST5151 LCD TV Solution---MMG49X	Number:	Revision: Rev. A	Size: A3
File: 06_VCTI-Core.Sch	Brawn: Potato	Date: 9-Feb-2006	
Eng. Appr.:	Date:	Sheet 7 of 6	Printed Date/Time: 19:20:24





Title		
Size	Number	Revision
B		
Date:	Sheet of	
File:		

D

C

B

A

1

2

3

4

01_SYSTEM_POWER
01_SYSTEM_POWER.Sch

☐ PWM	☐ P_EN
☐ BKLON	
☐ STANDBY	☐ DVD_L
☐ KEY	☐ DVD_R
☐ IR	
☐ PWM2	
☐ Option2	
☐ Option3	

02_Scaler_PC &601 &MCU
02_Scaler_PC &601 &MCU.Sch

☐ PWM	☐ BUD[0..7]
☐ RST_MST	☐ VPDA[0..7]
☐ INT_M	
☐ PWM2	

03_Scaler HDMI&HDTVinput
03_Scaler HDMI&HDTVinput.Sch

☐ PU_DVI	☐ VIN4
☐ DM_L1	☐ DVD_L
☐ DM_R1	☐ DVD_R
☐ VIN3	☐ AV&S-L
☐ VIN2	☐ AV&S-R

07_VCTI-Memory-Interface
07_VCTI-Memory-Interface.Sch

☐ ADB	
☐ DB	
☐ CONTROL	
☐ CONTROL	
☐ ADB	
☐ DB	

04_Scaler DDRAM
04_Scaler DDRAM.Sch

--	--

05_VCTI_AVinput
05_VCTI_AVinput.Sch

☐ VOUT1	☐ AGC
☐ SDA	☐ SCL
☐ IFIN1	
☐ VOUT2	☐ Y-S
☐ VIN3	☐ C-S
☐ VIN4	☐ VIN-AV
☐ VIN5	
☐ VIN1	
☐ VIN2	
☐ Vin10/Bin2	
☐ Vin9/Gin2	
☐ Vin8/Rin2	☐ VIN6
☐ Vin11/FBin2	☐ VIN7
☐ AVSW1	☐ AV&S-L
☐ AVSW2	☐ AV&S-R
☐ AIN1L	
☐ AIN1R	
☐ DM_L1	
☐ DM_R1	
☐ IFIN2	

08_AMP_TPA3008
08_AMP_TPA3008.SCH

☐ SP_L	
☐ SP_R	
☐ SP_L	
☐ SP_R	

06_VCTI-Core
06_VCTI-Core.Sch

☐ DB	☐ VPDA[0..7]
☐ ADB	☐ AVSW1
☐ CONTROL	☐ AVSW2
☐ CONTROL	
☐ SCL	☐ DVD_STB
☐ SDA	
☐ PU_DVI	
☐ P_EN	
☐ BKLON	
☐ AIN3L	
☐ AIN3R	
☐ AIN2L	
☐ AIN2R	
☐ AIN1L	
☐ AIN1R	
☐ BUD[0..7]	
☐ BUD[0..7]	
☐ INT_M	
☐ IR	
☐ KEY	
☐ 8532_IO1	
☐ AOUT1L	
☐ AOUT1R	
☐ VOUT1	
☐ VOUT2	
☐ PIP_VIN	
☐ VIN7	
☐ Vin11/FBin2	
☐ Vin10/Bin2	
☐ Vin9/Gin2	
☐ Vin8/Rin2	
☐ AOUT2L	
☐ AOUT2R	
☐ SCART1	
☐ SCART2	
☐ VIN1	
☐ VIN4	
☐ VIN3	
☐ VIN5	
☐ VIN6	
☐ VIN2	
☐ AGC	
☐ SPEAKERL	
☐ SPEAKERR	
☐ AMUTE	
☐ SUBWOOFER	
☐ IFIN1	
☐ RST_MST	
☐ STANDBY	
☐ LED	
☐ Option2	
☐ Option3	
☐ HDSEL	
☐ IFIN2	

