



JL328/378/408-XP

Service Manual

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1. Precautions and Safety Notices

Prior to using this service manual, please ensure that you have carefully followed all the procedures outlined in the user's manual for this product.

- (1) Read all of these instructions.
- (2) Save these instructions.
- (3) Follow all warnings and instructions marked on the product.
- (4) Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners, use a damp cloth for cleaning.
- (5) Do not use this product near water.
- (6) Do not place this product on an unstable cart, stand or table. The product may fall, causing serious damage to the product.
- (7) Do not tear up the EMI label, if the label has been destroyed, that must to past same size label on the same position.
- (8) Slots and openings in the cabinet and the back or bottom are provided for ventilation, to ensure reliable operation of the product and to protect it from overheating, those openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation less proper ventilation is provided.
- (9) This products should be operated from the type of power source indicated on the marketin label. If you are not sure of the type of power available, consult your dealer or local power company
- (10) This product is equipped with a 3-wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature, if you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding-type plug.
- (11) Pay attention to the code which connects with apheliotropism board of inside panel. and don't hook it.
- (12) Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
- (13) If an extension cord is used with this product, make sure that the total of the ampere ratings on the product plugged into the extension cord to the waplugged into outlet does not exceed 15 ampere.
- (14) Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.
- (15) Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to service personnel.
- (16) Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions :
 - a. When the power cord or plug is damaged or frayed.
 - b. If liquid has been spilled into the product.
 - c. If the product has been exposed to rain or water.
 - d. If the product does not operate normally, when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extension work by a qualified technician to restore the product to normal operation.
 - e. If the product has been dropped or the cabinet has been damaged.
 - f. If the product exhibits a distinct change in performance, indicating a need for service.

2. Specification

328XP Panel

Item	Specifications
Display pixels	1366 (H) x 768 (V) pixels (1 pixel = 1 RGB cells)
Display Area	708.954mm(H) x 398.592mm (V)
Pixel Pitch	0.1730 (H) x 0.5190 (V)mm
Display Colors	16.7M
Pixel Arrangement	R+G+B vertical stripe
Display Mode	Normally Black Mode
Brightness	550nits
Contrast Ratio	1000:1 typical
Brightness Uniformity	75% min.
Viewing Angle	±88° (H), ±88°(V) Typical at CR ≥ 20
Color Saturation	NTSC 75%
Color Chromaticity (CIE)	White: x =0. 285 , y= 0.293
Frame Rate	50Hz/60Hz
Response Time	8ms typical
Surface Treatment	AG,3H

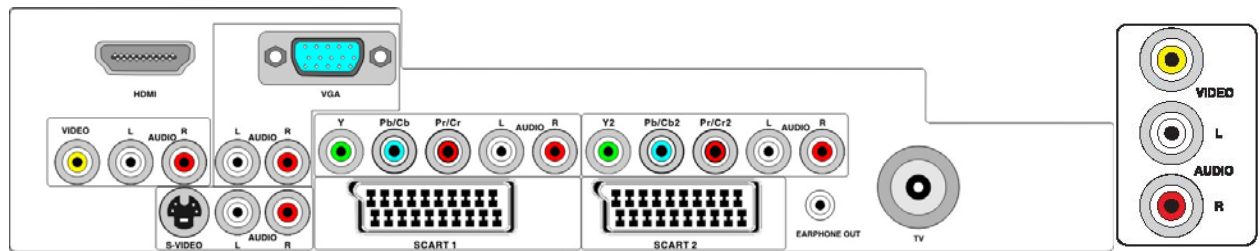
378XP Panel:

Item	Specifications
Panel Name	AUO
Panel Model No.	T370XW01
Display pixels	1366 (H) x 768 (V) pixels (1 pixel = 1 RGB cells)
Display Area	819.6mm (H) x 460.89mm (V)
Pixel Pitch	0.6mm
Display Colors	16.7M
Pixel Arrangement	R+G+B vertical stripe
Brightness	500nits typical
Contrast Ratio	1000:1 typical
Viewing Angle	±88° (H), ±88°(V) Typical at CR ≥ 10
Color Chromaticity (CIE)	White: x= 0.280 , y =0. 290
Response Time	8ms (Gray to Gray)
Surface Treatment	Hard-Coating (3H), Anti-Glare, Reflectance < 2%

408XP Panel:

Item	Specifications
Panel Name	SAMSUNG
Display pixels	1366 (H) x 768 (V) pixels (1 pixel = 1 RGB cells)
Display Area	885.168mm (H) x 497.664mm (V)
Display Colors	16.7M
Pixel Arrangement	R+G+B vertical stripe
Brightness	500nits typical
Contrast Ratio	1200:1 typical
Viewing Angle	±89° (H), ±89°(V) Typical at CR ≥ 10
Color Chromaticity (CIE)	White: x= 0.280 , y =0. 290
Response Time	8ms (Gray to Gray)
Surface Treatment	Haze 40%, Hard-Coating (3H)

INPUT Source :



Inputs & Outputs Signals	Video Format	Connector types	
		Video	Sound
Main-TV	PAL/ SECAM	PH Type	None
RGB+Y/C+ CVBS(input/output)+ L/R(input/output)	RGB+Y/C+ CVBS(input/output)+ L/R(input/output)	SCART 21pin	
RGB+Y/C+ CVBS(input/output)+ L/R(input/output)	RGB+Y/C+CVBS(input/output)+L/R(input/output)	SCART 21pin	
Video1 + L/R Audio	CVBS	RCA x 1	RCA x 2(Red, White)
Video2 + L/R Audio	CVBS	RCA x 1	RCA x 2(Red, White)
S-VIDEO+ L/R Audio	Y/C	Mini Din 4 Pin	RCA x 2(Red, White)
Component1(Y,Pb/Cb,, Pr/Cr) + L/R Audio	480i.576i.480p,576p.720p, 1080i	RCA x 3	RCA x 2(Red, White)
Component2(Y,Pb/Cb2,, Pr/Cr2) + L/R Audio	480i.576i.480p,576p.720p, 1080i	RCA x 3	RCA x 2(Red, White)
VGA+ L/R Audio	Analog RGB	VGA15 Pin	RCA x 2(White, Red)
HDMI	Digital signal	HDMI 19Pin	

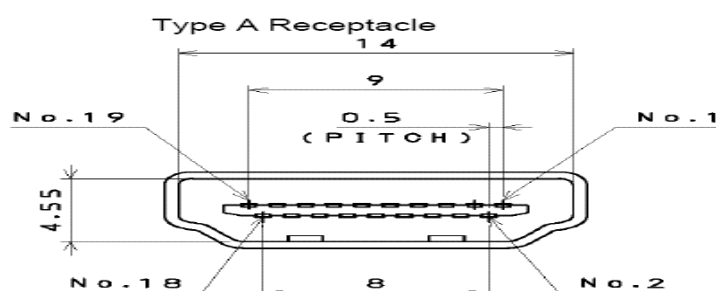
Note:

A. SCART connector



Pin Number	Pin Name	Signal Level	Impedance
1	Audio Output, Right	0.5V RMS	<1 k Ω
2	Audio Input, Right	0.5V RMS	<1 k Ω
3	Audio Output, Left	0.5V RMS	<1 k Ω
4	Ground, Audio	-	-
5	Ground, Blue	-	-
6	Audio Input, Left	0.5V RMS	<1 k Ω
7	Blue Input	0.7V	75 Ω
8	Function Select (A/V Control)	High (9.5-12V) – A/V Mode, Mid (5-8V) – Wide-screen, Low (0-2V) – TV Mode	>10 k Ω
9	Ground, Green	-	-
10	Comms Data 2	-	-
11	Green Input	0.7V	75 Ω
12	Comms Data 1	-	-
13	Ground, Red	-	-
14	Ground, blanking	-	-
15	Red Input	0.7V	75 Ω
16	RGB switching Control	High (1-3V) – RGB, Low (0-0.4) – Composite	75 Ω
17	Ground, Video input & output	-	-
18	Ground, RGB Switching control	-	-
19	Video Output, composite	1V including sync	75 Ω
20	Video Input, composite	1V including sync	75 Ω
21	Common Ground, shield	-	-

B. HDMI connector is a type A receptacle for video/audio mode.



1. TMDS Data 2+	9. TMDS Data 0-	17. CEC/GND
2. TMDS Data 2 shield	10. Clock +	18. +5V Power
3. TMDS Data 2-	11. Clock shield	19. Hot Plug Detect
4. TMDS Data 1+	12. Clock -	
5. TMDS Data 1 shield	13. CEC	
6. TMDS Data 1-	14. NC	
7. TMDS Data 0+	15. DDC CLK	
8. TMDS Data 0 shield	16. DDC DATA	

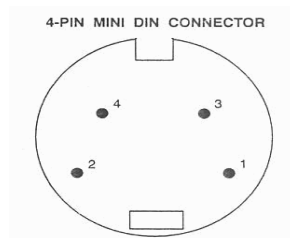
C. D-Sub Connector IN. (This function also can provides to HDTV.)

D-Sub type Connector pin assignment		
1. Red Video	6. Red Ground	11. GND
2. Green Video	7. Green Ground	12. SDA For DDC1/2B
3. Blue Video	8. Blue Ground	13. H-sync.
4. GND	9. +5V from PC	14. V-sync.

5. Vdd from PC for DDC	10. Sync. GND	15. SCL For DDC1/2B
------------------------	---------------	---------------------

a) RCA jacks are all female type.

b) Mini DIN CNC 4 Pins (SCN570S3NS00000) for S-video, the pin assignment is described as below:



- 1: Ground
- 2: Ground
- 3: Y
- 4: C

HDMI	
Format	DVI 1.0
Level/Impedance	0.5~3.0Vp-p/100 Ohm (Differential),50 Ohm (Single ending)
TMDS Mode	Single Link
Frequency	Fh = 31~80 kHz Fv = 50~75 Hz
Maximum Pixel Clock	135 MHz
DDC 1/2B	Compliant with Revision 1.0
Connector	HDMI x 1
Analog HD15 PC Signal (RGB)	
Format	R, G, B Analog
Level/Impedance	0.7Vp-p / 75Ω
DDC 1/2B	Compliant with Revision 1.0
Sync	H/V separate 3V TTL level / 1kΩ
Frequency	Fh = 31~80 kHz Fv = 50~75 Hz
Maximum Pixel Clock	135 Mhz
Connector	Mini D-Sub 15 pin (female) x 1
Video (Composite) CVBS Signal	
Format	NTSC, NTSC4.43, PAL_M, PAL(B,G,H,D,N), SECAM
Level / Impedance	1.0Vp-p / 75Ω
S-Video (Y/C) Signal	
Format	Y, C
Level / Impedance	Y: 1.0Vp-p / 75Ω C: ± 286 mV/ 75Ω
Analog HD15 Video Signal (YPbPr/YCbCr)	
Format	Y, Pb, Pr or Y, Cb, Cr
Level / Impedance	Y: 1.0Vp-p / 75Ω Pb/Cb, Pr/Cr: 0.7 ± 0.035Vp-p / 75Ω

HDMI Mode

PRESET MODES	HDMI 640X480P	HDMI 720X480P	HDMI 1280X720P	HDMI 1280X720P	HDMI 1920X1080	HDMI 1920X1080I
F. V	59.941Hz	59.941Hz	50Hz	59.941Hz	59.941Hz	50Hz
PRESET MODES	HDMI 640X480P	HDMI 720X480P	HDMI 1280X720P	HDMI 720X576P	HDMI 1920X1080	
F. V	60Hz	60Hz	60Hz	50Hz	60Hz	

RGB PC Timing

STANDARD	RESOLUTION	V FREQ Hz	H FREQ kHz	CLK MHz
VGA	640x480	60	31.47	25.16
VGA	640x480	75	37.5	31.5
SVGA	800x600	60	37.88	40
SVGA	800x600	75	46.9	49.5
XGA	1024x768	60	48.36	65.0
XGA	1024x768	75	60.02	78.75
SXGA	1280x1024	60	64	108
SXGA	1280x1024	75	80	135
MAC	640x480	67	35	30.24

Video & S-Video AV Timing

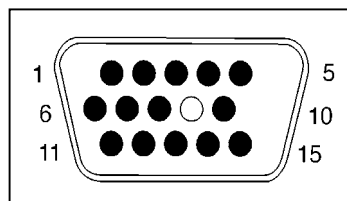
STANDARD	RESOLUTION	V FREQ Hz	H FREQ kHz	CLK MHz
NTSC	525	60	15.734	12.65
PAL(B,G,H,D,I)	625	50	15.625	14.50
SECAM	625	50	15.625	14.50
NTSC4.43	525	60	15.734	12.65
PAL-M	525	60	15.734	12.65
PAL-N	625	50	15.625	14.50

HDTV (SDTV) Mode

PRESET MODES	SDTV 480I	SDTV 576I	SDTV 480P	SDTV 576P	HDTV 720P	HDTV 720P	HDTV 1080I
F. V	60Hz	50Hz	60Hz	50Hz	50Hz	60Hz	50Hz
PRESET MODES	HDTV 1080I						
F. V	60Hz						

Power Source	AC100 – 240 V, 60/50 Hz
Sound Output	10W X2, 4 Ohm.

Signal Connector Pin Assignment

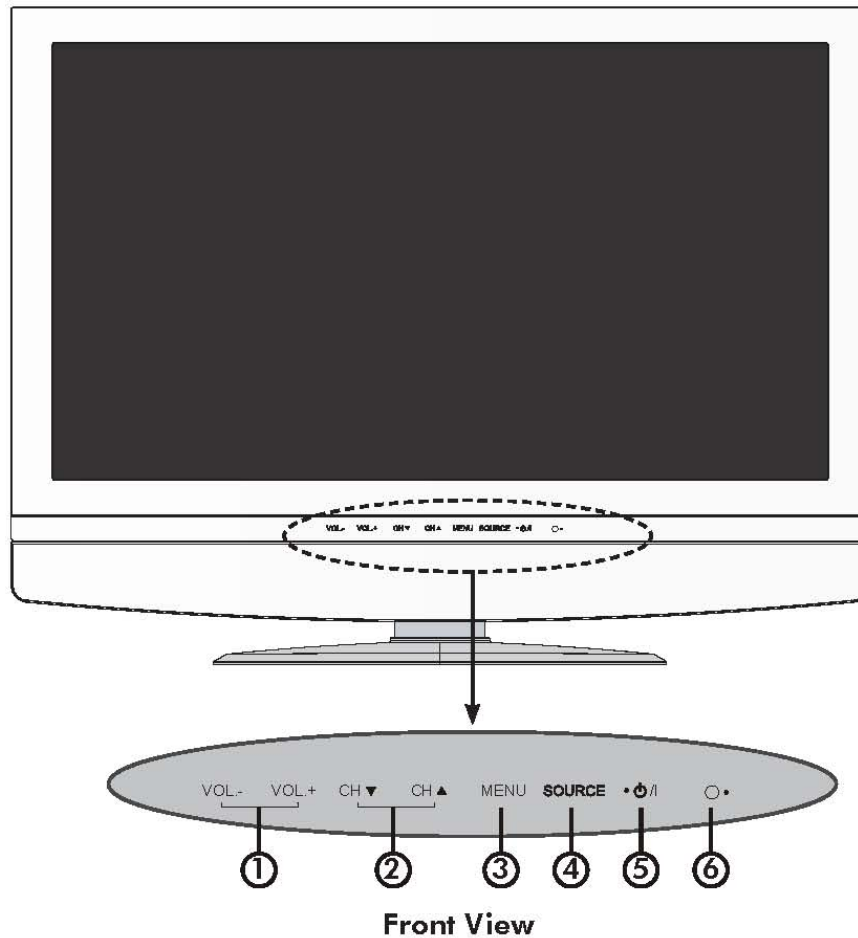


Pin	Assignment	Pin	Assignment	Pin	Assignment
1.	Red	6.	Red Ground	11.	Ground
2.	Green	7.	Green Ground	12.	SDA
3.	Blue	8.	Blue Ground	13.	Horizontal Sync.
4.	Ground	9.	Not Connected	14.	Vertical Sync.
5.	Self Test	10.	Sync. Ground	15.	SCL

