



LCT TV

Service Manual

MODEL: LCT-20HSST

CONTENTS

SAFE PRECAUTION	4
BLOCK DIAGRAM	5
MAIN BOARD	6
FACTORY MODE ADJUSTMENT	7
TROUBLESHOOTING	10
HOW TO UPDATE THE SOFTWARE	12
CIRCUIT DIAGRAM	13
PART LIST	28

SAFETY PRECAUTION

WARNING:

Service should not be attempted by anyone unfamiliar with the necessary precaution on this receiver.

The following are the necessary precautions to be observed before servicing this chassis.

1. When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as: non-metallic control knobs, insulating covers, shields, isolation resistor-capacitor network etc.
2. When replacing parts or circuit boards, disconnect the power cord.
3. When replacing a high wattage resistor (oxide metal film resistor) on the circuit board, keep the resistor 10mm (1/2in) away from circuit board.
4. Connection wires must be kept away from components with high voltage or high temperature.
5. If any fuse in this TV receiver is blown, replace it with the FUSE specified in the chassis parts list.

PRODUCT SAFETY NOTICE

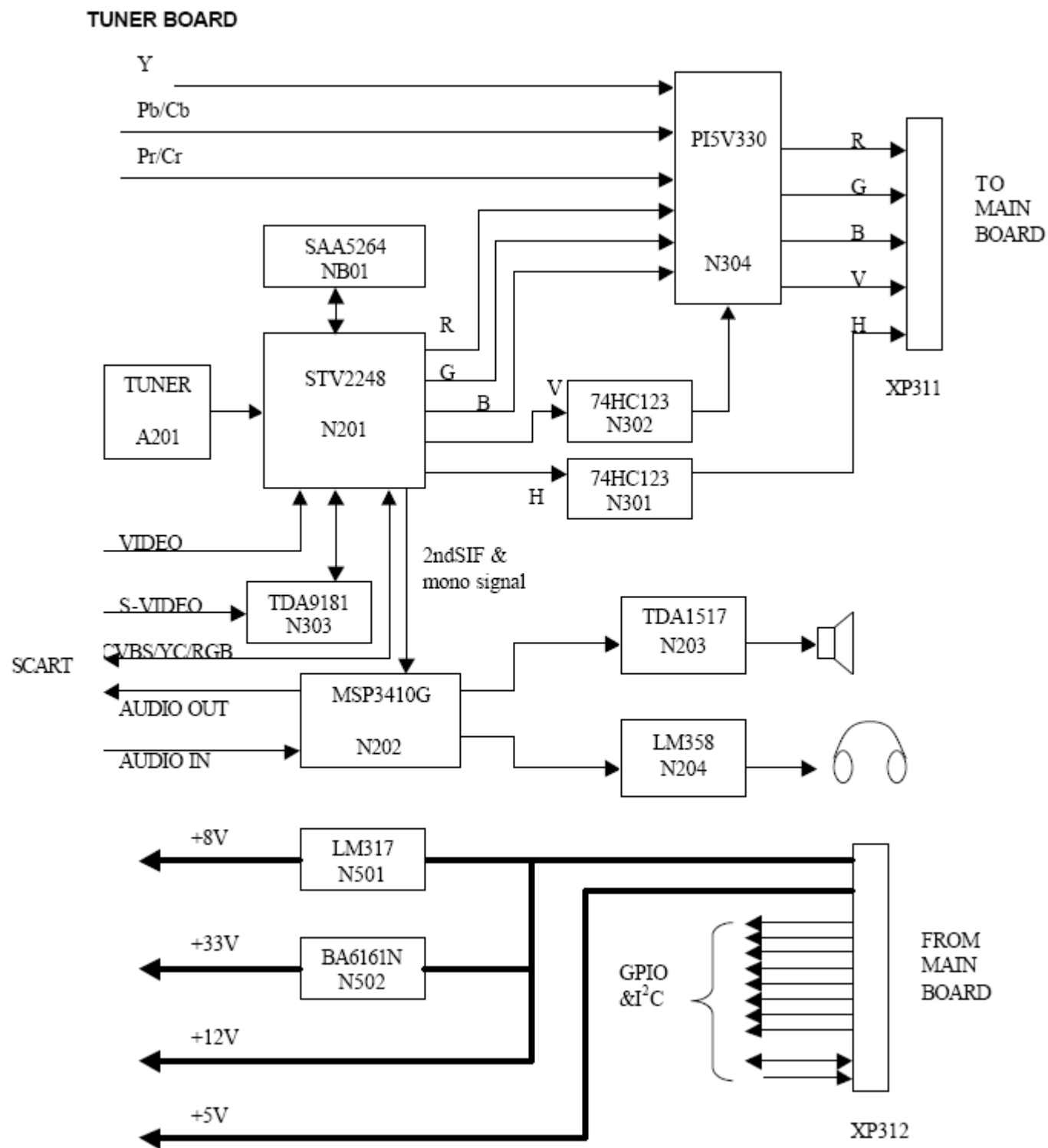
Many electrical and mechanical parts in the chassis have special safety-related characteristics.

These characteristics are often passed unnoticed by a visual inspection.

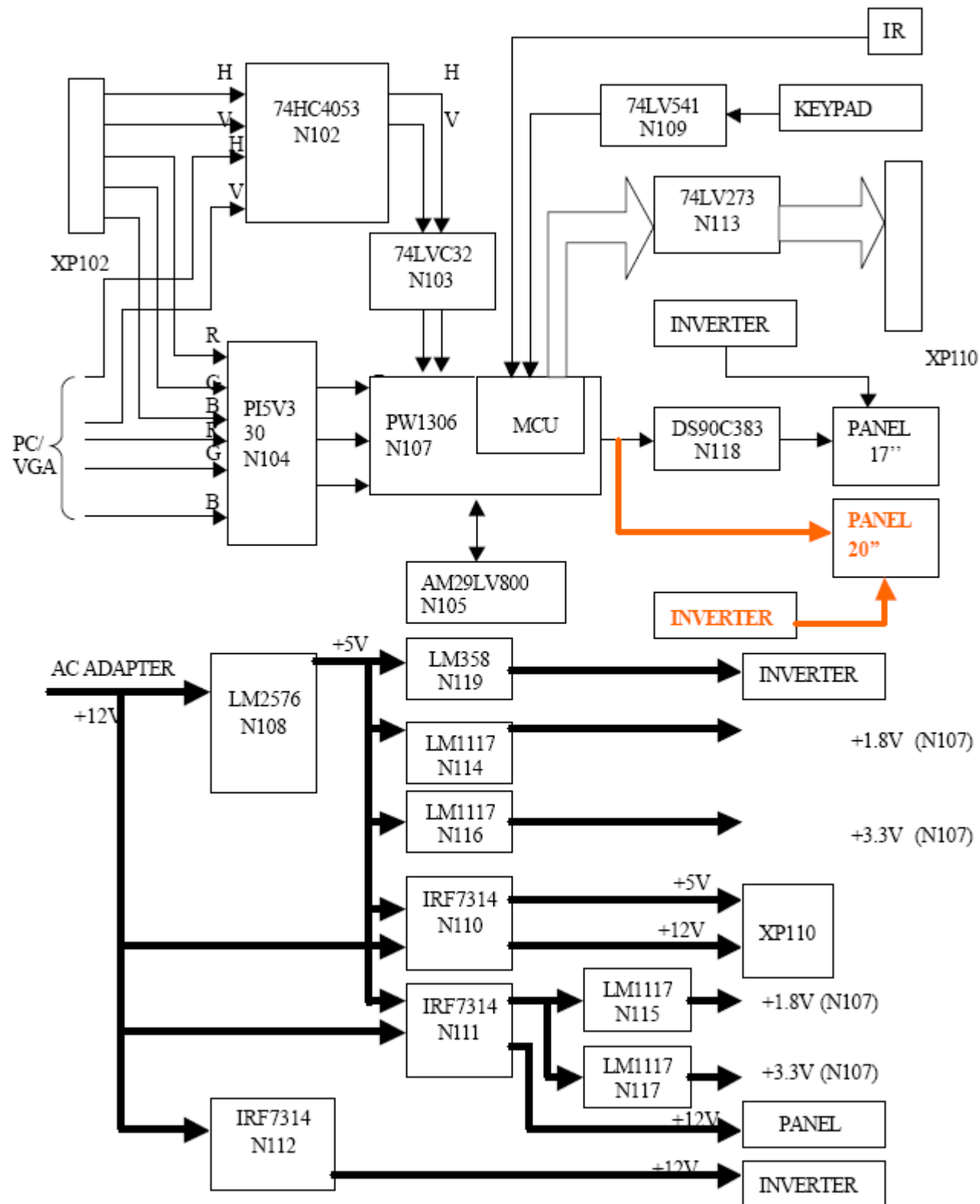
Replacement parts, which have these special safety characteristics are identified in this manual and its supplement electrical components having such features are shaded on the schematic diagram and the parts list.

Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same characteristic as specified in the parts list may create shock, fire or other hazards.

BLOCK DIAGRAM



MAIN BOARD



FACTORY MODE ADJUSTMENT

FACTORY MODE adjustment is a special adjustment, which is controlled by I2C BUS. The TV set has been set at optimum mode at the factory. Except for special request, such as updating software, replacing PANEL, MEMORY, IC etc., it is hoped not to be adjusted after produced. To conduct FACTORY MODE's adjustment, please do it according to the following steps:

- 1) Press the MUTE button and the number button [2、6、6、0、7、1] on the remote controller to enter into factory menu, adjust **display**, **cal.**, **stv2248** or **other** menu. You can use navigation key to access them.
- 2) In **display** menu, display the basic characteristic parameter such as panel resolution, mode table, power on time, backlight on time, software version number etc.
- 3) In **cal.** menu, display the basic characteristic parameter such as external comb filter, video format, color space, test pattern etc. Except for special need, reset nvram item and right to OK set item are hoped not to be adjusted.
- 4) In **stv2248** menu, select the item you want to adjust by pressing the button “CH+” or “CH-” and use the "VOL+" or "VOL-" button to adjust. In this menu, you can adjust the white balance, picture modes value, SCART Audio out value and volume middle value. And the contrast value, AGC value and the important value vcofine, vcocoa are in the sub menu **2248 adjust**.
- 5) In **OTHER** menu, select the item you want to adjust by pressing the button “CH+” or “CH-” such as sharpness adjust, Volume Max and Volume Min value and use the "VOL+" or "VOL-" button to adjust.
- 6) Press "MENU" button on the remote controller to exit the FACTORY MODE.

Page 1: Display the different characteristic parameter according to signal source and TV set model.

Item	Name	Default	Value	Note
1	Panel	640 x 480		
2	Mode table			
3	Power on time			
4	Backlight on time			
5	Version number			

Page 2: Display the basic default setting according to signal source.

Item	Name	Default	Value	Note
1	External comb filter	on	On, off	
2	Video space	auto	NTSC, PAL, SECAM, NTSC Japan, Auto	
3	Color space	RGB		Only for tv, video, s-video, RGB source
		Ypbpr smpte240		Only for YPbPr/YcbCR
4	Test pattern	None	Color bar, black, gray, White, red, green, blue gradient, blue gradient	Used for test in factory
5	Calibration			Useless
6	Reset nvram			Used for test in factory.
7	Right to OK setting			Used for test in factory

Page 3: Set the default value of brightness and contrast as following table.

Item	Description	Default	Value	Note
2248 contrast	IC 2248 contrast value	19	0~63	
2248 bright	IC 2248 bright value	32	0~63	
2248 vcofine	IC 2248 vco fine value		0~128	Depends on hardware
2248 vcocoa	IC 2248 vco coarse value		0~15	Depends on hardware
2248 AGC	Auto gain control value	24	0~64	
2248 auto vco	Automatically adjust vco value			
2248 manual vco	Manually adjust vco value			
Wb manual adj	Manually adjust white balance			
Wb auto adj	Automatically adjust white balance			Used for test in factory
Wb state preset	White balance state value			Used for test in factory
Pct mode setting	Picture modes value of different source			
SCRT Audio out	Audio amplitude value	96	80~116	
Volume Middle	Middle value of volume	100	0~127	

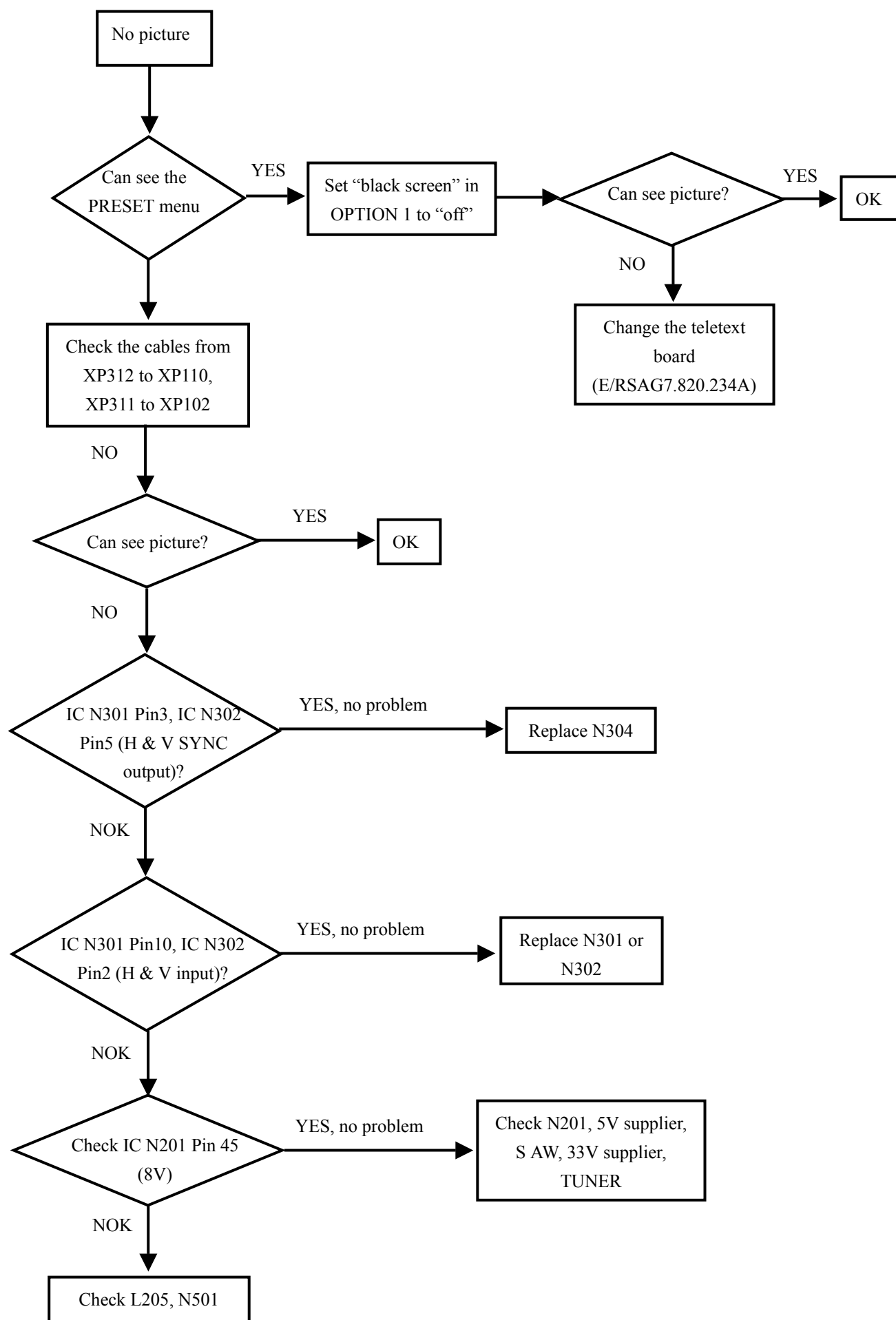
Set the default value of picture mode item as following table.