Title		
Size	Number	Revision
A4		
Date:	9-Feb-2006	Sheet of
File:		

1

2

3

4

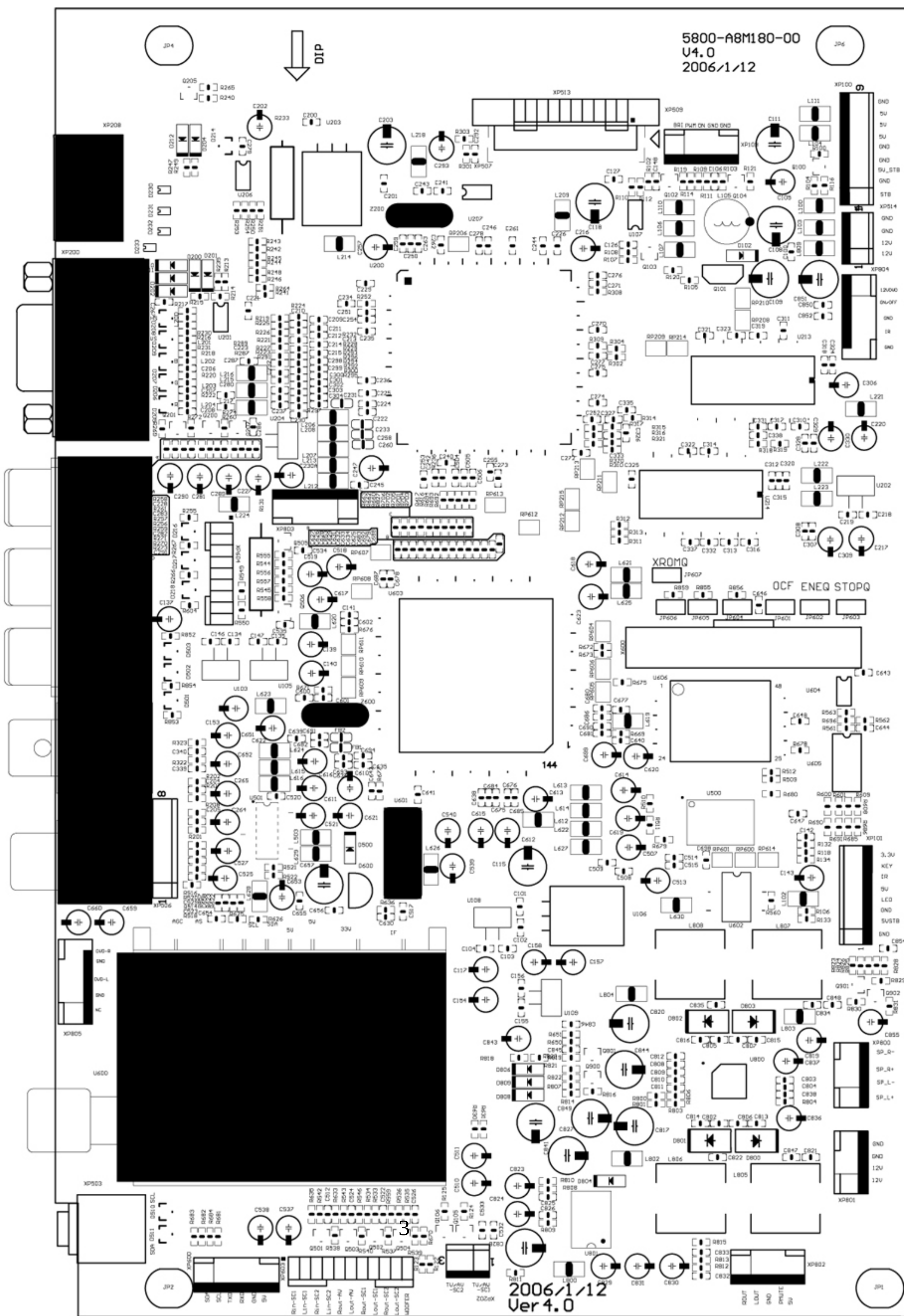
D

C

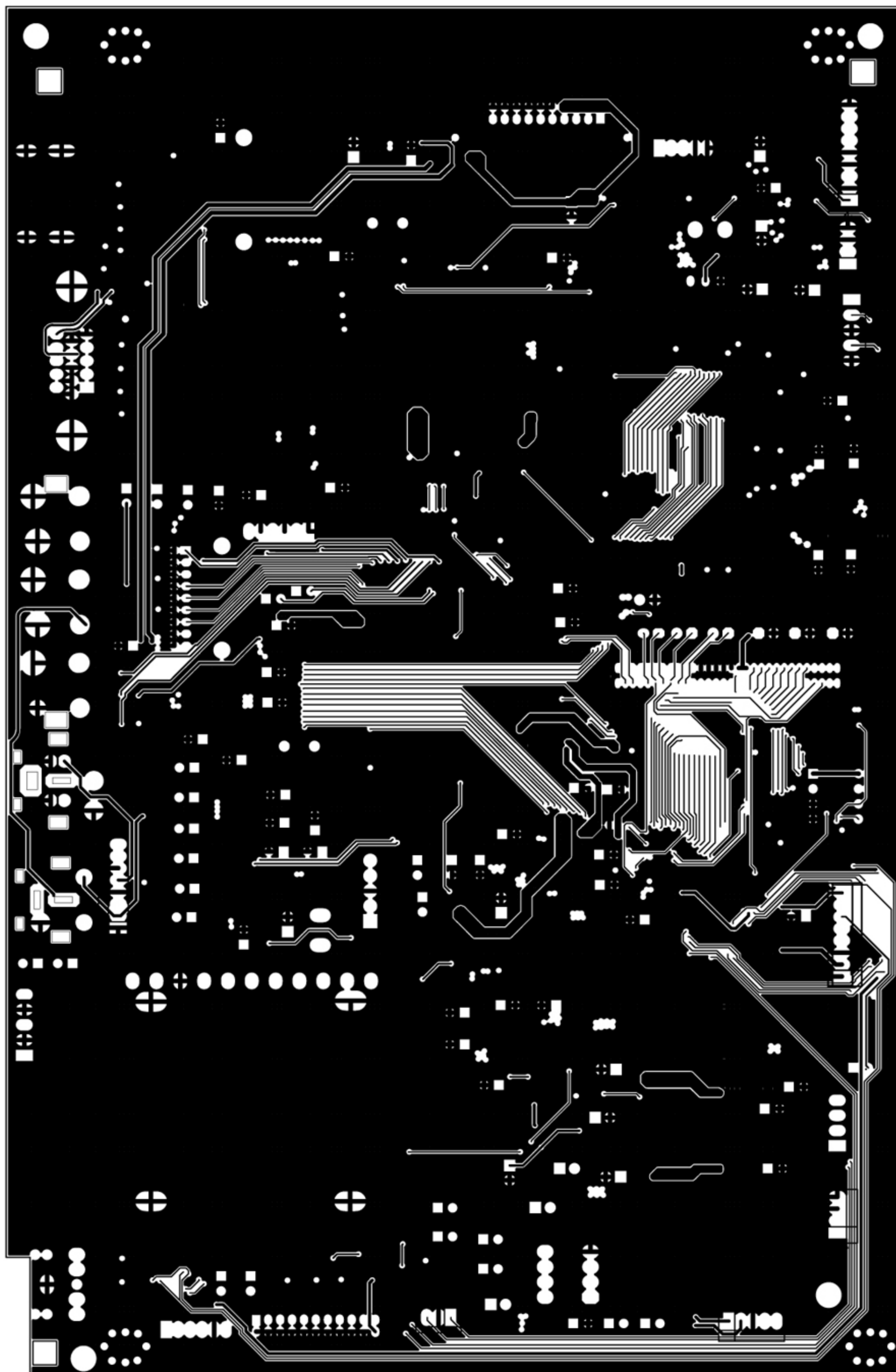
B

A