3. Front Panel Function Control Description

Operation, Adjust and Programming

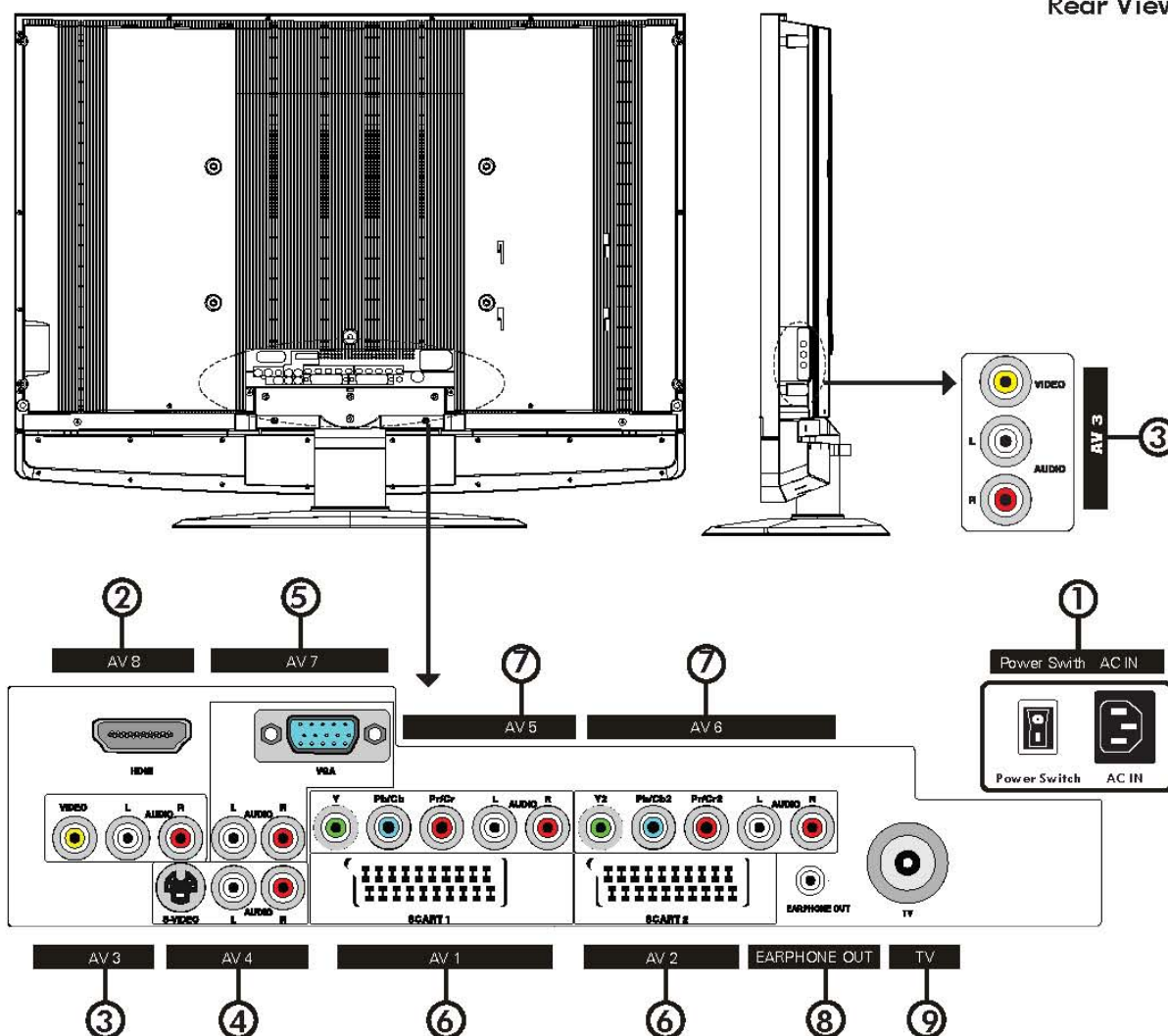
Front View



Front View

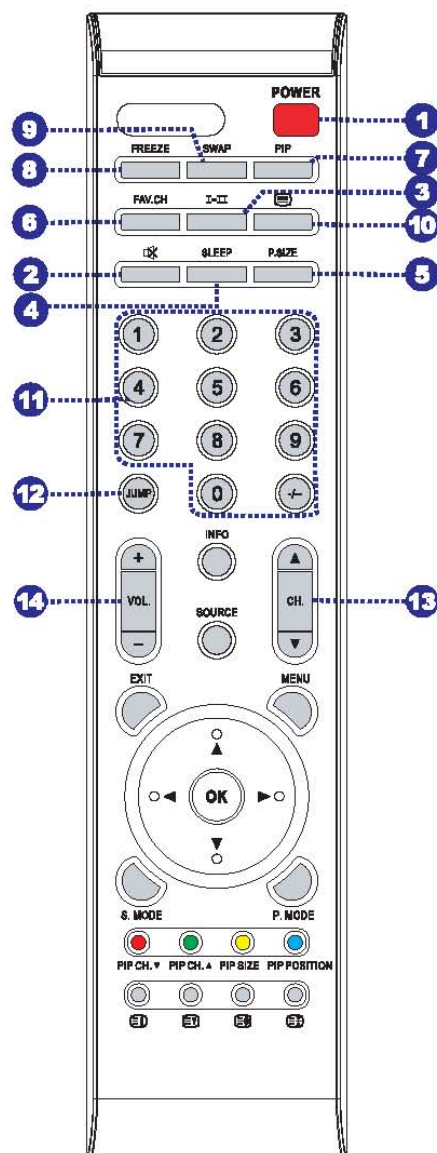
ITEM	DESCRIPTION
1 VOLUME	Adjusts the volume up and down. Changes settings for items and the value for items on the OSD mode.
2 CHANNEL	Scans up and down through channels. Selects sub-menu items on the OSD mode.
3 MENU	Press MENU to display the OSD (on screen display).
4 SOURCE	Chooses from different input signal sources.
5 ⏻ / I	Turns the LCD TV on and off.
6 IR	Infrared Receiver (IR)

Rear View



ITEM	DESCRIPTION
1 AC IN/Power Switch	Connects the AC power cord./ Turns the LCD TV on and off.
2 AV8 HDMI	Connects to a digital set-top box or other deceives with a HDMI interface.
3 AV3 VIDEO/AUDIO(L/R)	Connects to the composite A/V output jacks on your video equipment. When Video/Audio of TV rear and side have been plug in the TV at the same time, TV will to priority of read the Video/Audio of TV rear.
4 AV4 S-VIDEO/AUDIO(L/R)	Connects to the S- VIDEO output jacks and Audio output jacks on your video equipment.
5 AV7 VGA IN/AUDIO(L/R)	Connects to a digital set-top box or other deceives with a VGA interface.
6 AV1/AV2 SCART	Connects to a piece of AV equipment with a SCART socket. The SCART interface offers CVBS signals, with audio input/output between the TV and external video equipment.
7 AV5/AV6 COMPONENT/AUDIO(L/R)	Connects to the component (Y, Pb/Cb, Pr/Cr) video jacks and audio (L/R) jacks of your DVD player, HDTV, or video equipment.
8 EARPHONE OUT	Connects to your earphone.
9 TV	The RF input that connects to your VHF/UHF antenna or cable.

- 1 POWER**
Turns the LCD TV on and into standby mode.
- 2** 
Mutes and restores your LCD TV sound.
- 3 I-II**
Cycles through the TV Sound options:
MONO/DUAL/STEREO
- 4 SLEEP**
Sets the LCD TV sleep time.
- 5 P.SIZE**
Selects from the following modes settings:
16:9 ,14:9, Zoom , Spectacle, Full, Original, 4:3.
- 6 FAV.CH**
This function make you select your favourite
programmes directly.
- 7 PIP**
Turns on and off the PIP/POP function.
- 8 FREEZE**
Freezes and restores the picture.
- 9 SWAP**
Exchange the picture between the main and sub-
picture.
- 10** 
Turns on and off the Teletext function.
- 11 0-9**
Select and switch to a channel by
using 0-9 buttons.
-/-
The one/two digit numbers can be
set by pressing -/- button.
- 12 JUMP**
Switches back and forth between
the current and previous channels.



- 13 CH. Δ/∇**
Changes the channels up and down .
- 14 VOL. $\pm$**
Adjusts the volume.

15 INFO

Displays information on the LCD TV screen such as channel and channel label.

16 SOURCE

Cycles among the different input signal sources:

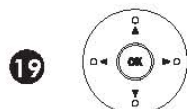
TV → AV1 → AV2 → AV3 → AV4 → AV5 → AV6 → AV7 → AV8
↑

17 EXIT

Exits the OSD menu (on-screen display), the TELETEXT Mode, PIP/POP Mode.

18 MENU

Displays the OSD menu (on screen display).



19

Allows you to move, select and set up the OSD options.

20 S.MODE

Selects sound mode: Flat, Music, Movie, Speech, User. (See Page 35 for details)

21 P.MODE

Selects picture mode: Standard, Mild, Game, User, Dynamic. (See Page 30 for details)



22

Accesses the Teletext items or corresponding pages.

PIP CH ▼ / ▲ : select a programme for the sub-picture.

PIP SIZE: Allows you to adjust picture size in PIP/POP/DW Mode.

PIP POSITION: Allows you to adjust sub-picture position in PIP Mode only.



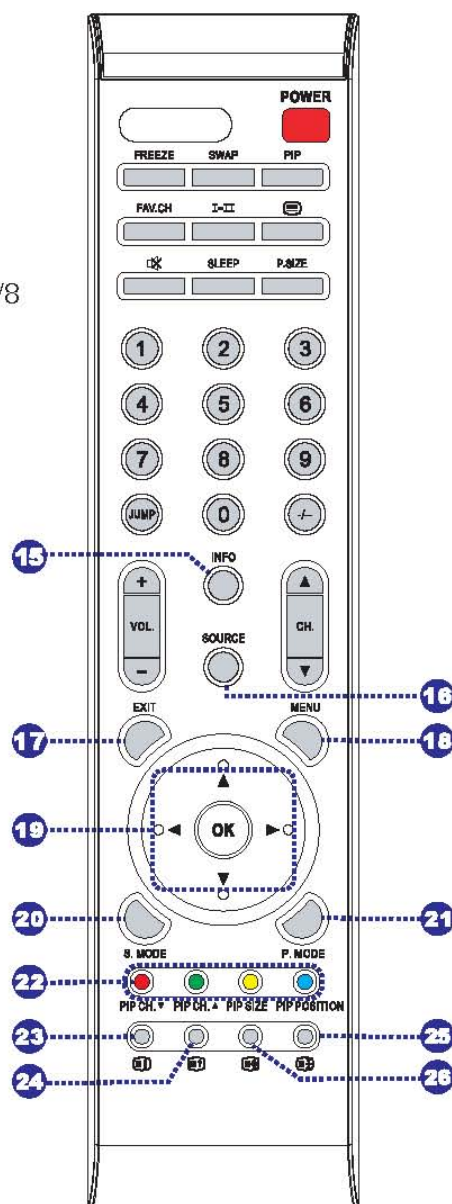
23

Displays the main index in Teletext mode.



24

Reveals hidden information such as the answer to a quiz in Teletext mode.



25



Freezes a multi-page passage on screen in Teletext mode.

26



Displays the top, bottom or all of page, to easily read in Teletext mode.

The operation of each OSD controls is described as following table:

Main Menu	Sub Menu	Option	Adjustment
	Auto Programme	Audio System ¹	Press ◀/▶ to select the audio system to be I,DK,L or BG
		Auto Search	Press ◀/▶ to search program automatically
	Manual Search	Program No	Press ◀/▶ to display the current program No.
		Audio System	Press ◀/▶ to select the audio system to be I,DK,L or BG
		Channel Type	Press ◀/▶ to select the Channel type to be V,UHF or Cable.
		Channel No.	Press ◀/▶ to display the prior storage information on the Tune
		Manual Search	Press ◀/▶ to search channel manually
		Fine Tune	Press ◀/▶ to fine tune the current programme No.
		Name	To edit the channel name
	Color System		Press ◀/▶ to select the color system to be Auto,PAL,SECAM,PAL60,NTSC or N443
	Programme Edit		Press ◀/▶ to edit the programme
	Favourite Programme		Set the favorite program
	Picture Mode		Press ◀/▶ to select the Video mode to be Dynamic, Standard, Mild, Game and User.
	Black Extend		Press ◀/▶ to select the Black Extend to be On or Off
	Color Temp.		Press ◀/▶ to adjust the Color Temperature to be Cool, Normal, Warm, User. Red, Green, Blue
	Color Adjust		Press ◀/▶ to adjust the Fleshone, Greentone and Bluetone value
	Contrast		Press ◀/▶ to adjust the Contrast from 0 to 100
	Brightness		Press ◀/▶ to adjust the Brightness from 0 to 100
	Saturation		Press ◀/▶ to adjust the Saturation from 0 to 100
	Sharpness		Press ◀/▶ to adjust the Sharpness from 0 to 100
	Hue		Press ◀/▶ to adjust the Hue from 0 to 100(Only for NTSC)
	VOLUME		Press ◀/▶ to adjust the Volume from 0 to 100
	Sound Mode		Press ◀/▶ to select the Sound mode to be Flat, Music, Movie, Speech or User
	Surround		Press ◀/▶ to select the Surround to be On or OFF
	Balance		Press ◀/▶ to adjust the balance from 0 to 100
	100Hz		Press ◀/▶ to adjust the 100Hz from 0 to 100
	500Hz		Press ◀/▶ to adjust 500Hz from 0 to 100
	1.5KHz		Press ◀/▶ to adjust 1.5KHz from 0 to 100
	5KHz		Press ◀/▶ to adjust 5KHz from 0 to 100
	10KHz		Press ◀/▶ to adjust 10KHz from 0 to 100
	Clock		Press ◀/▶ to adjust the current time
	Turn Off		Press ◀/▶ to set the off time

	Clock	Press ◀/▶ to adjust the current time
	Language	Press ◀/▶ to select the language to be English, French, German, Portuguese, Spanish, Polish, Italian or Dutch
	OSD Time out	Press ◀/▶ to select the OSD Timeout to be 15,20, 25, 30, 40sec.
	Turn On Blue Screen	Press ◀/▶ to set the on time
	Keypad Lock	Press ◀/▶ to select the Keypad Lock to be On or Off.
	Transparent	Press ◀/▶ to select the transparent to be On or Off
	OSD Reset	To return to the factory default
	Auto Config.	Press ◀/▶ to set the auto config.
	Manual Config.	Press ◀/▶ to enter into the option, use the to adjust the Phase, Clock, H-Position and V-Position
	Display Mode	Press ◀/▶ to select the display mode to be Spectacle, Full, Original, 4:3, 16:9, 14:9 and Zoom.
	Zoom In/Out	Set the current image to zoom in /out
	Position	Press ◀/▶ to set the image position on TV screen
	Cinema	Press ◀/▶ to select the Cinema to be On or Off
	Noise Reduce	Press ◀/▶ to set the 3D Noise reduce value
	Reset	To recall to the factory default
	Input	Press ◀/▶ to select the Source to be TV,AV1(Scart1),AV2(Scart2),AV3(CVBS),AV4(S-Video), AV5(YPbPr1),AV6(YPbPr2),AV7(VGA) or AV8(HDMI)
	Double Window	Press ◀/▶ to select the Double window to be DW1,DW2,OFF
	PIP	Press ◀/▶ to select the PIP to be On or OFF
	PIP Input	Press ◀/▶ to select the PIP source to be TV,AV1(Scart1),AV2(Scart2),AV3(CVBS),AV4(S-Video), AV5(YPbPr1),AV6(YPbPr2),AV7(VGA), AV8(HDMI)
	Win.Size	Press ◀/▶ to adjust the window size
	Win. Position	Press ◀/▶ to adjust the window position (only TV)

4. Adjusting Procedure

ITEM		Equipments	Requirements	Procedure and SPEC
Program Menu.				
1	VIDEO adjustment	DVD Video Cable	Play DVD Set DVD to interlaced	Screen is clear and fluent
2	S-VIDEO	DVD S-Video Cable	Play DVD Set DVD to interlaced output	Screen is clear and fluent
3	TV	Genertor"FLUKE54200"		Send TV source through 54200 Noise Reduce Adjusts the Noise Reduce to be 3,and make snow to be lighter Adjusts the Noise Reduce to be 0,and make snow to be bad
4	SCART1/SCART2 adjust	FLUKE 54200	Set the FLUKE 54200 to be Y/C,RGB and CVBS	Press SOURCE key to select the SCART1/SCART2 Check if the screen is clear and fluent Check if the Teletext is normal on the SCART(CVBS)
5	SCART1/SCART2 check	FLUKE 54200	Set the FLUKE 54200 to be Y/C,RGB and CVBS	Check if the screen is clear and fluent Check if the Teletext is normal on the SCART(CVBS) Press any key to be deviate from the originally value Display the blue screen without signal
6	SCART Mode wide screen scale Auto detect	FLUKE 54200	Set the FLUKE 54200 to be 4:3/16:9	Select the SOURCE to be TV/AV1/AV2 /AV3 Selects the Original of Display mode on the SCREEN menu Check it is normal that picture Mode is differentiated automatically
7	Auto Sourcing of SCART	FLUKE 54200		Selects the TV Inserts SCART input cable Check if it is swatched to the SCART mode and pull out the SCART cable,Make sure it will to swatch to the TV mode