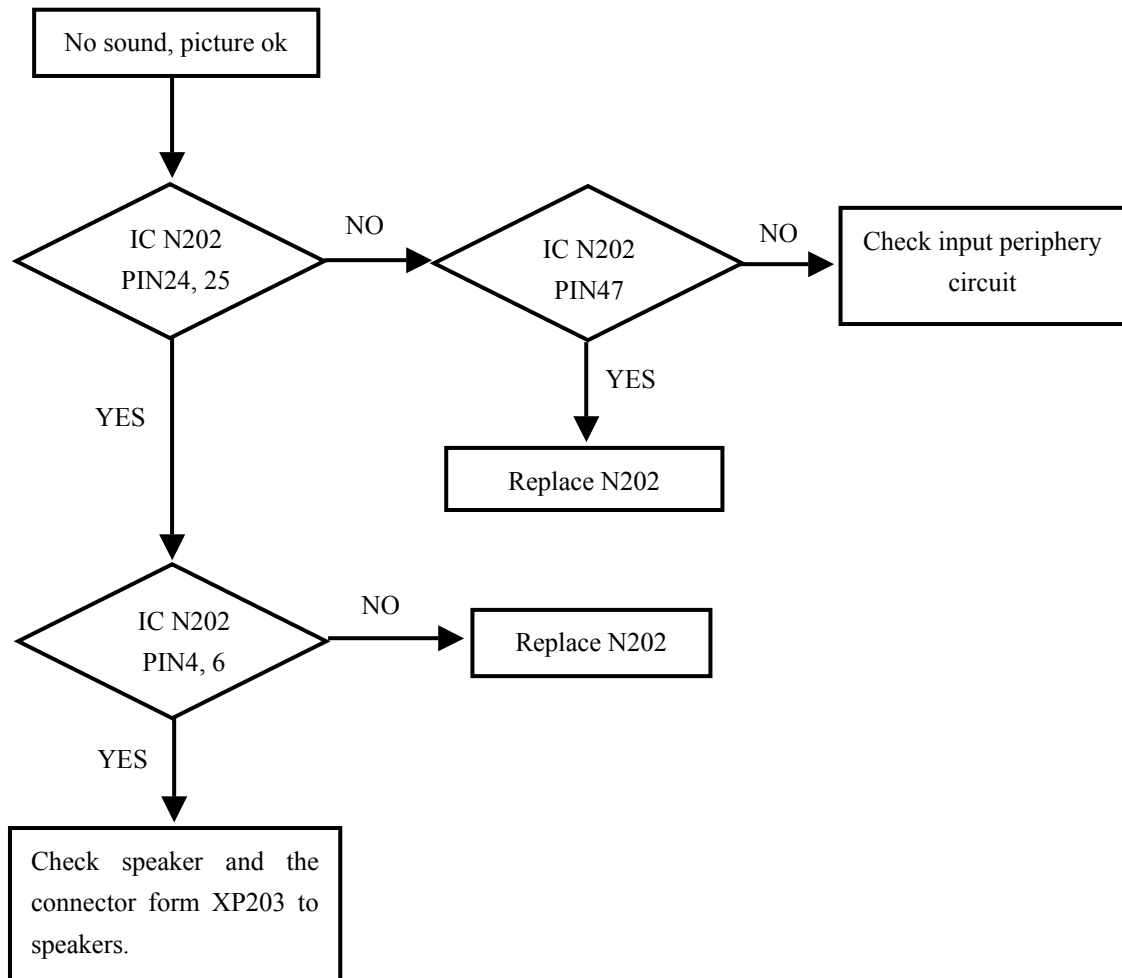
Single source	Pct mode status	Brightness	Contrast	Note
VIDEO	Dynamic	81	80	
	Standard	71	70	
	Soft	60	60	
YUV	Dynamic	81	69	
	Standard	71	59	
	Soft	60	49	
RGB	Dynamic	60	60	
	Standard	50	50	
	Soft	50	29	

Page 4: Set the default value of volume and white balance adjustment as following table.

Name	Description	Default	Value	Note
Sharpness	Sharpness of TV & video picture	Sofetest	Normal, soft, sharp, sharpest, softest	
Pw brt max video	IC PW1306 max bright for video	35	0~127	
Pw cnt max video	IC PW1306 max contrast for video	65	0~255	
Pw cnt max yuv	IC PW1306 max bright yuv	55	0~127	
Pw cnt max yuv	IC PW1306 max contrast for yuv	85	0~225	
Pw brt max rgb	IC PW1306 max bright for rgb	55	0~127	
Pw cnt max rgb	IC PW 1306 max contrast for rgb	85	0~255	
Volume Max	Volume maximum value	110	0~127	
Volume Min	Volume minimum value	60	0~127	

TROUBLESHOOTING





HOW TO UPDATE THE SOFTWARE

The software of LCDTV stored in a 8M bit FLASH memory IC, so it can be updated when needed. Sometimes we have to update the software of LCDTV to solve some problems. Only the authorized people can do the updating work.