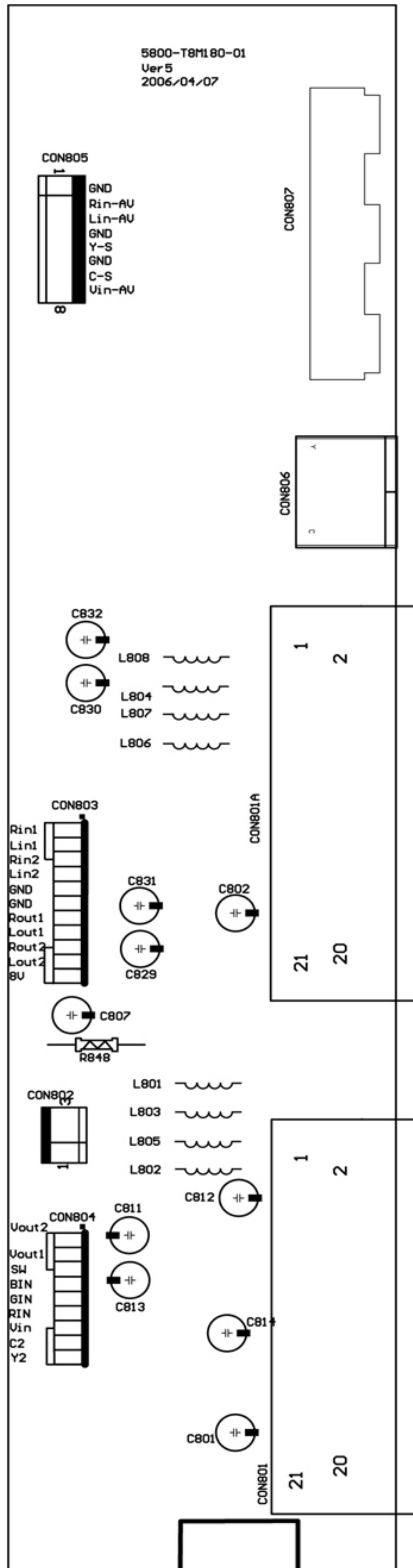
MAIN PCB Top Layer



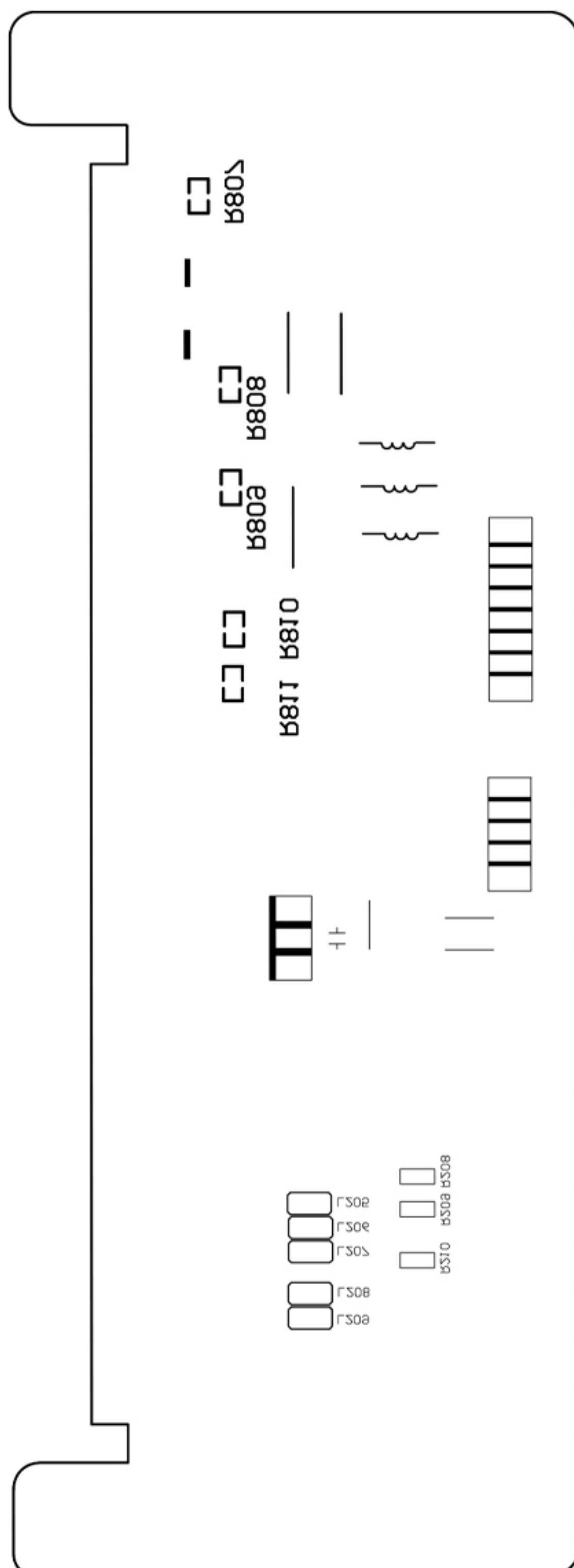