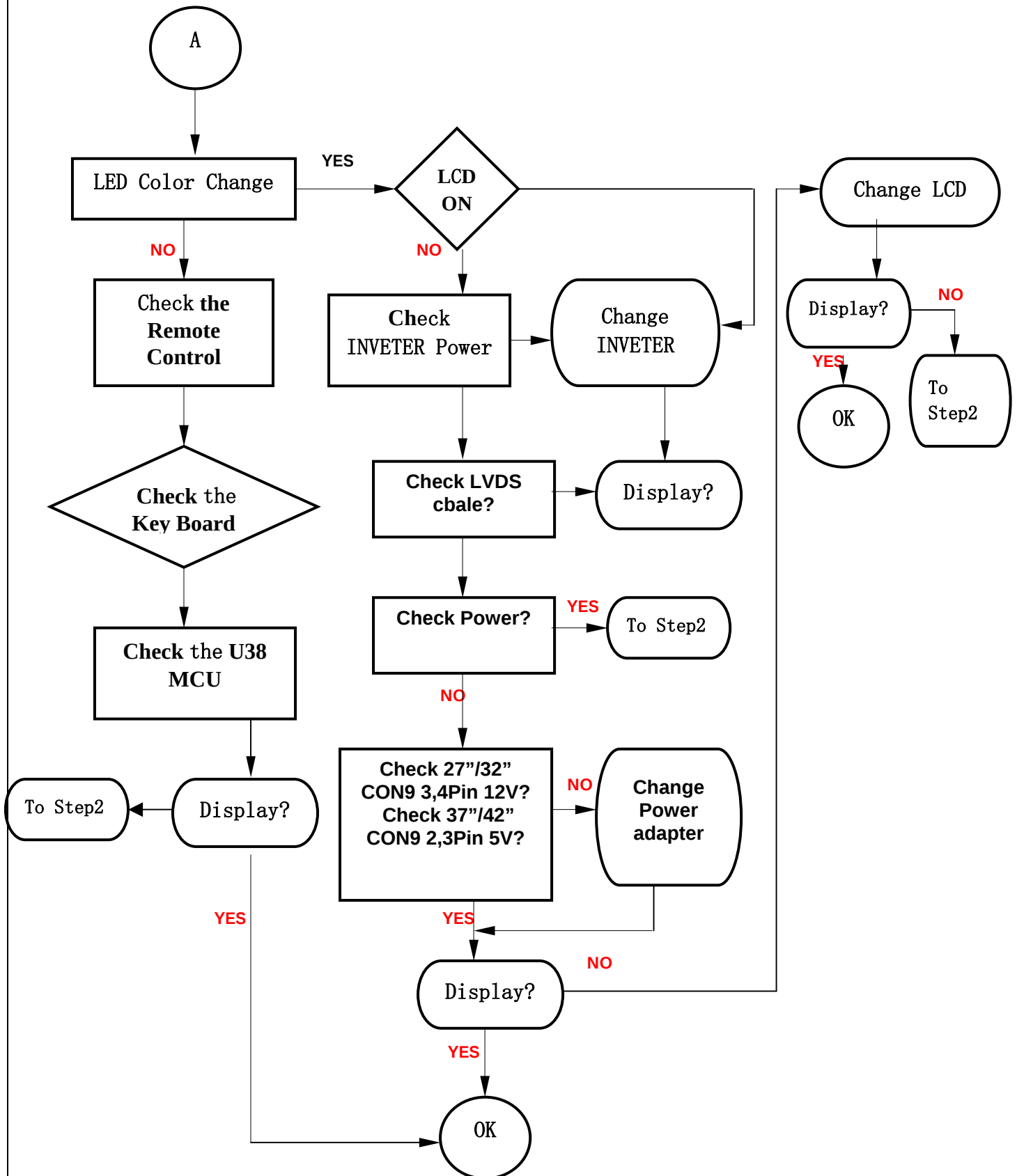
8	Teletext operation	FLUKE 54200	Sets the Teletext output	● Selects the Source to be TV/AV1/2(SCART CVBS)/AV3 ● Operates Switch Teletext key ● Check if the teletext is normal
9	DVD (Y,Pb,Pr1/ Y,Pb,Pr2) 480i.576i.480p.576p.720p, 1080i	DVD Component Cable 720p/1080i DVD Player Samsung HD-931	Play DVD(Y,Pr,Pb) Set the DVD to progressive output	Screen is clear and fluent
10	HDTV (Y,Pb,Pr1/ Y,Pb,Pr2) 480i.576i.480p.576p.720p, 1080i	HDTV Receiver ATSC HDTV Tuner SAMSUNG SIR-T165 BS Tuner: Panasonic TU-BHD300 Component Cable	Play HDTV (Y, Pb, Pr)	Screen is clear and fluent D-VHS Digital HDTV Video Cassette Recorder JVC HM-DH30000U Panasonic NV-DH2
11	VGA	PC VGA Cable DVI Cable	PC Mode	1. Selects Source to be AV7(VGA) 2. Each Mode can display normally. If there is a specific Mode that is not appropriate after switching, press Auto Adjust can automated adjust to appropriate screen.
12	VGA	TV BOX VGA Cable		Utilize external-connected TV BOX, watching the TV program; the screen is clear and fluent.
13	HDMI	SAMSUNG DVD-HD948 QUANTUMDATA802BT		1. Selects Source to be AV8(HDMI) 2. Each Mode can display normally. Screen is clear and fluent
14	HDCP Test	QUANTUMDATA802BT		1. Selects SOURCE to be AV8(HDMI) 2. Check the test source with HDMI/HDCP through the 802BT source generator, and check if the OSD displays "PASS"
15	Display Mode test	PC DVD S-Video cable Video Cable Or TV SIGNAL /FLUKE54200		1. Selects SOURCE to be TV,AV1,AV2,AV4,AV5,AV6,AV7,AV8 2. Press MENU to adjust Display Mode 3. Check if each Display Mode is normal

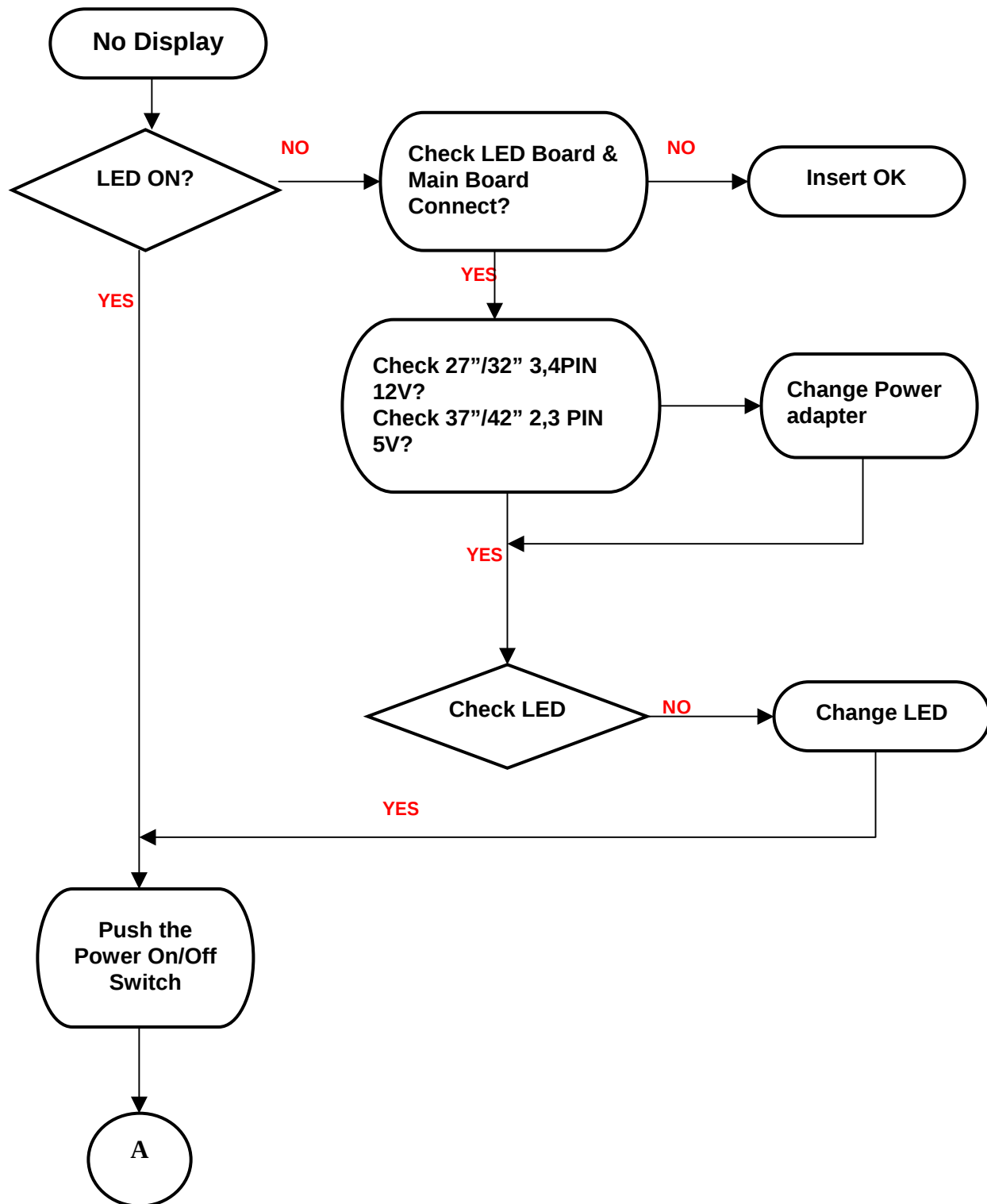
16	NTSC/PAL/SECAM switch	DVD S-Video Cable Video Cable FLUKE 54200	Play DVD test disc VIDEO ESSENTIAL Set DVD to interlaced output	1. Select SOURCE then choose AV3 (VIDEO) or AV4(S-VIDEO). 2. Sending the signal from DVD test disc (sixth paragraph)  3. Switch DVD to output mode from NTSC/PAL/SECAM, See if there is the action of switch NTSC/PAL/SECAM.
17	480P/480i switch	DVD Component Cable	Play DVD test disc VIDEO ESSENTIAL Set the DVD to progressive output (P-SCAN)	1. Select SOURCE then choose AV3(HDTV) 2. Sending the signal from DVD test disc (sixth paragraph)  4. Switch DVD output mode between P-SCAN ON/OFF 5. see if there is the action of switch mode on the screen.(480i/480p).
18	Audio adjustment	Pattern Generator Sound input External connect left-right trumpet(10W X2, 4 Ohm.)	Any Pattern	1. Select SOURCE 2. Then press MENU KEY enter AUDIO adjustment item.
	a. Volume			1. Set the sound volume. 2. Check if the action is normal.
	b.Sound mode			1. Make sure the sound is normal under the Flat/Music/Movie/Speech/User 2. Check if the action is normal
	c.Surround			1. Make sure the surround is normal 2. Check if the action is normal

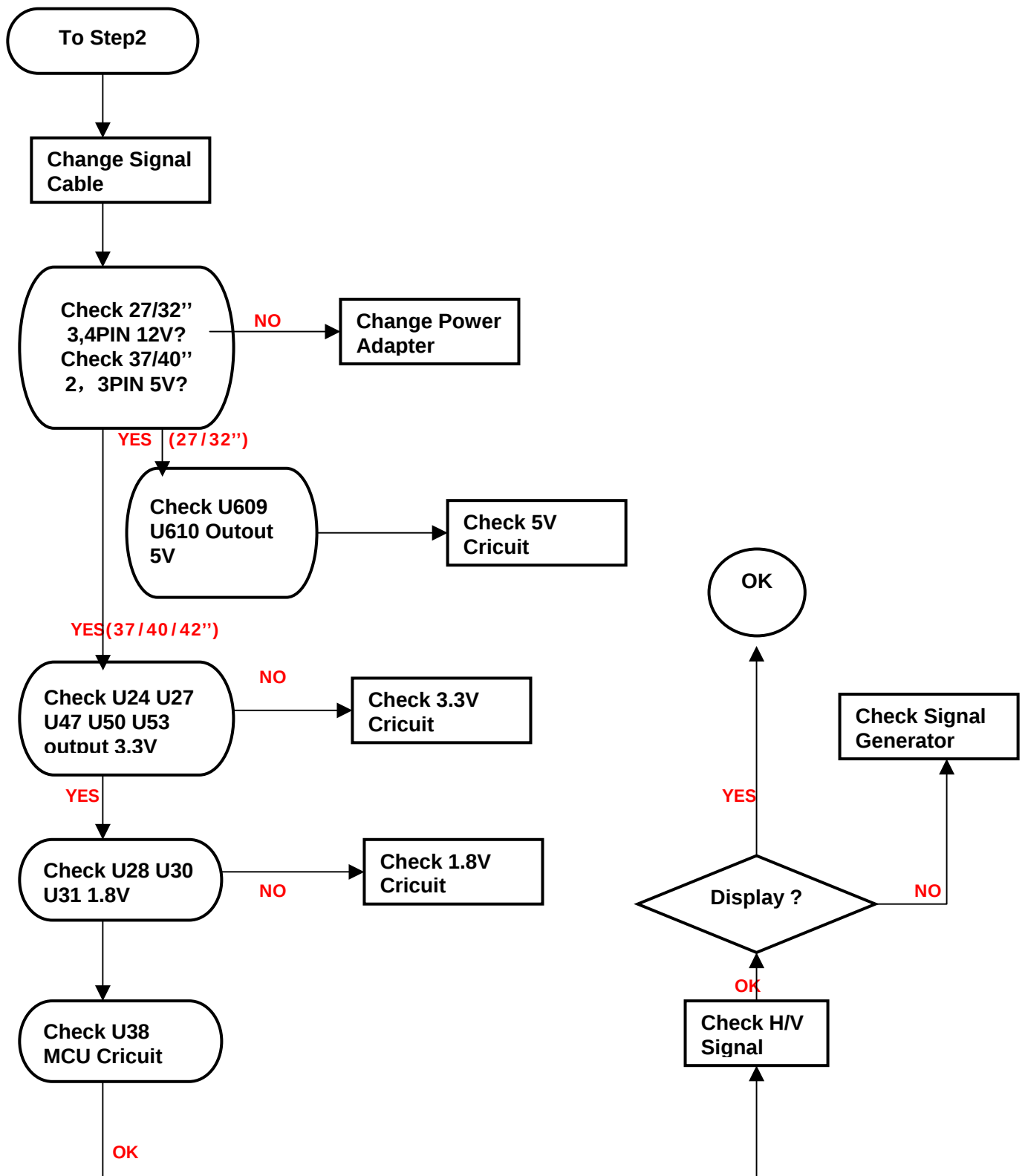
	d. Balance			1. Set the left/right speaker to be balance 2. Check if the action is normal.
	e.100Hz			1. Set the Bass volume 2. Check if the action is normal
	f.500Hz			1. Set the mediant volume 2. Check if the action is normal
	g.1.5KHz			1.Set the mediant volume 2.Check if the action is normal
	h.5KHz			1. Set theTreble volume 2. Check if the action is normal
	i.10KHz			1. Set theTreble volume 2. Check if the action is normal
	j.TV NICAM DUAL1/DUAL2 STERO, MONO			1. Press I-II key on the remote control to select the DUAL1/DUAL2/DUALI+II, STERO,MONO 2. Check if the action and sound are normal
19	PIP/DW test	PC DVD S-Video cable Video Cable Or TV SIGNAL /FLUKE54200		1. Selects the SOURCE to be TV, AV1,AV2,AV3,AV4,AV5,AV6 2. Press Menu key to select the PIP/DW menu item and select it to be On under the PIP mode 3. Check if the PIP/DW are normal under each source
20	Language adjustment			1. Select required language. 2. Defalt value is set to English or set upon clients' requirement.
21	Remote control	VGA TV Signal Generator DVD or VCD HDTV Player HDMI Player		Check if all function are right on each mode

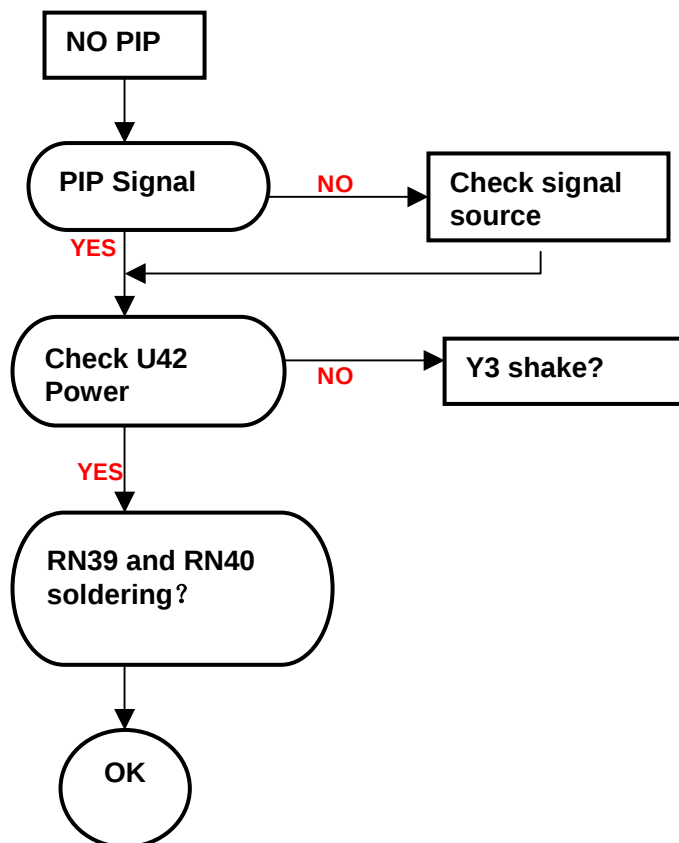
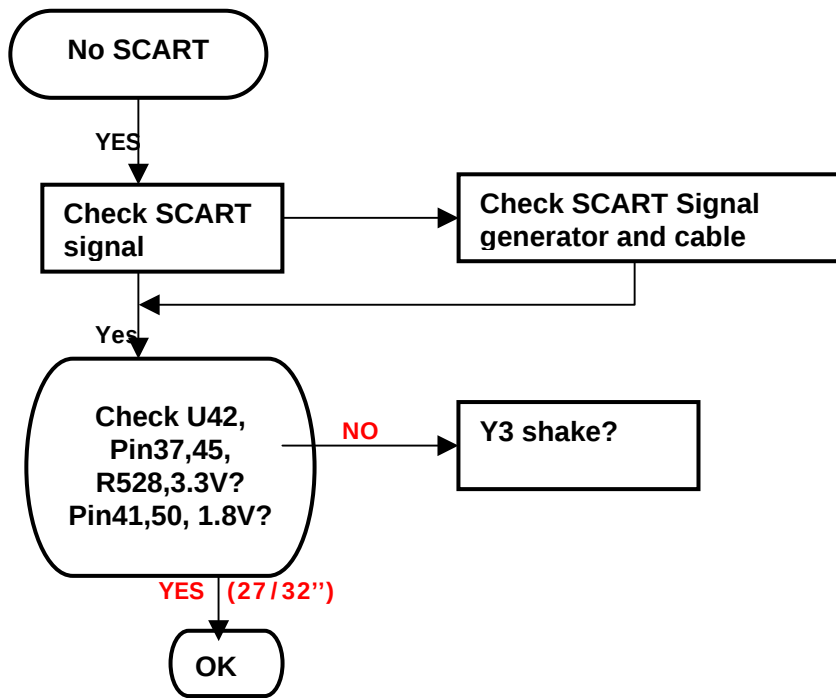
5. Trouble Shooting Flow Chart