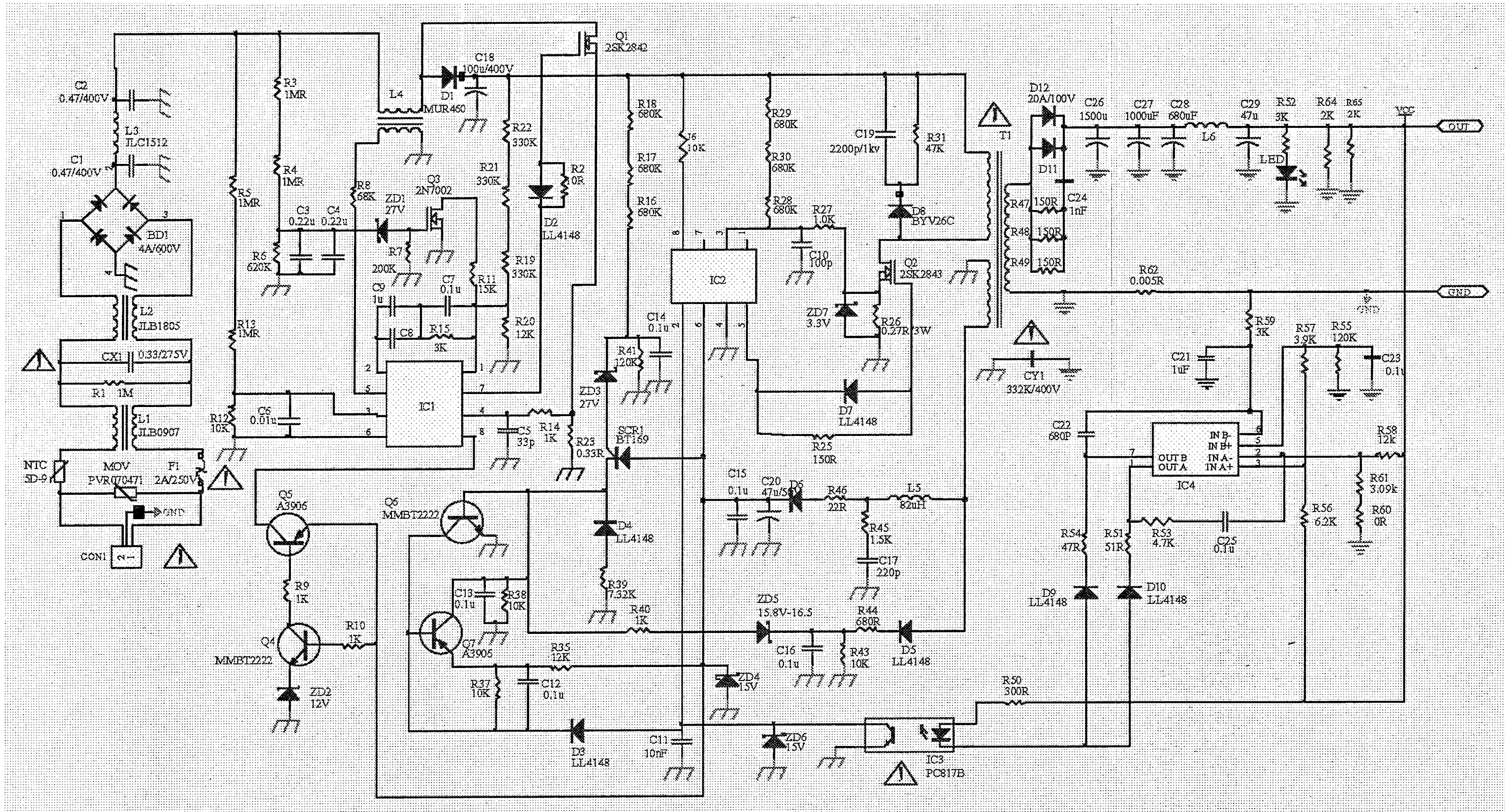
When updating the software, we need following instruments, a computer running windows NT /windows 2000/windows XP, a debug board, a serial cord with D-sub 9 pin terminals (NOT SUPPLIED).

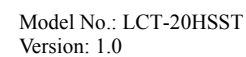
- 1) Power off the LCD TV, pull down the power cord.
- 2) Remove the stand and back-cover, dismount the steel shield-cover
- 3) Connect the computer—serial cord—debug board—LCD TV (connector XP109)
- 4) Running the update program (tool) to load the new software
- 5) Plug in the power cord, the software will be wrote into the FLASH IC.

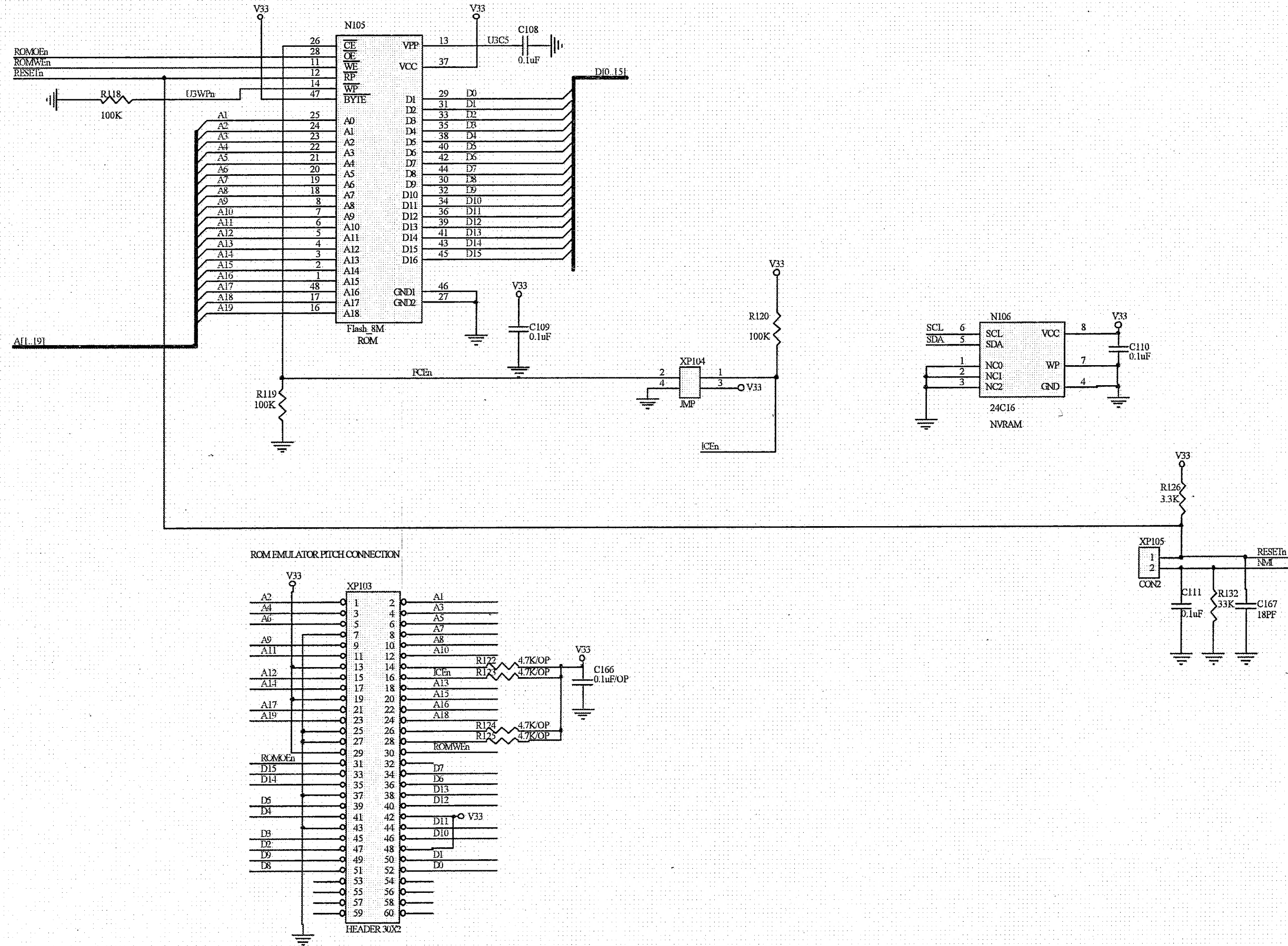
Cautions:

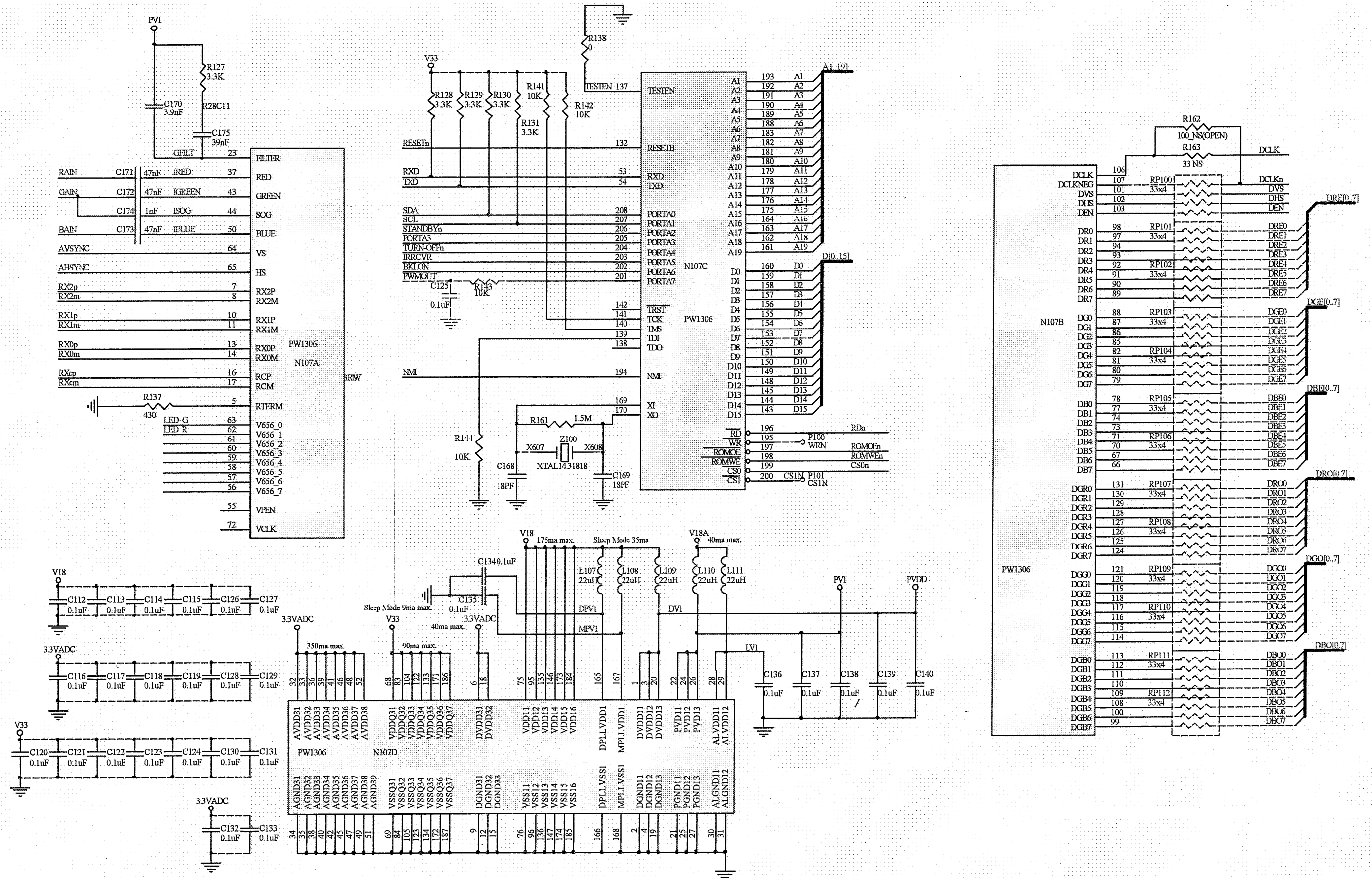
The updating work will erase all the parameter such as white balance value, vco value etc. So before you update the software, you must enter the factory mode and to write down the vco values and white balance values. When you finish the updating work, you must restore the values to right position.