MAIN PCB BOTTOM Layer



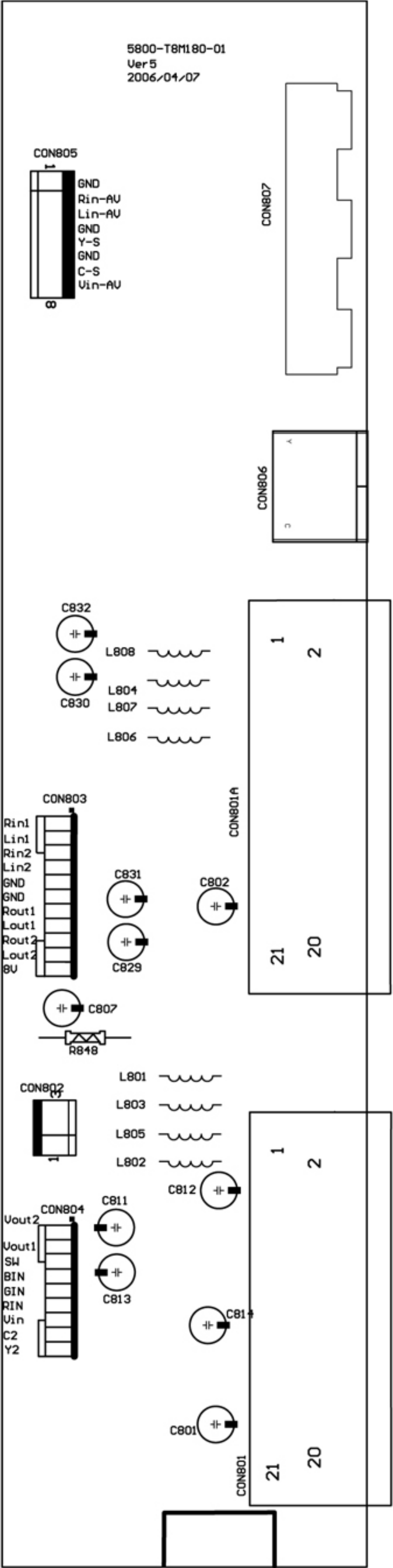
FRONT AV PCB Top Layer