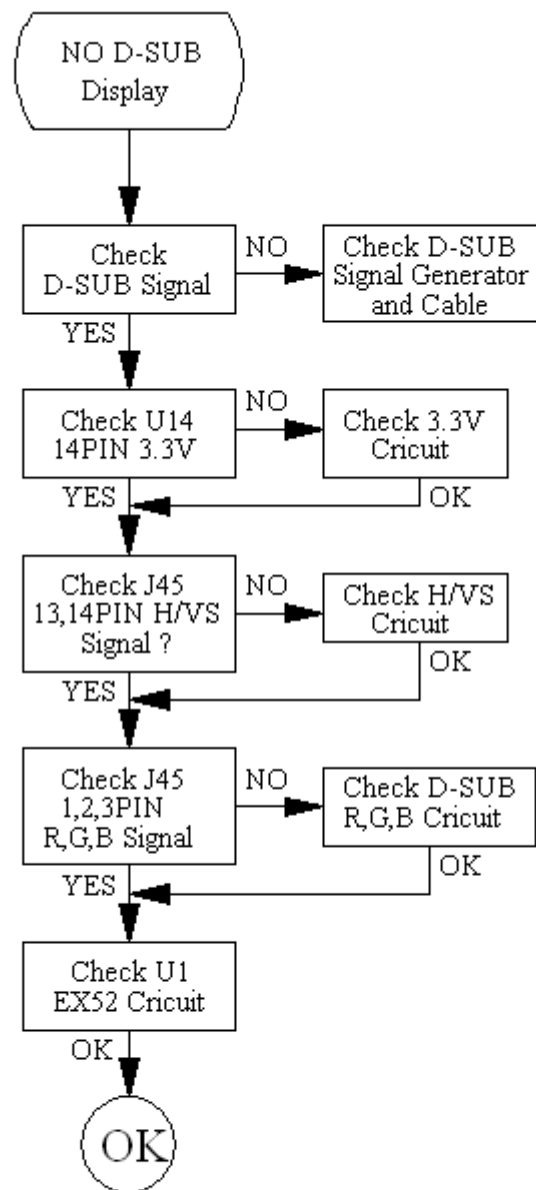
STEP 1.