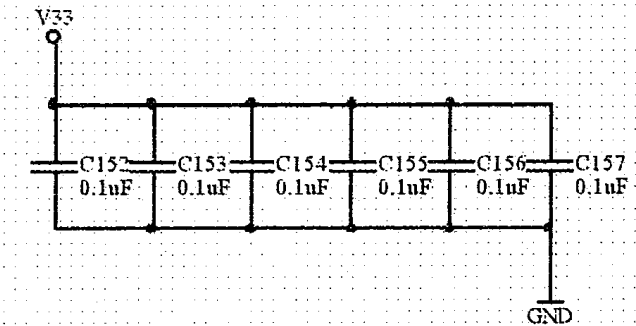
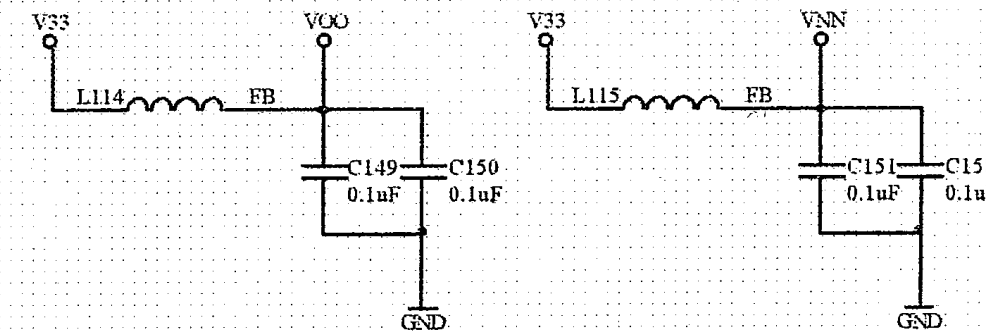
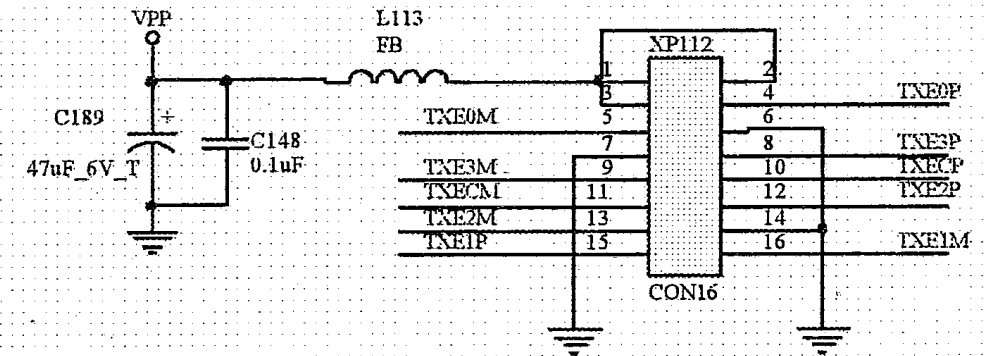
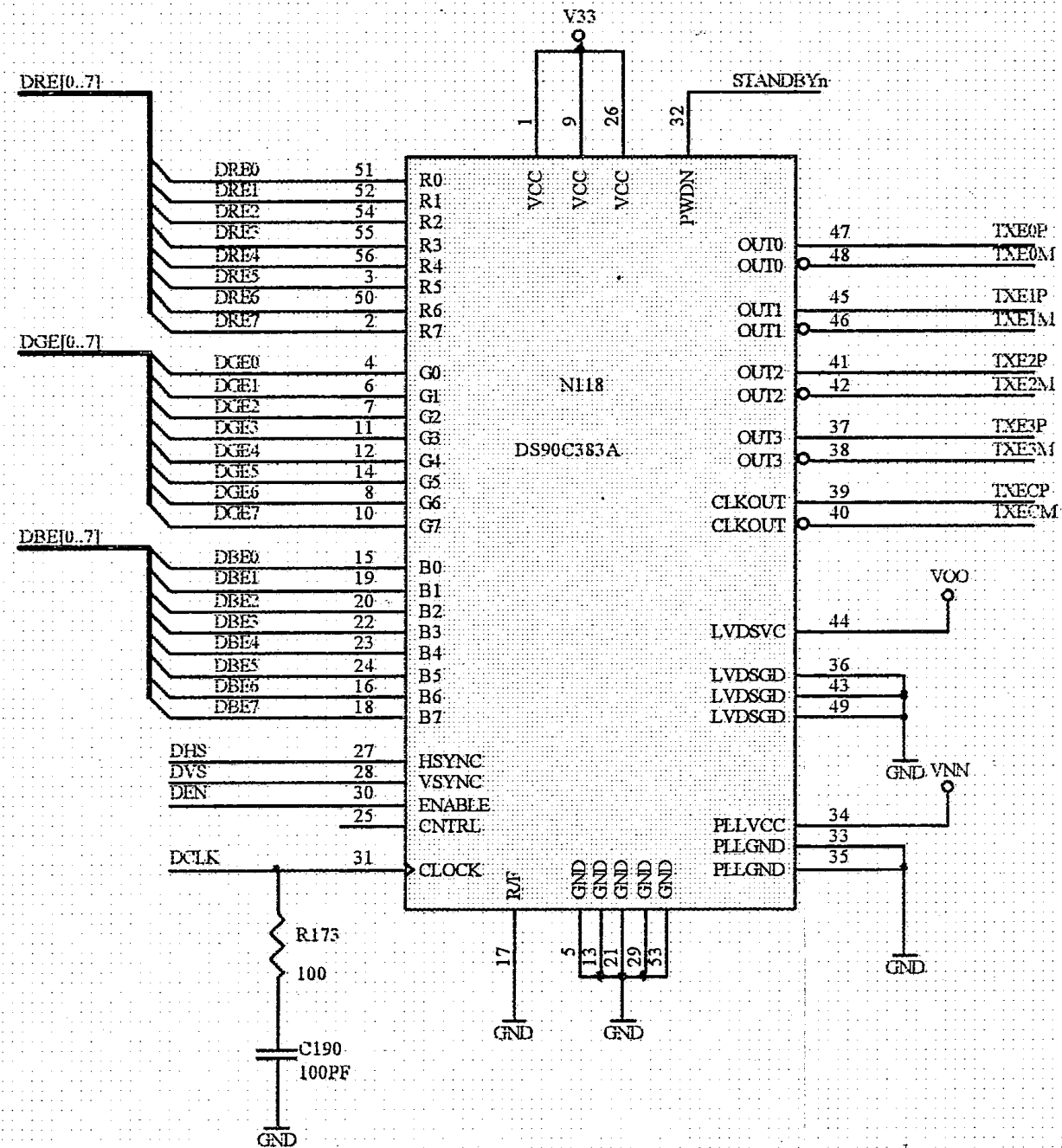
CIRCUIT DIAGRAM