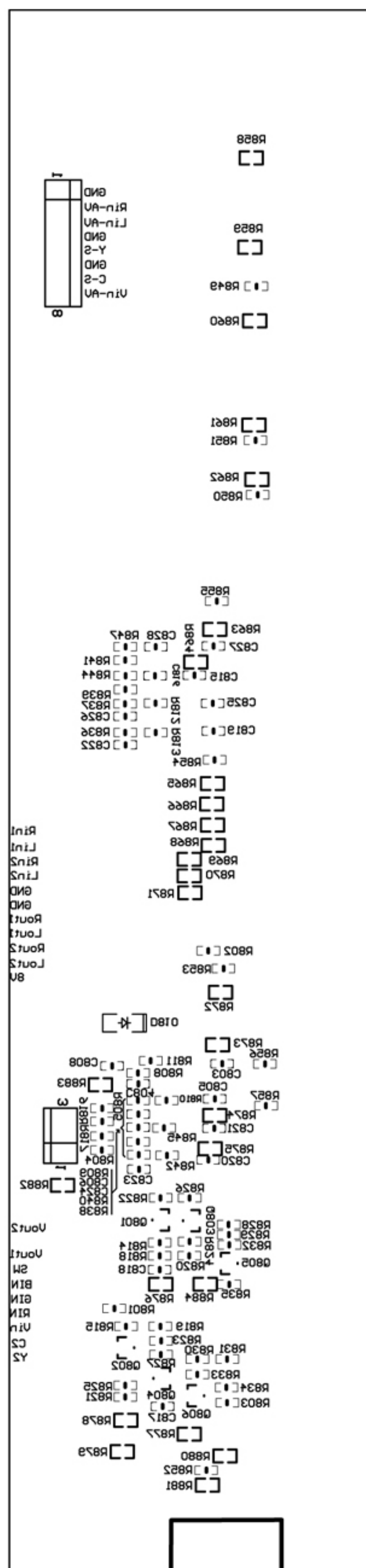
FRONT AV PCB Bottom Layer