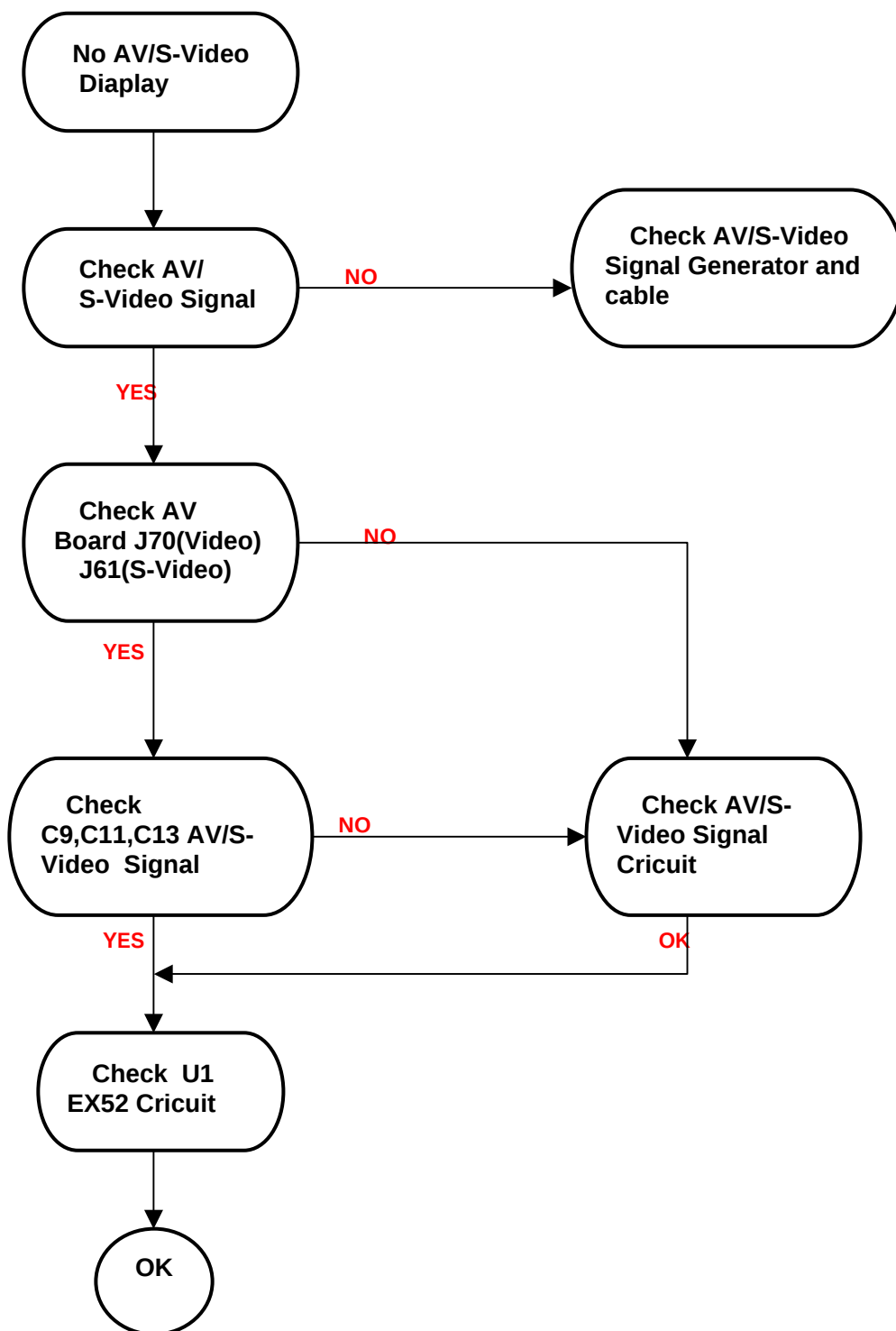


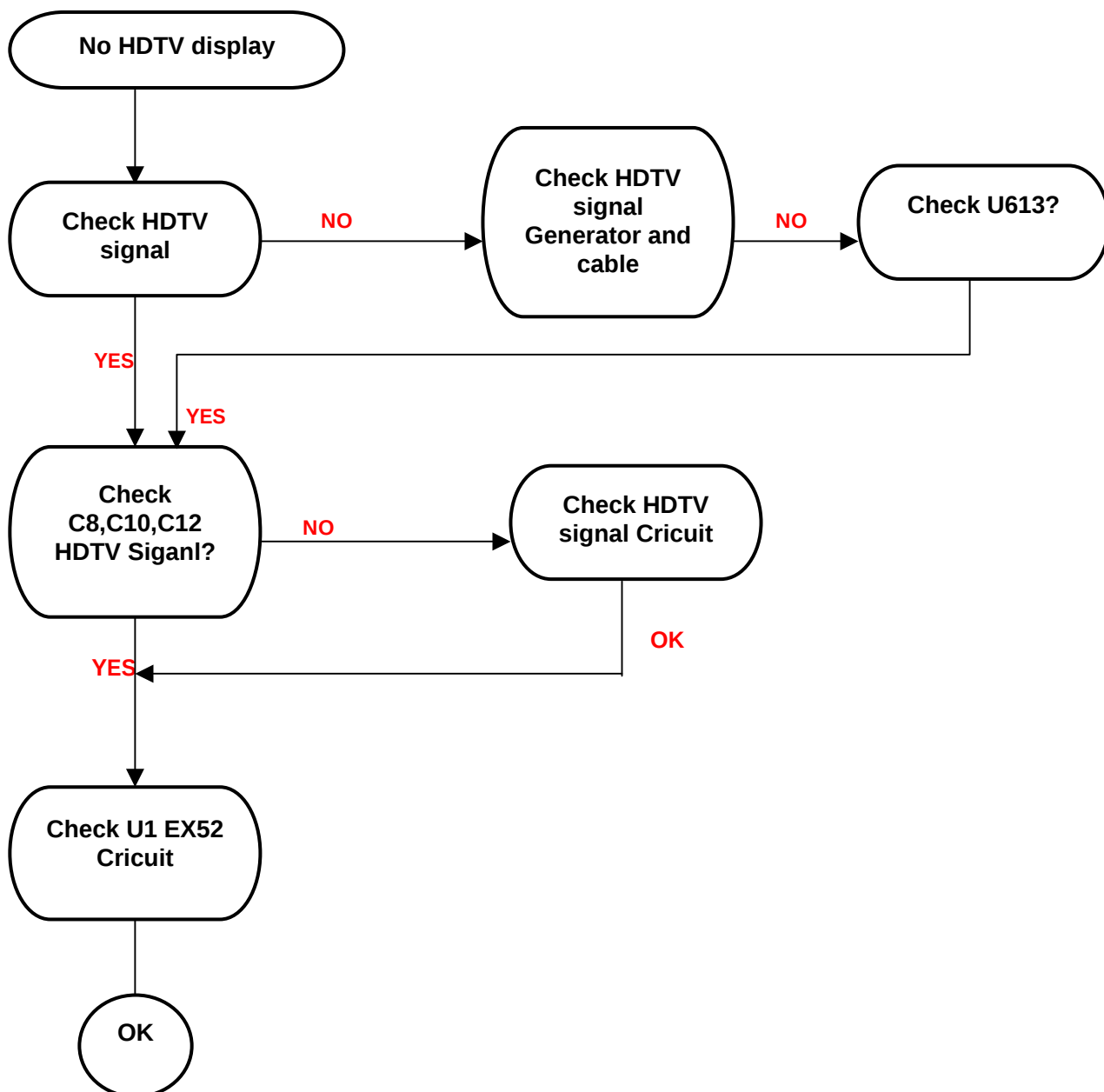


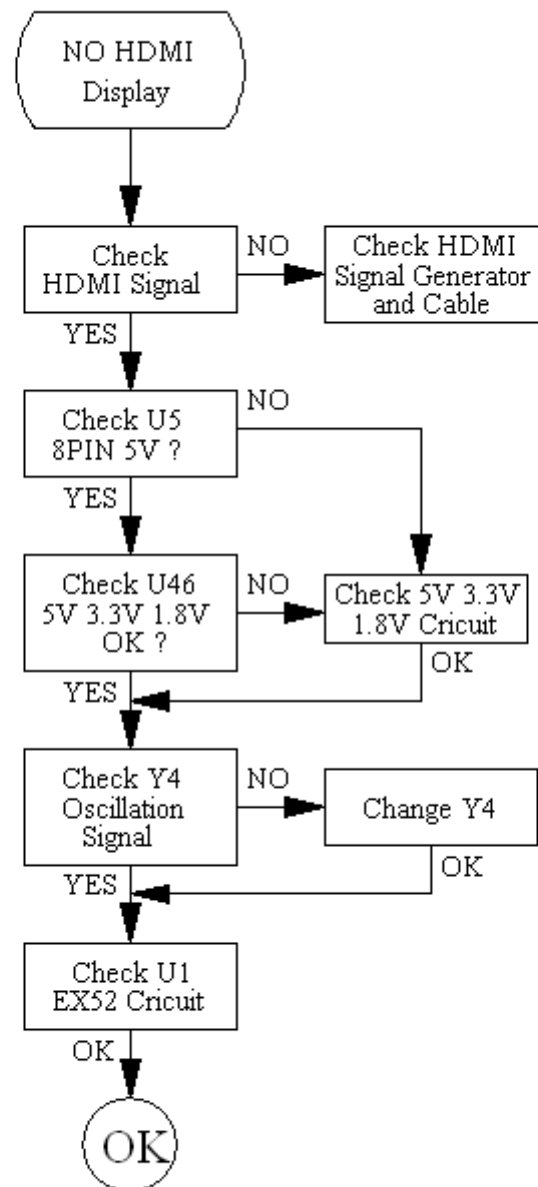


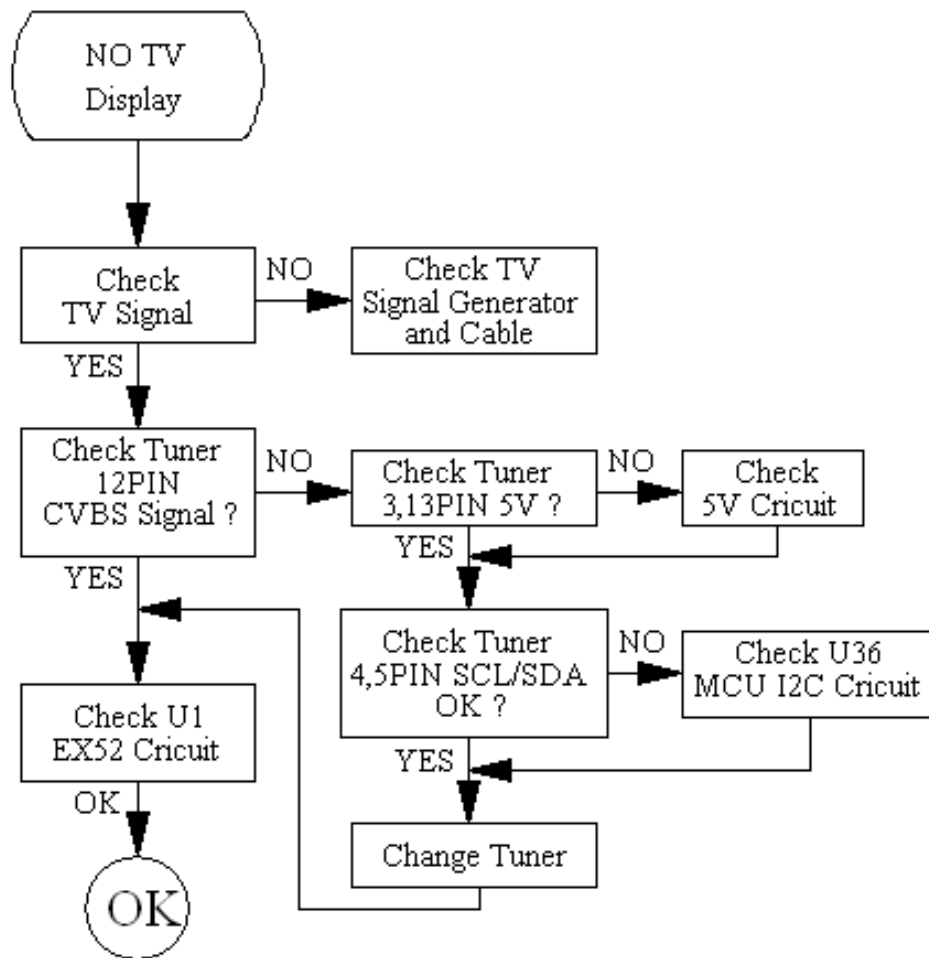


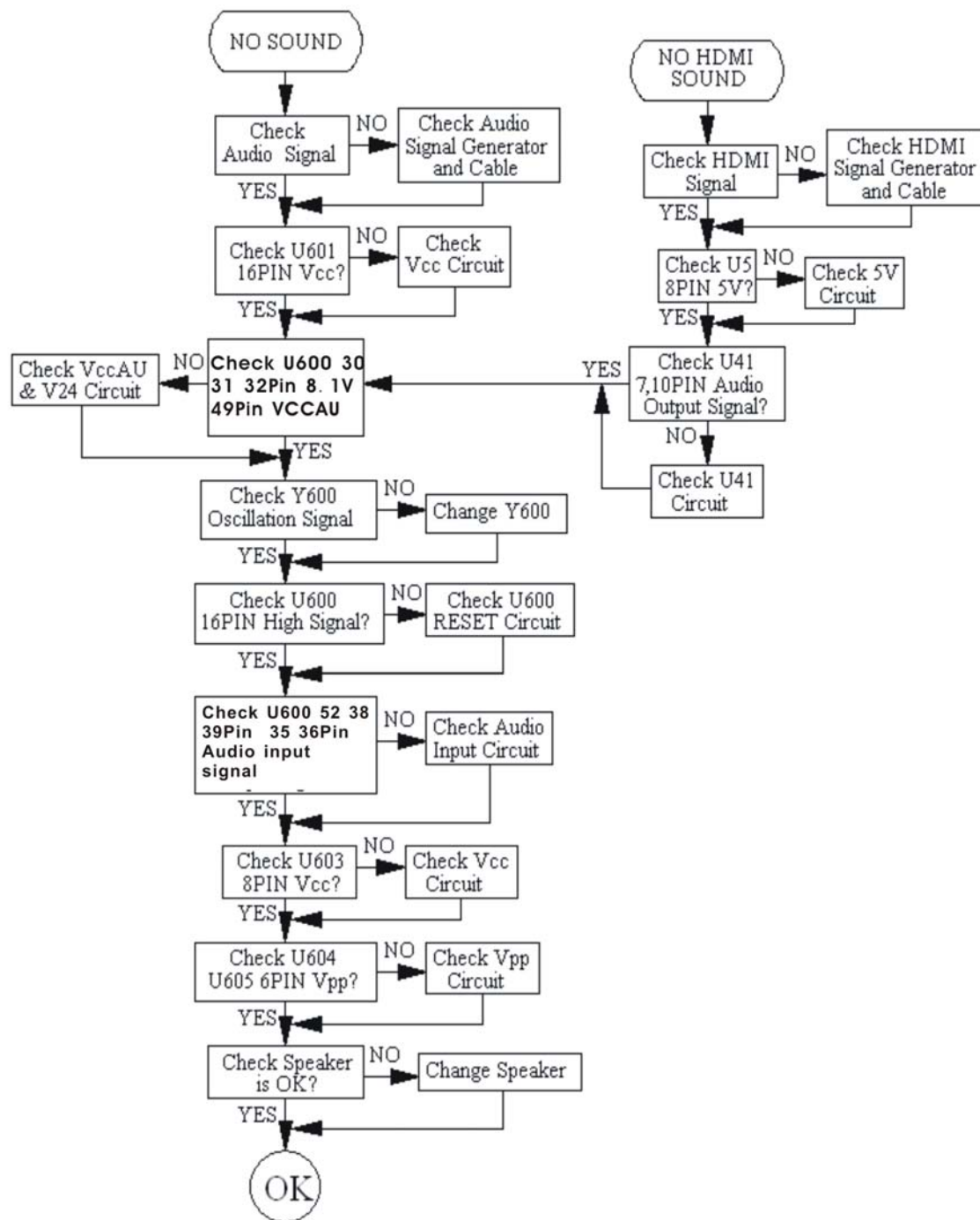






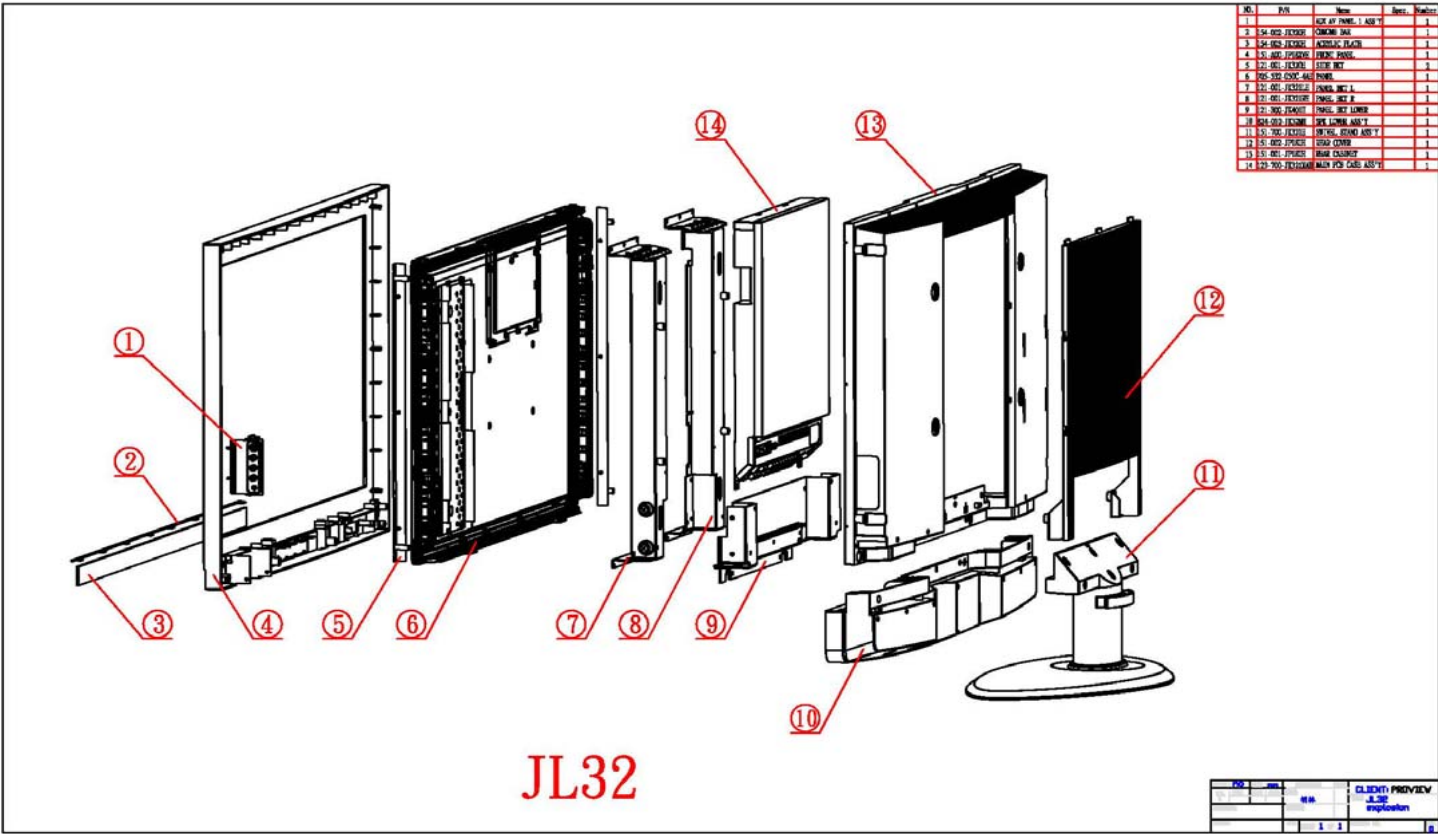


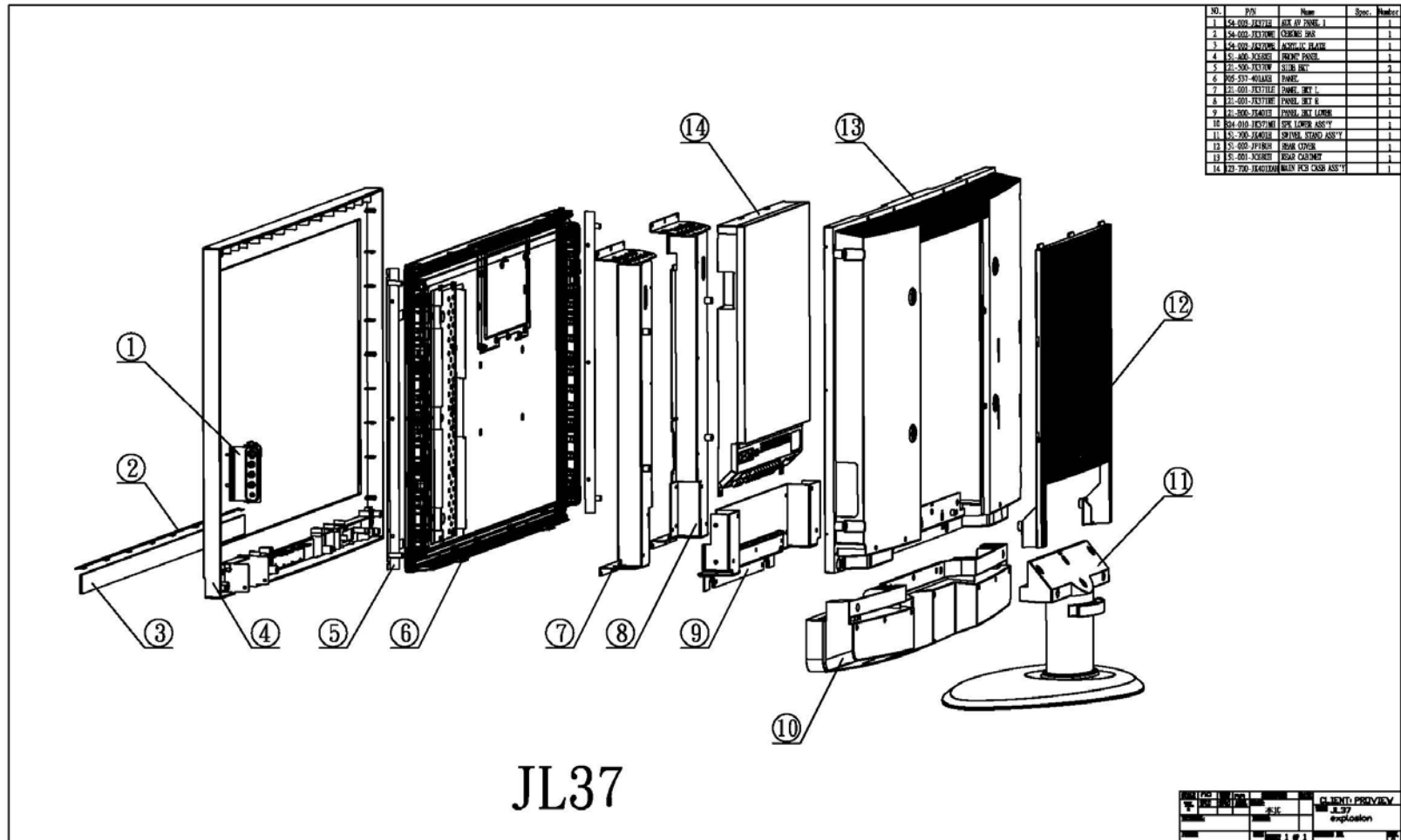


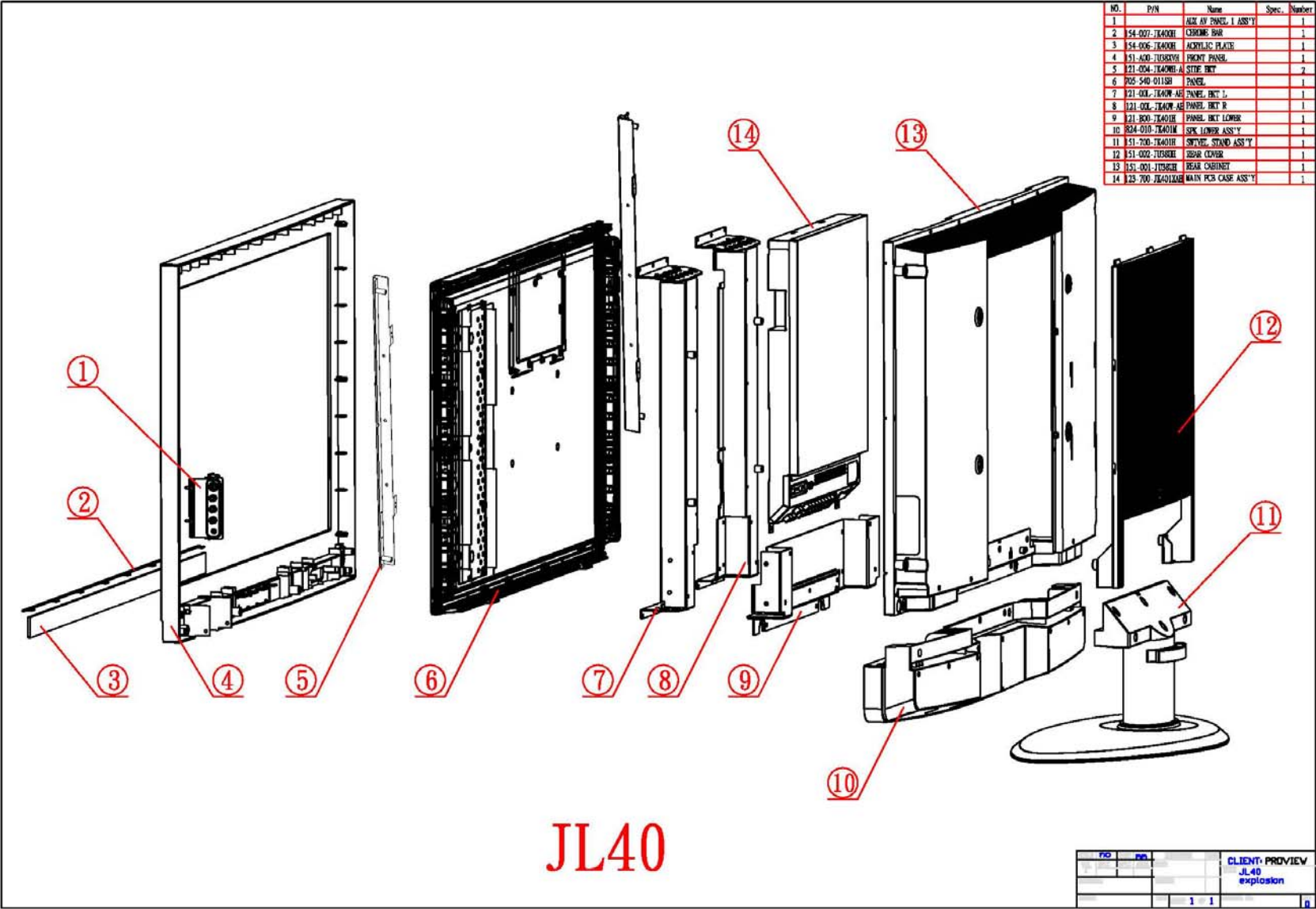