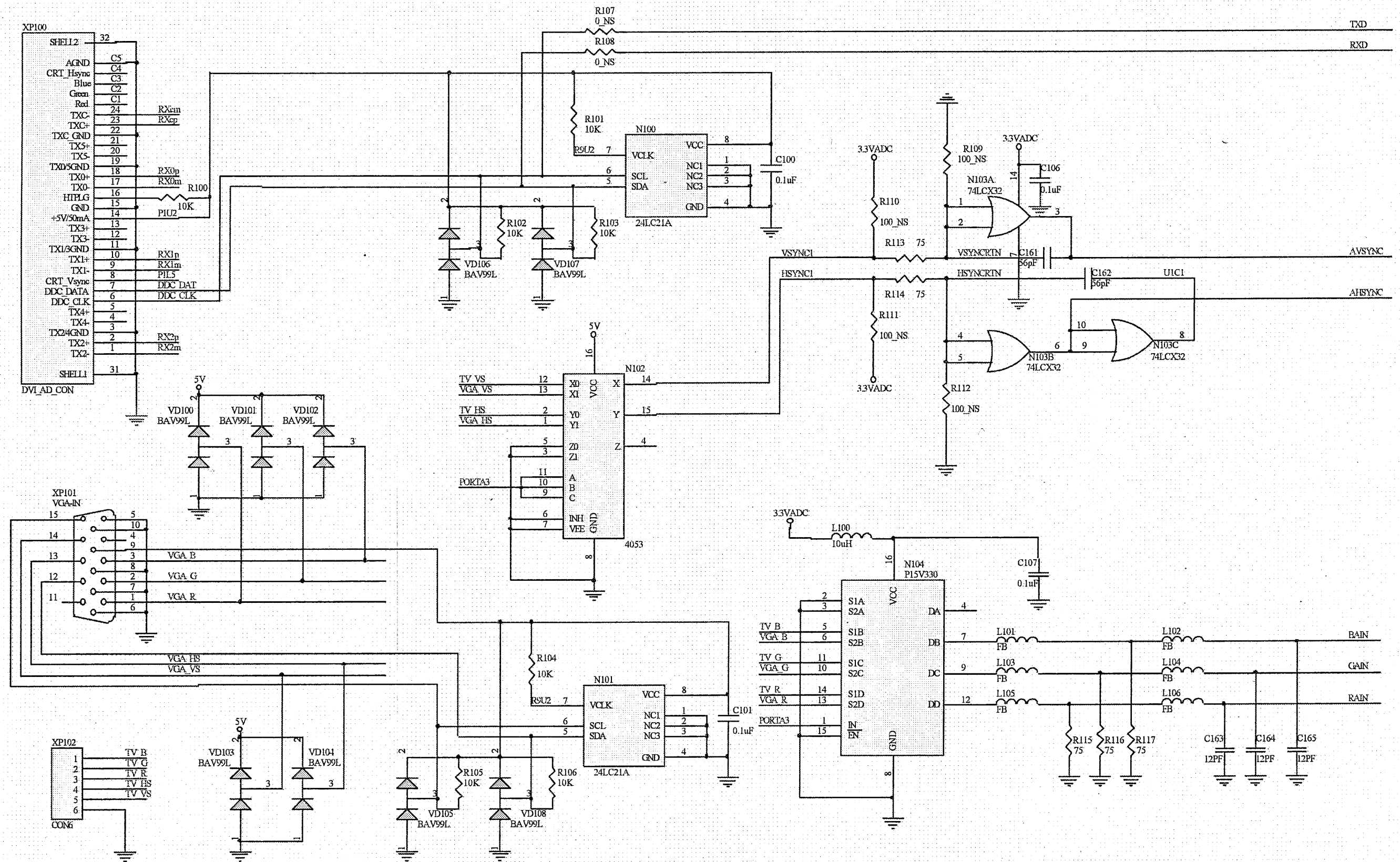




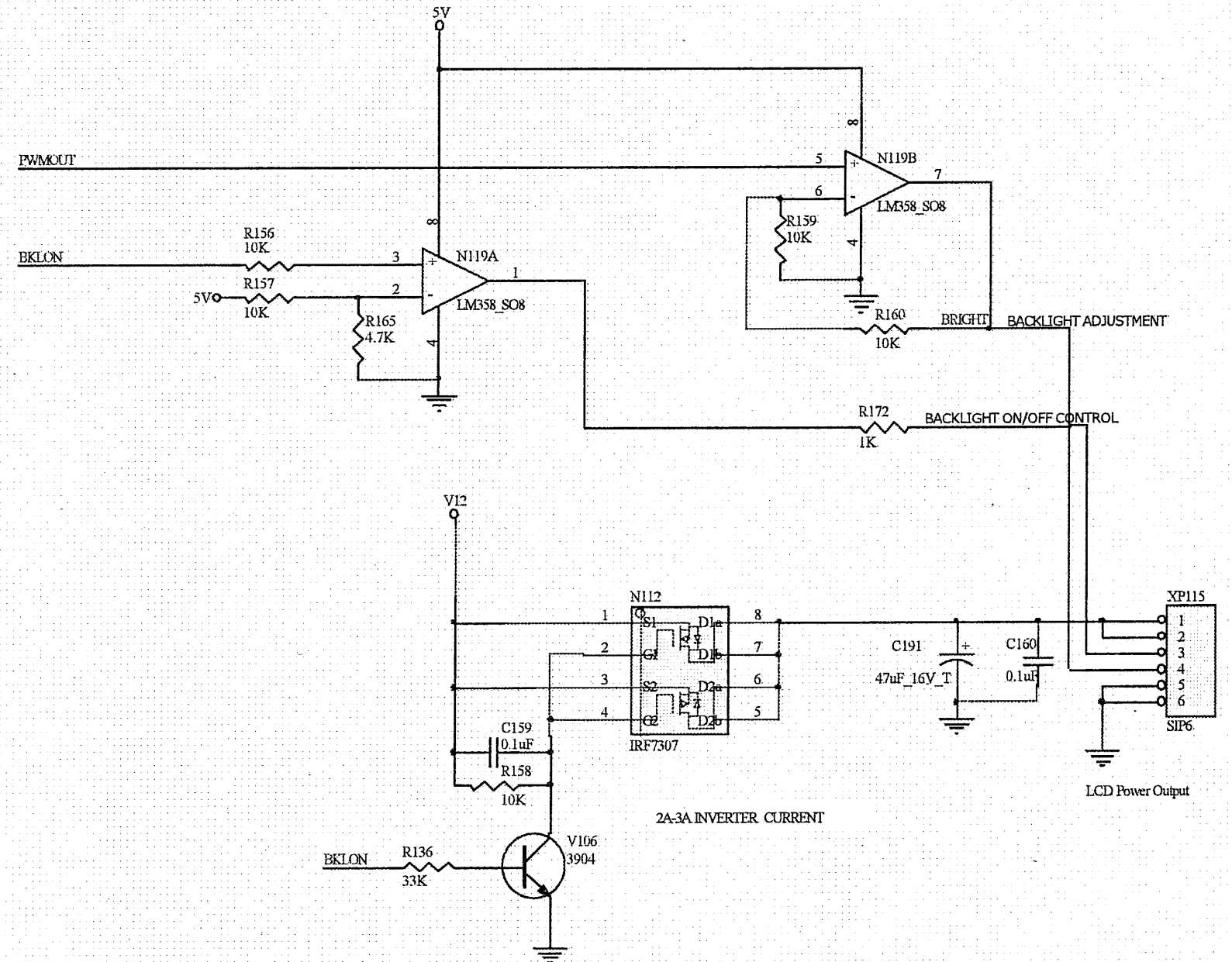
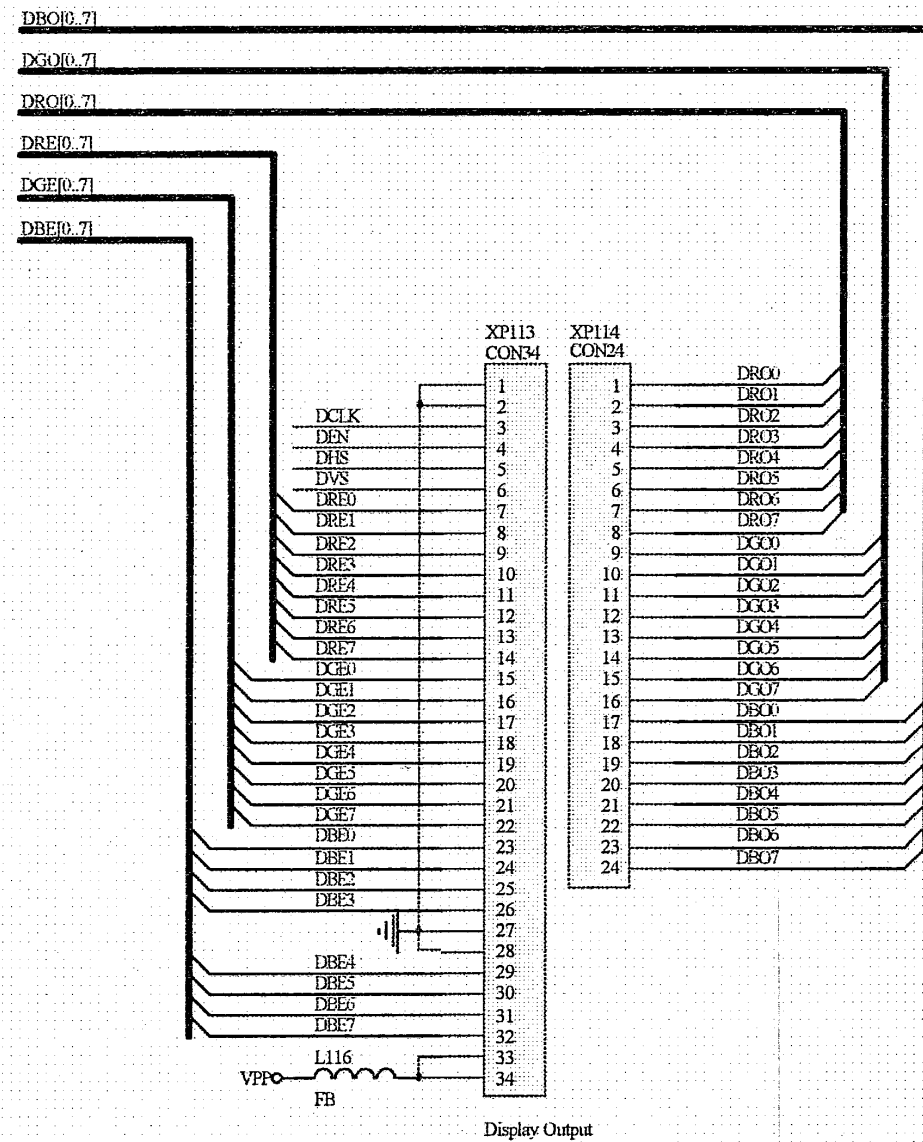