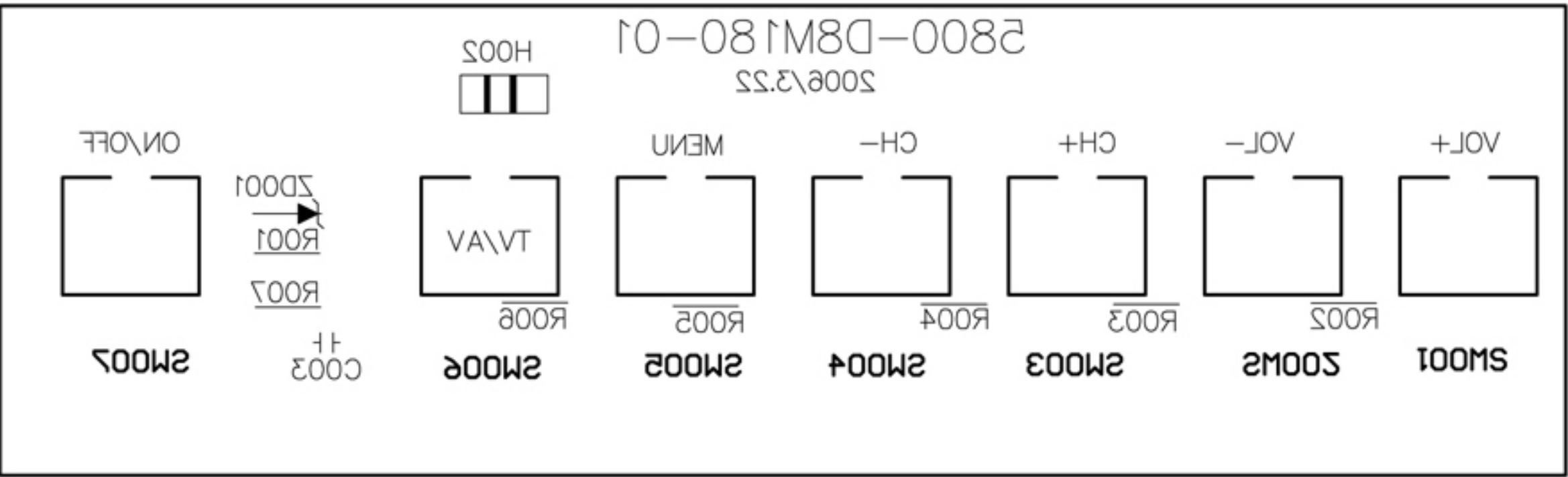
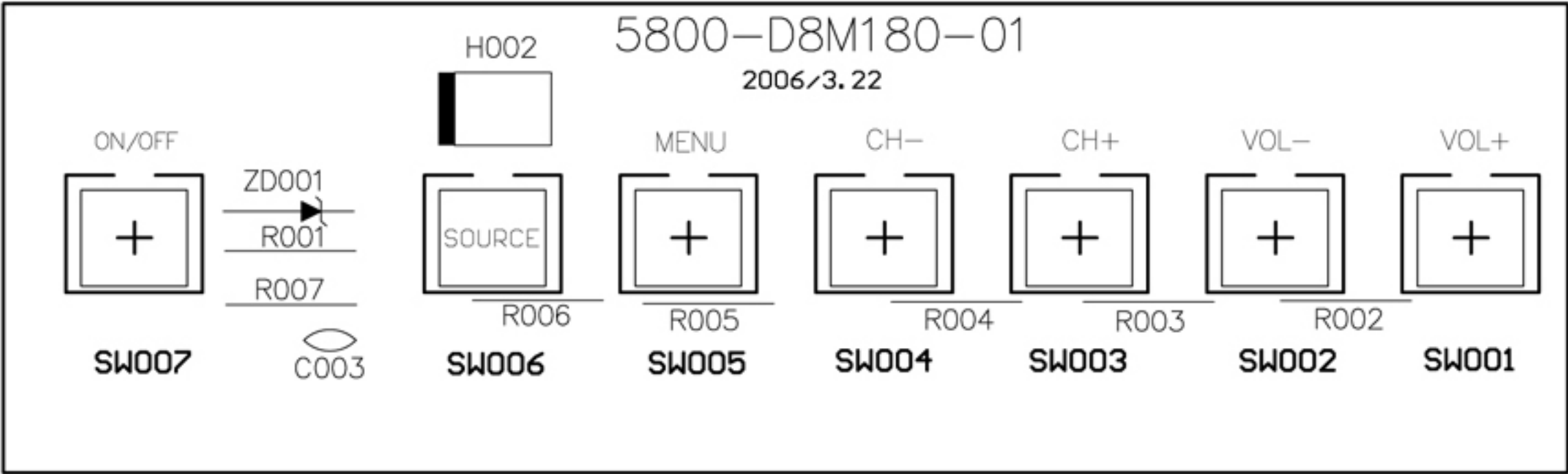
BACK AV PCB Top Layer