6. Exploded Diagram and Spare Parts List

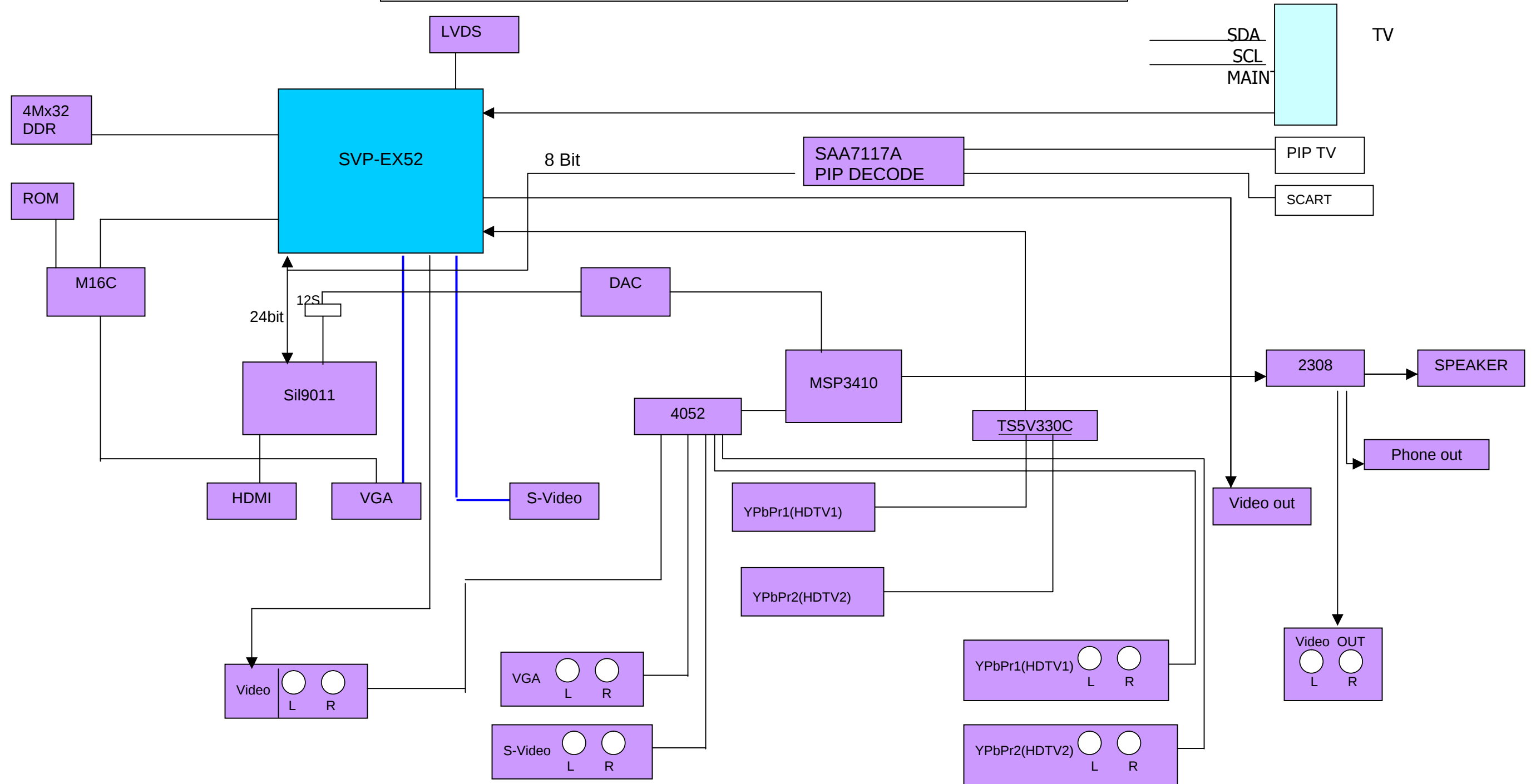
JL328





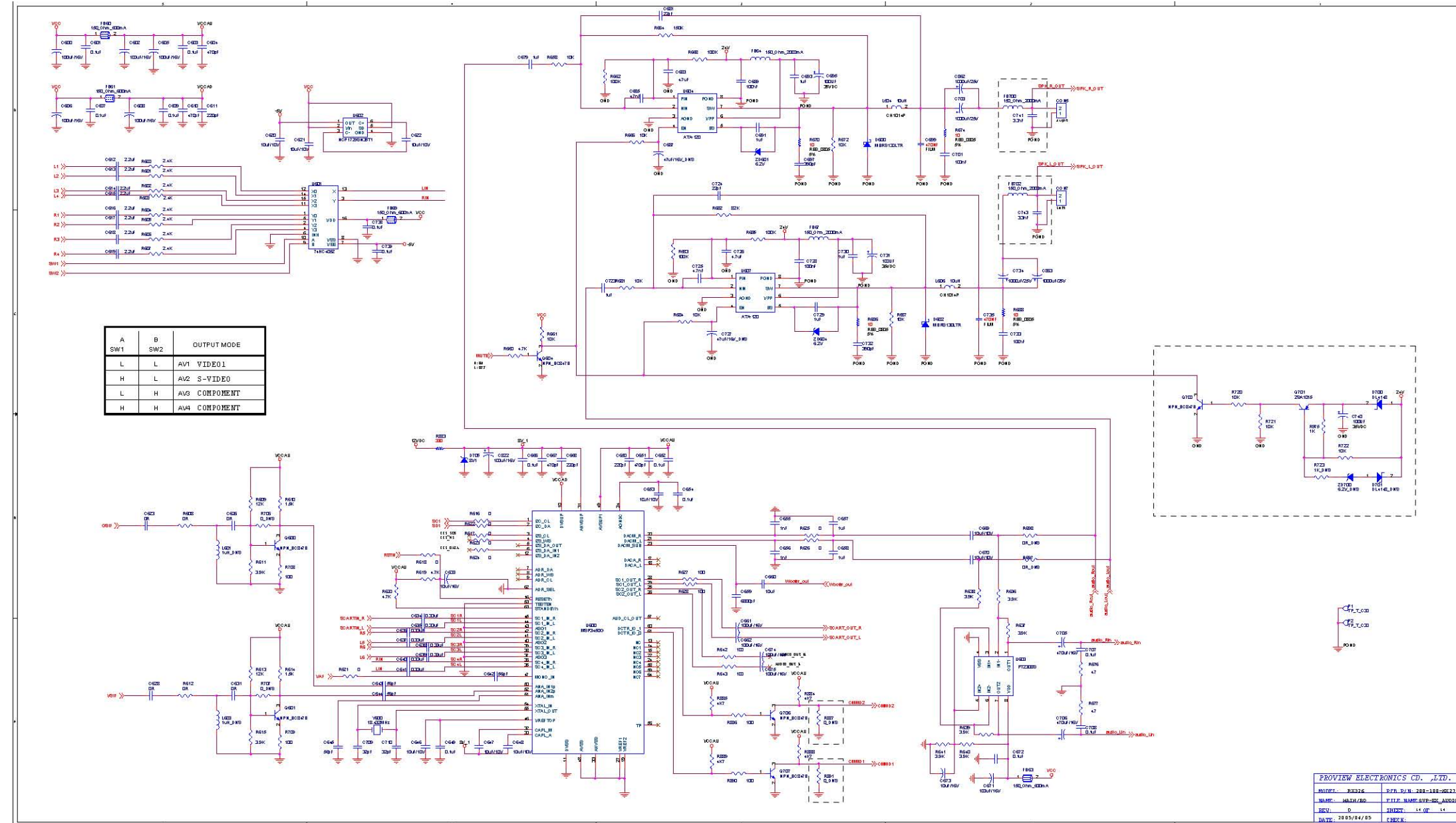


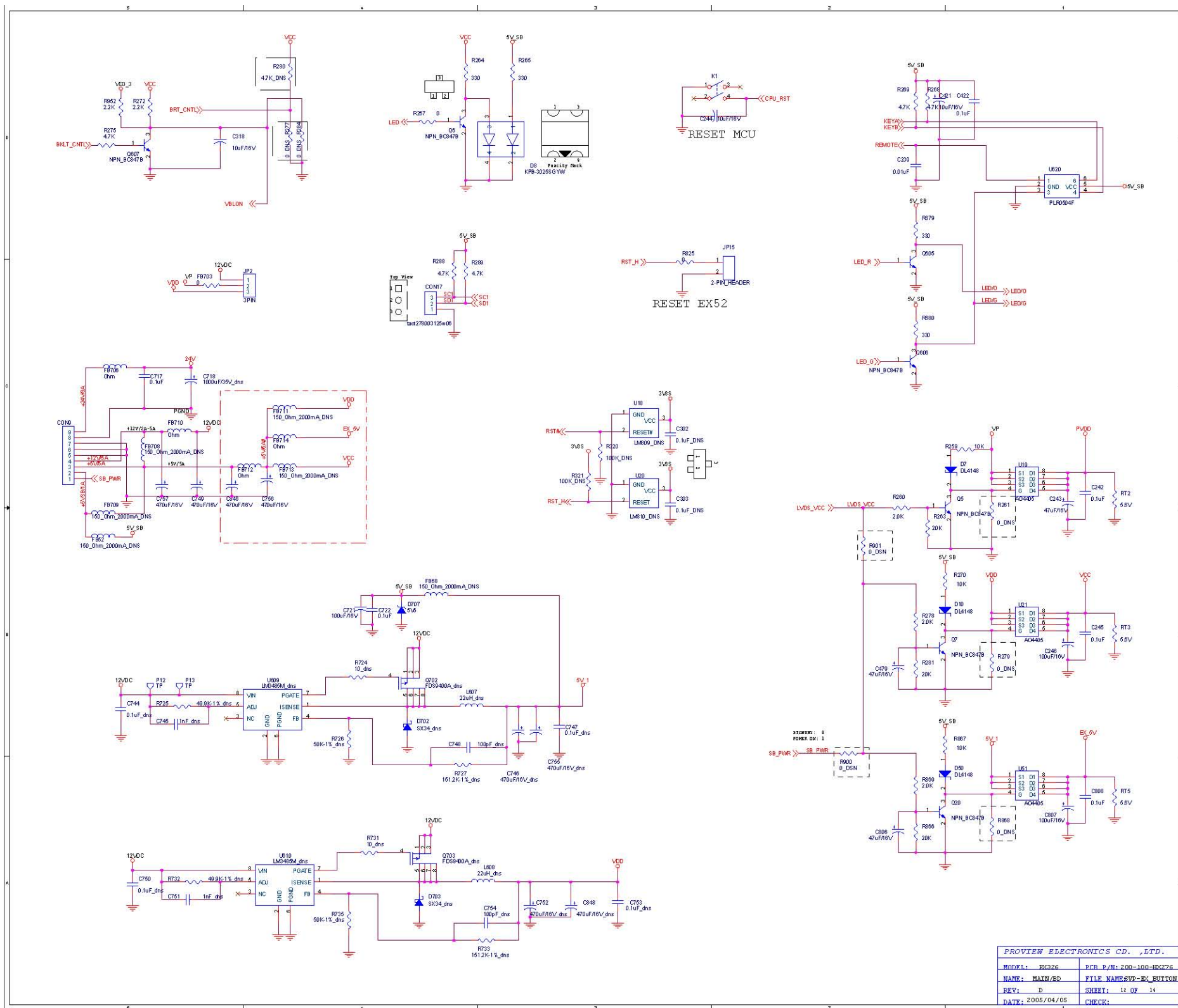
7. Block Diagram

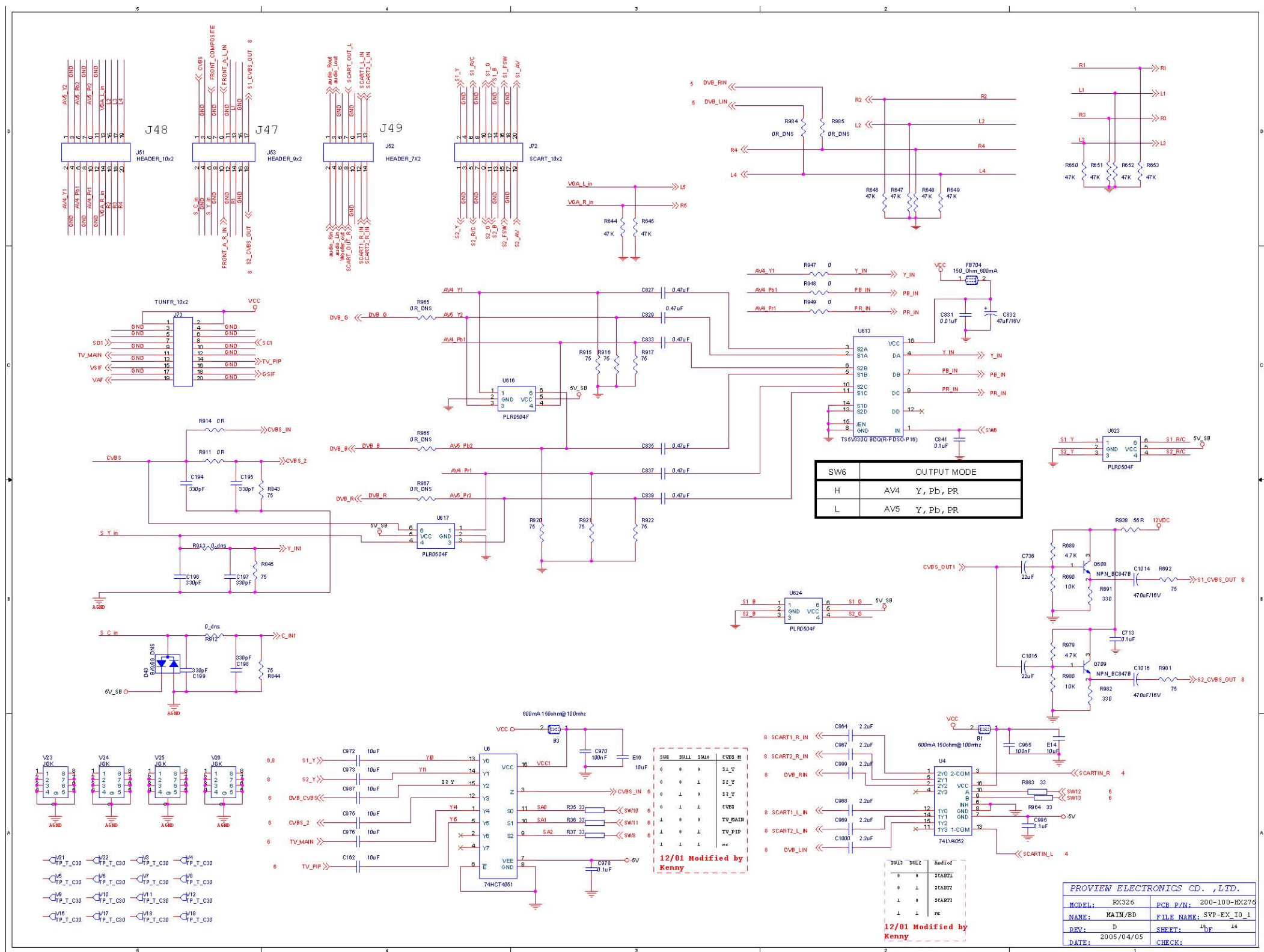


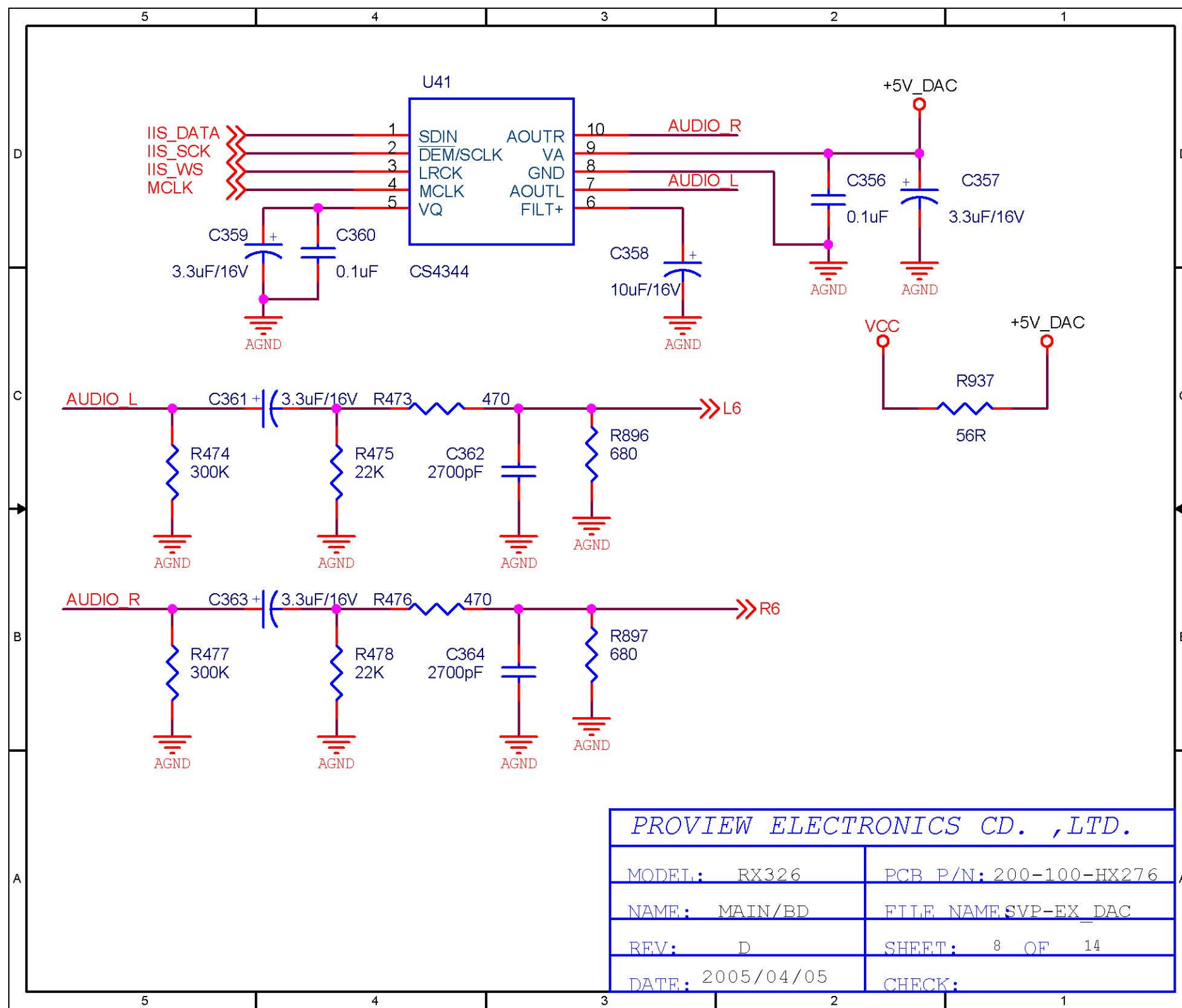
8. Schematic Diagram

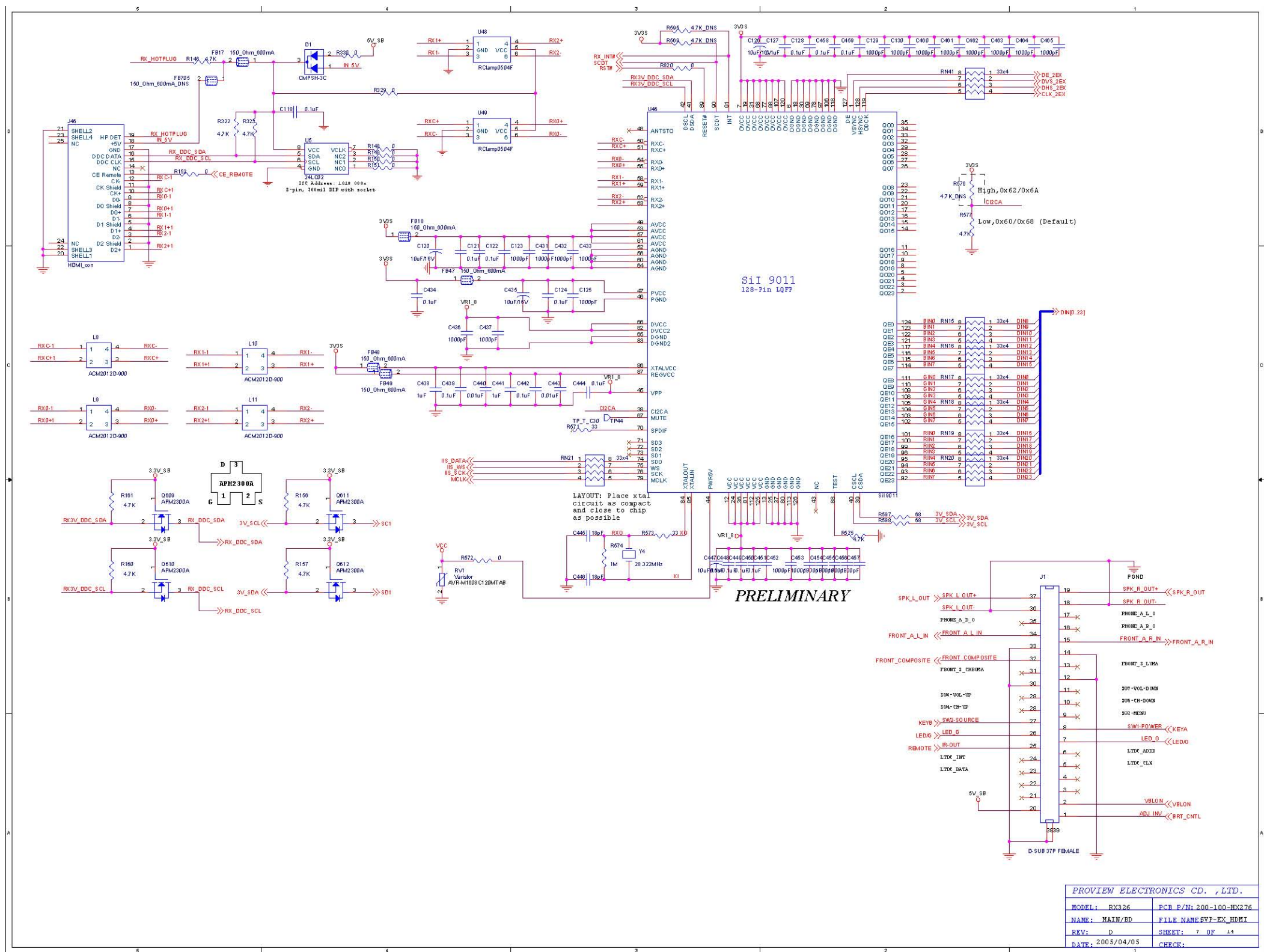
Main Board



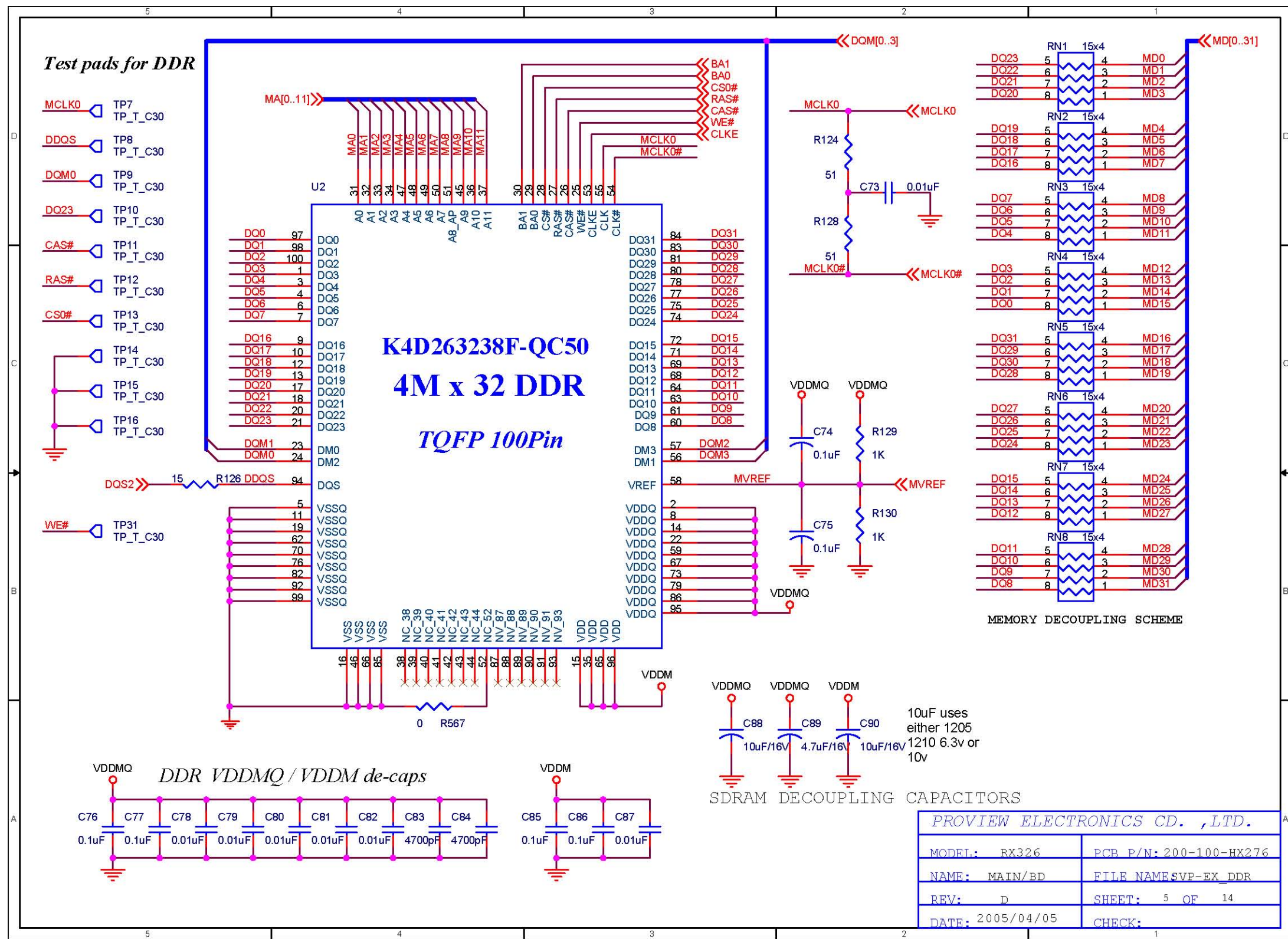


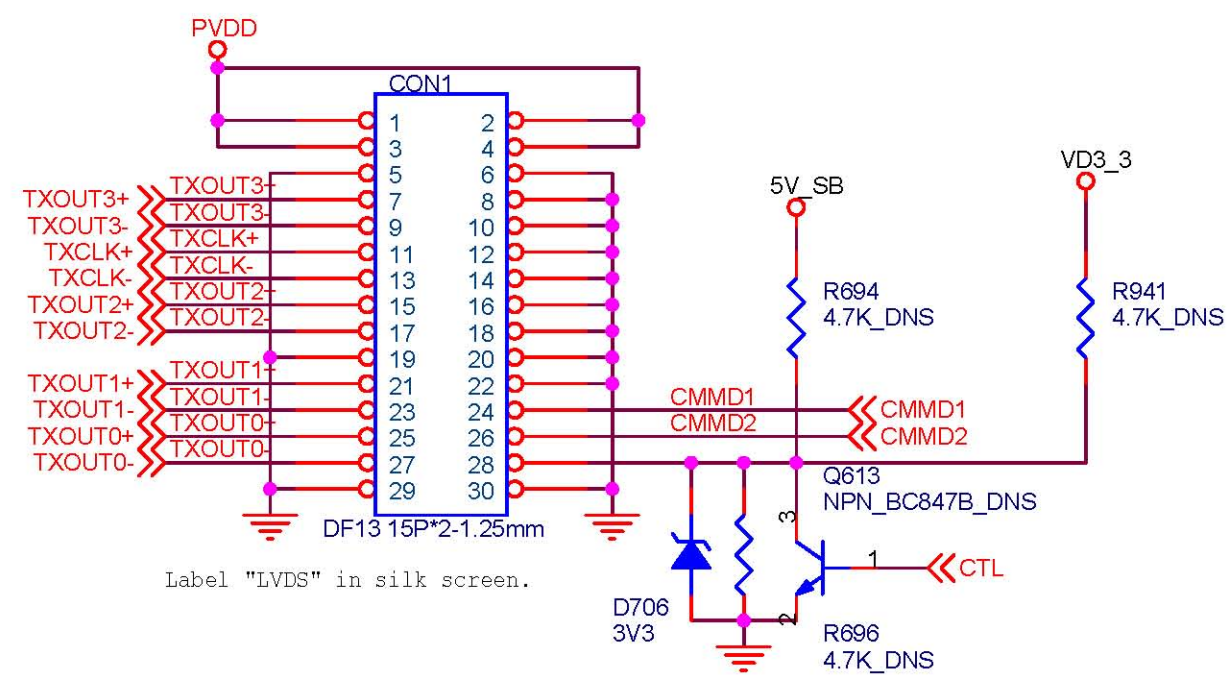




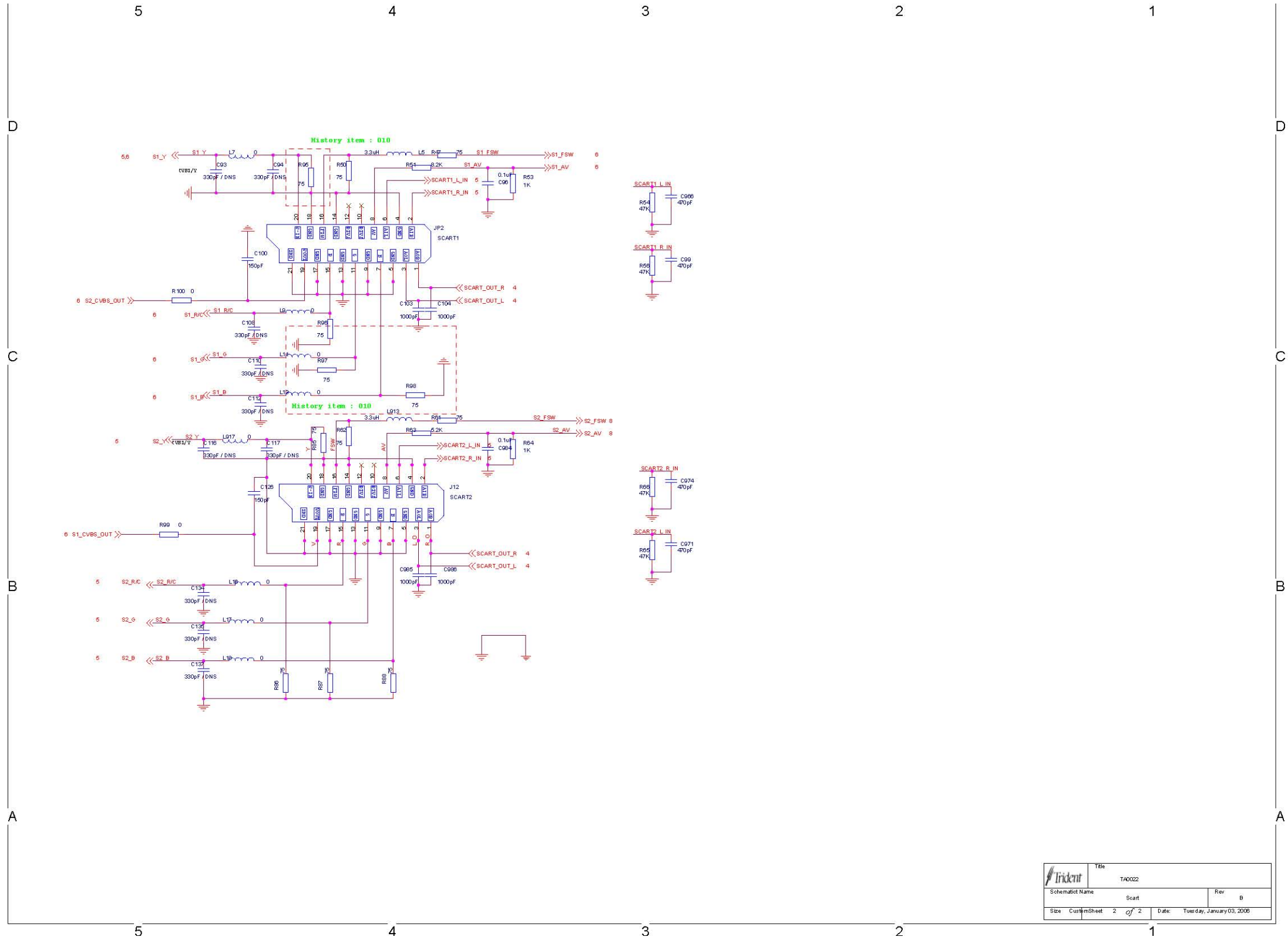




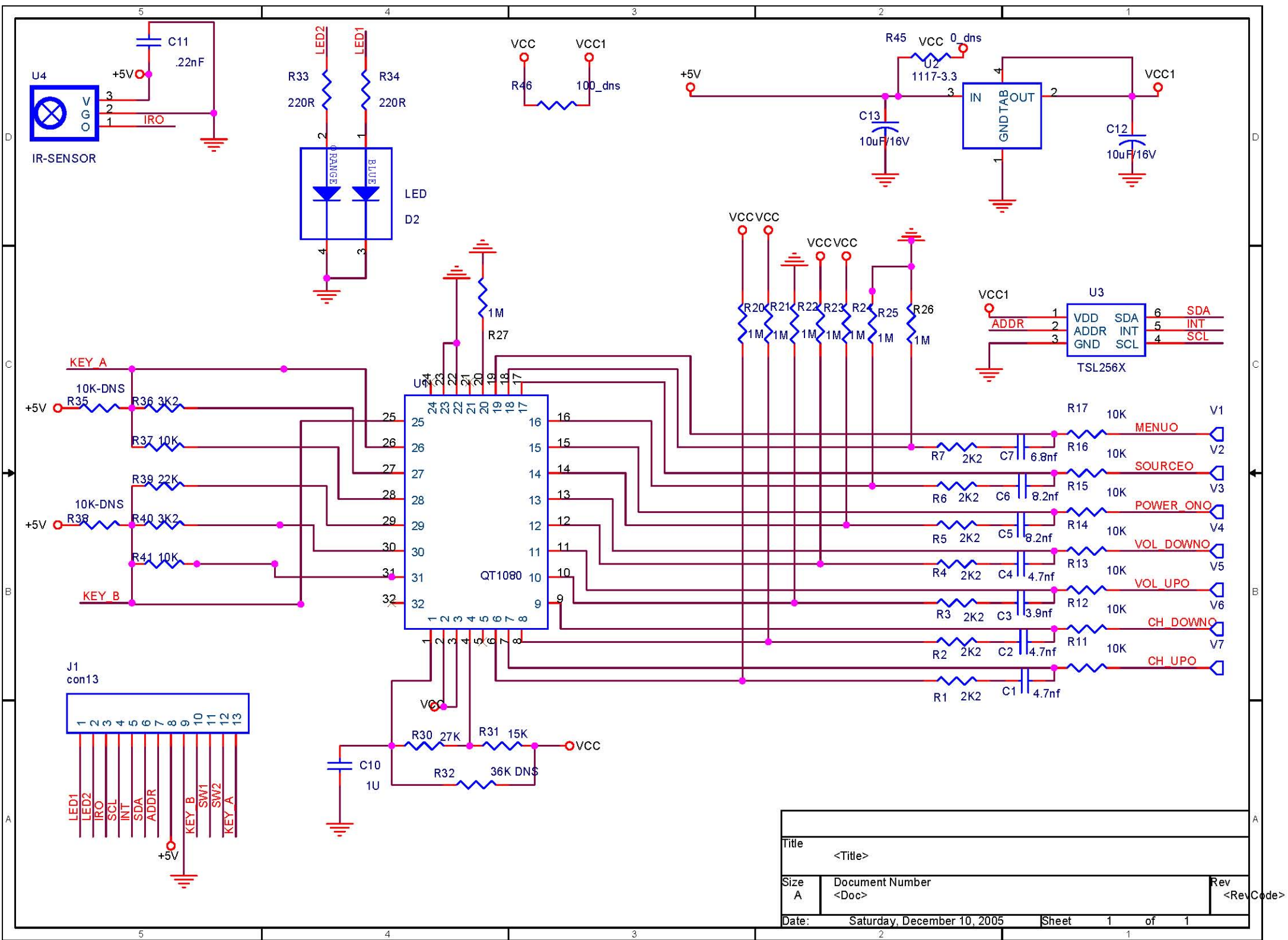




PROVIEW ELECTRONICS CD. ,LTD.	
MODEL: RX326	PCB P/N: 200-100-HX276
NAME: MAIN/BD	FILE NAME: SVP-CONFIG.PIN
REV: D	SHEET: 4 OF 14
DATE: 2005/04/05	CHECK:

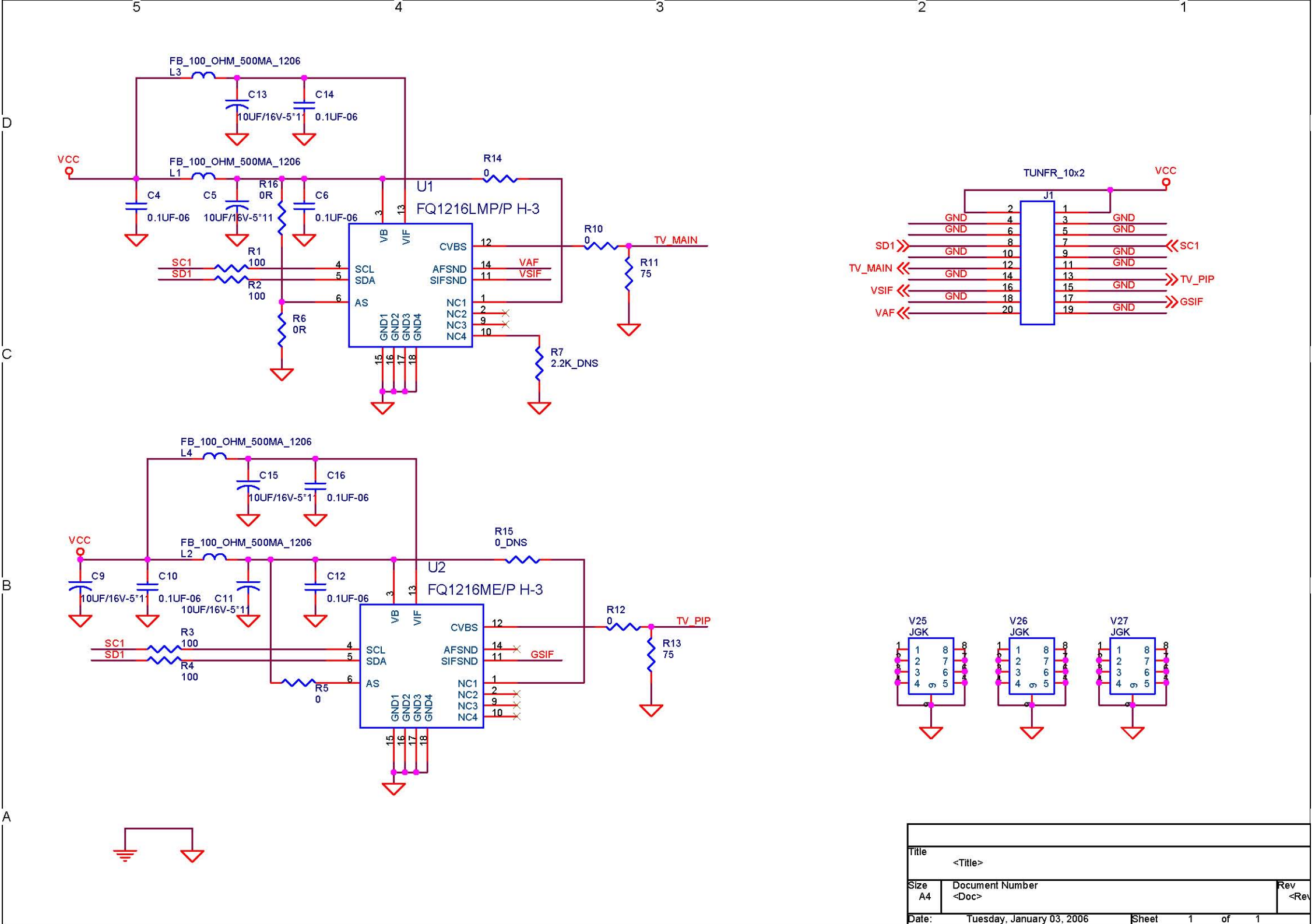


Keypad Board



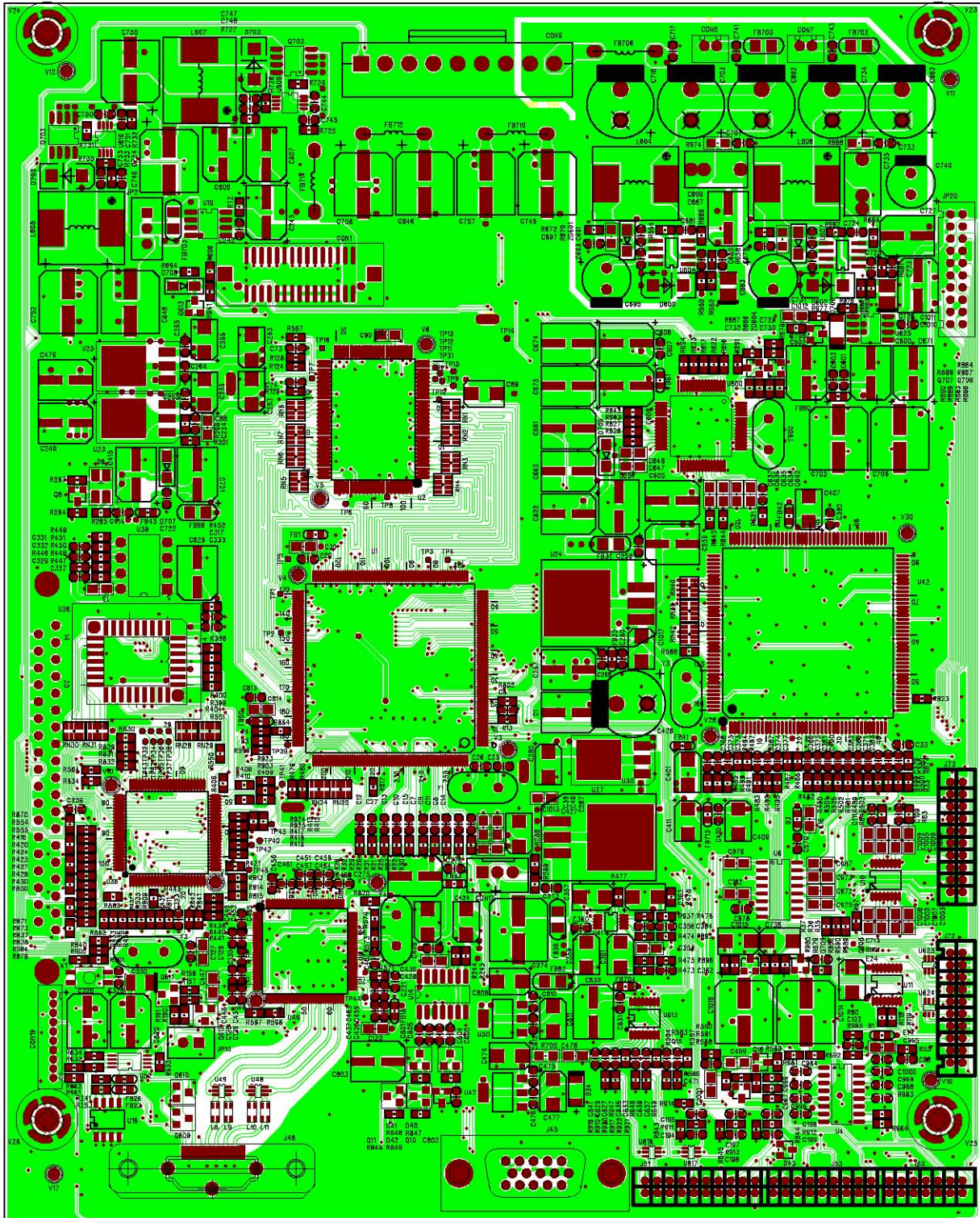
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Date: Saturday, December 10, 2005					Sheet 1 of 1

Tuner Board

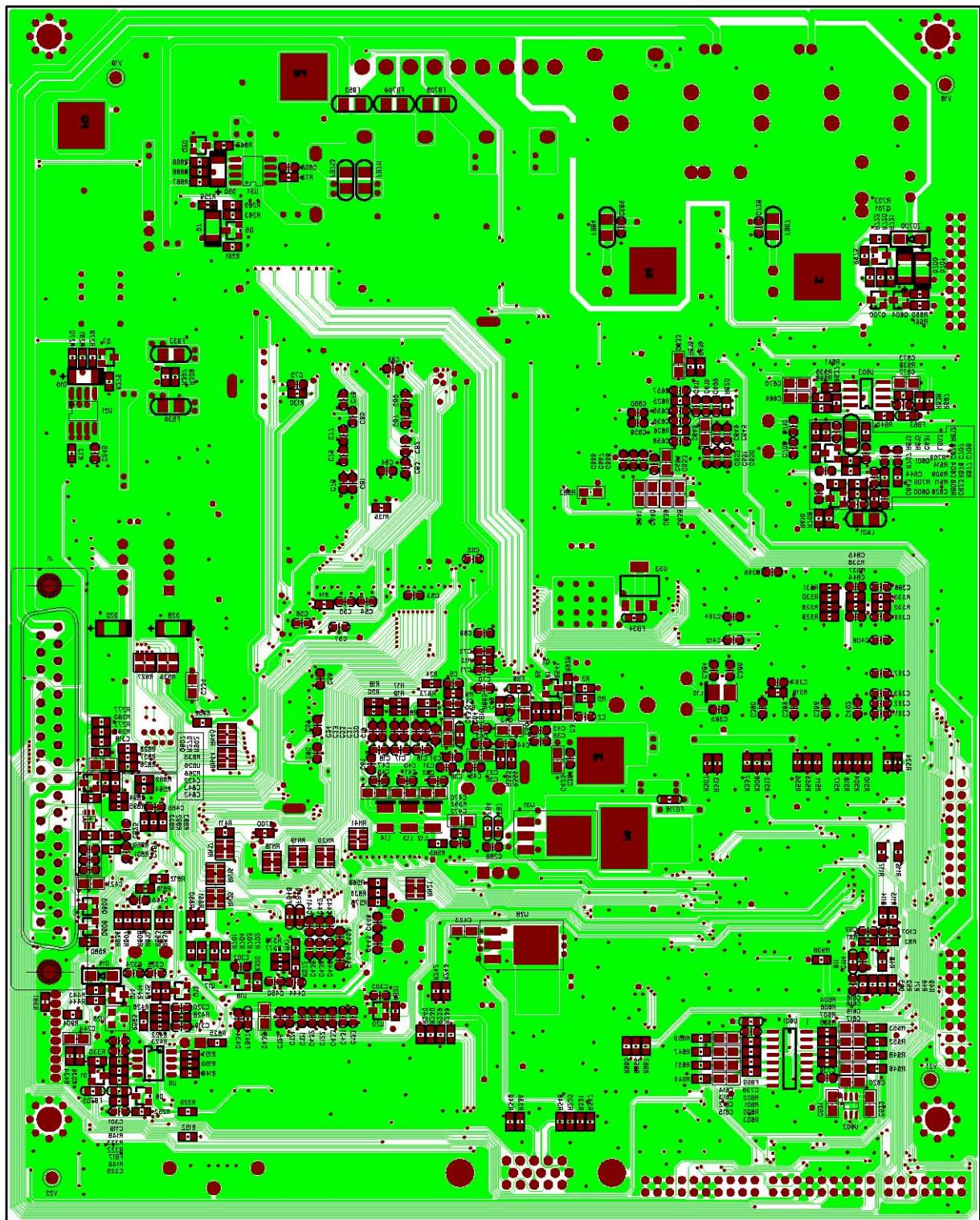


9. PCB Layout Diagram

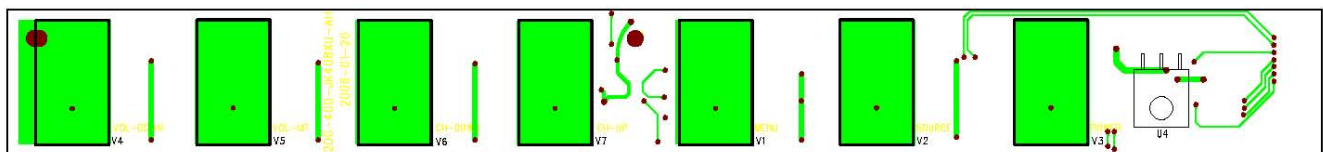
Main Board((Component Side Top)



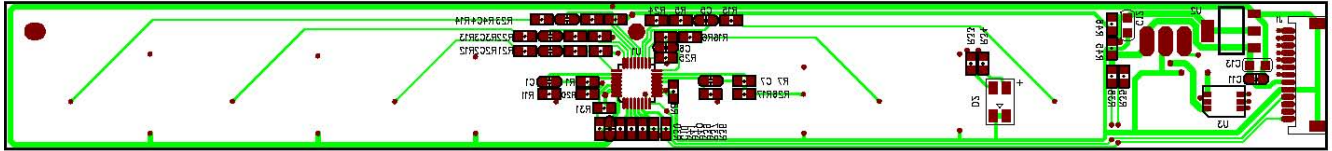
Main Board(Component Side Bottom)



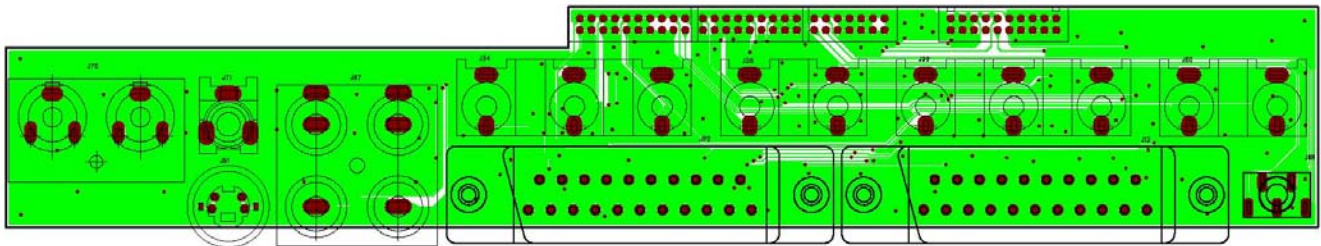
Keypad Board (Component Side Top)



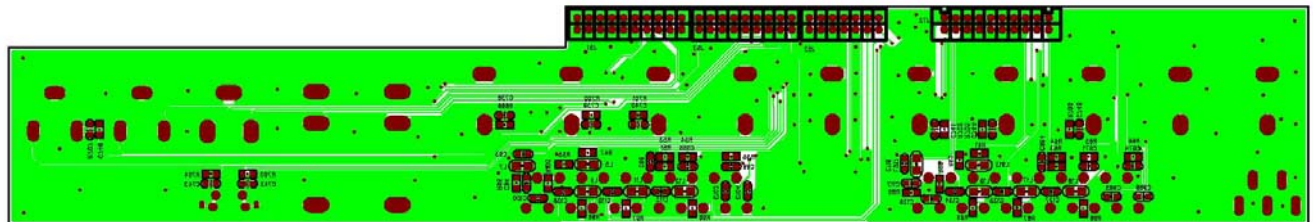
Keypad Board (Component Side Bottom)



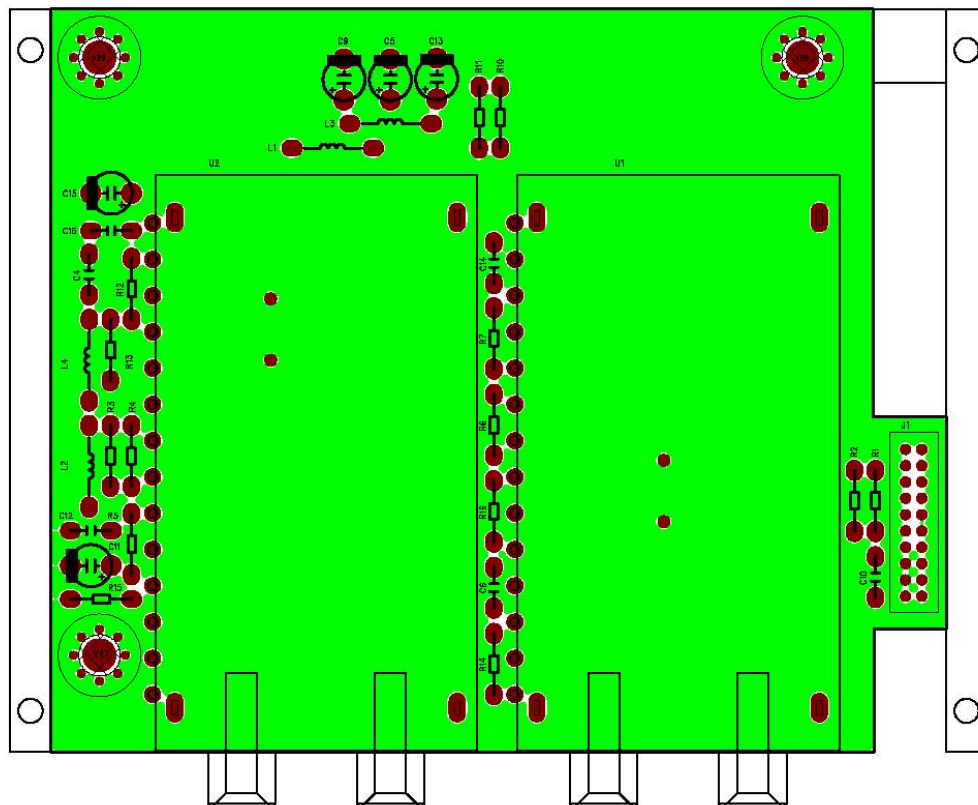
IO Board (Component Side Top)



IO Board (Component Side Bottom)



Tuner Board (Component Side Top)



Tuner Board (Component Side Bottom)