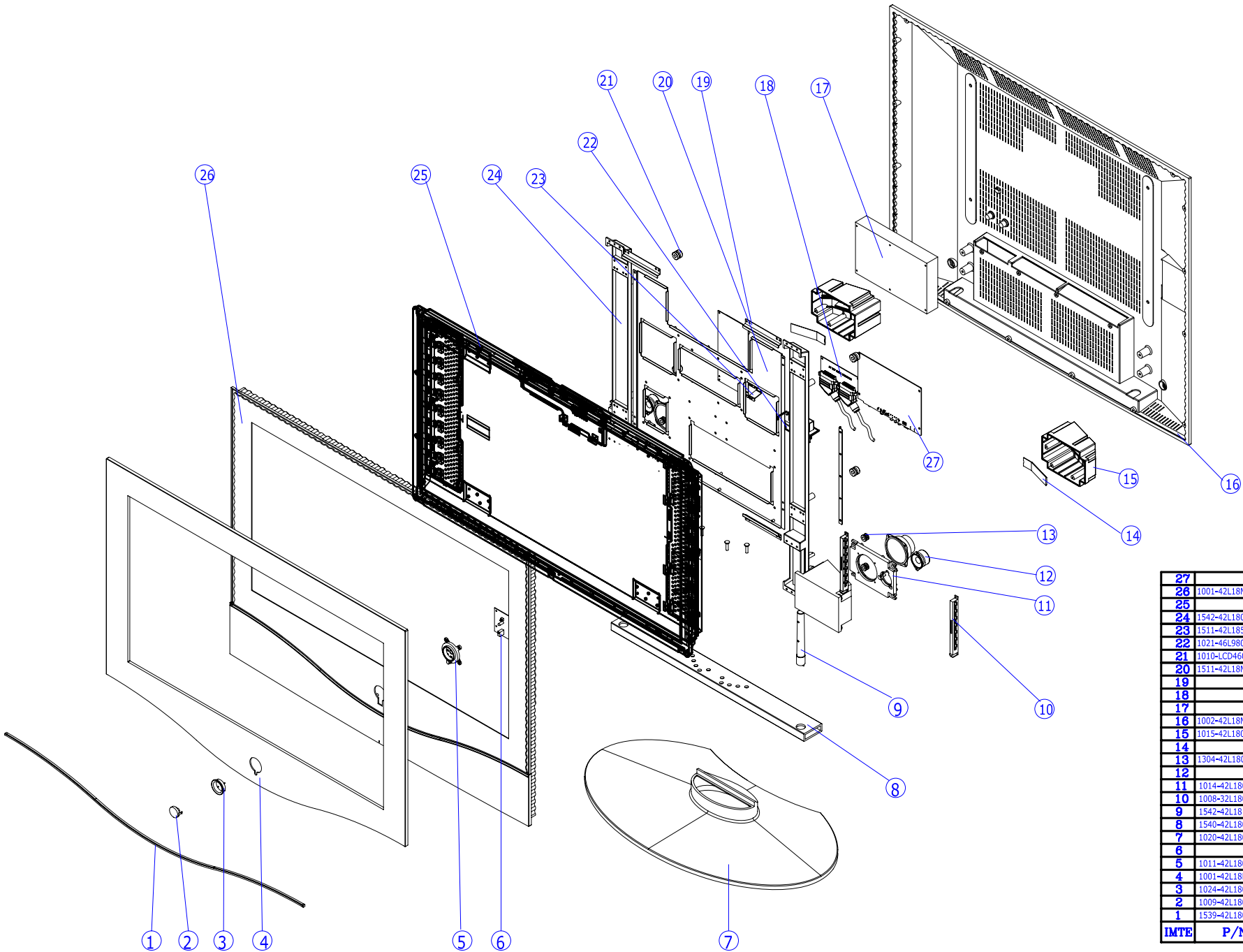
AV PCB Bottom Layer



CONTROL PCB



ISSUE	DATE	REVISION	DATE



27	1001-42L18M-01	MAIN PCB	1
26	1001-42L18M-01	FRONT CAB - NB002 (HIPS)	1
25	1001-42L18M-01	LG PANEL	1
24	1542-42L180-00	SUPPORT BRIDGE (ALUMINUM ALLOY)	2
23	1511-42L185-01	POWER SWITCH MTG.BKT	1
22	1021-46L980-01	DVB BRACKET - DG001 (ABS)	1
21	1010-LCD460-00	SCREW MTG.POST(FISHER S10)	10
20	1511-42L18M-02	42L18 MAIN PLATE(NEW LG PANEL)	1
19	1001-42L18M-01	2-SCART PCB	1
18	1001-42L18M-01	POWER PCB	1
17	1002-42L18M-01	BACK CAB - NB002+DG001 (HIPS)	1
16	1015-42L180-00	SPEAKER BOX BACK,CAB-ABS	2
15	1015-42L180-00	SPEAKER BOX BACK,CAB-ABS	2
14	1304-42L180-01	RUBBER RING	8
13	1014-42L180-00	SPEAKER	2
12	1014-42L180-00	SPEAKER BOX FRONT CAB. - ABS	2
11	1008-32L180-04	CONTROL KEY(ABS)TS003	1
10	1542-42L181-00	SUPPORT BAR (ALUMINUM ALLOY)	2
9	1540-42L180-01	SUPPORT TRANSOM	1
8	1020-42L180-01	STAND CAB (HIPS) + HNB001	1
7	1001-42L18M-01	RECEIVER P.C.BOARD	1
6	1011-42L180-01	POWER KEY SUPPORT	1
5	1001-42L18M-01	FRONT CAB - NB002 (HIPS)	1
4	1024-42L180-02	FPOWER KEY DECORATE	1
3	1009-42L180-01	POWER KEY - ABS	1
2	1539-42L180-02	DECORATE AL	1
1	1539-42L180-02	DECORATE AL	1
IMTE	P/N	DESCRIPTION	QTY