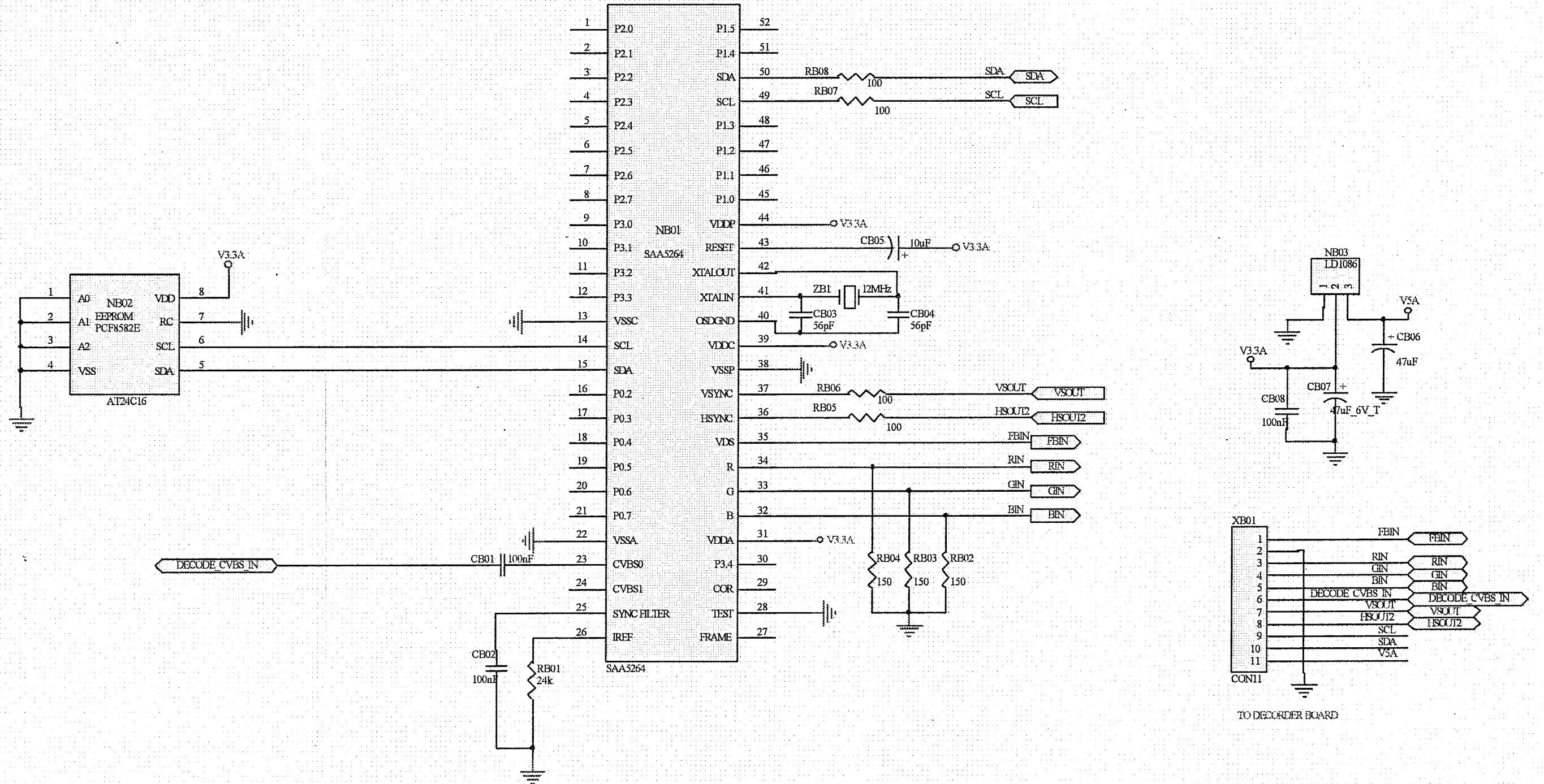


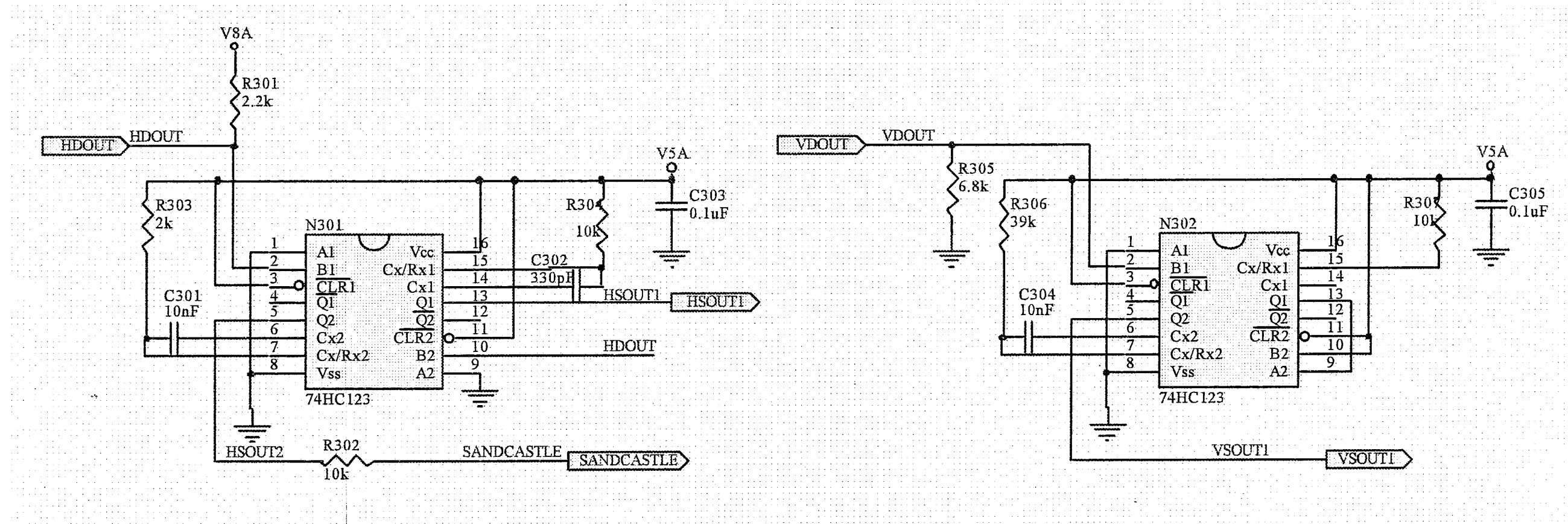
Bypass caps

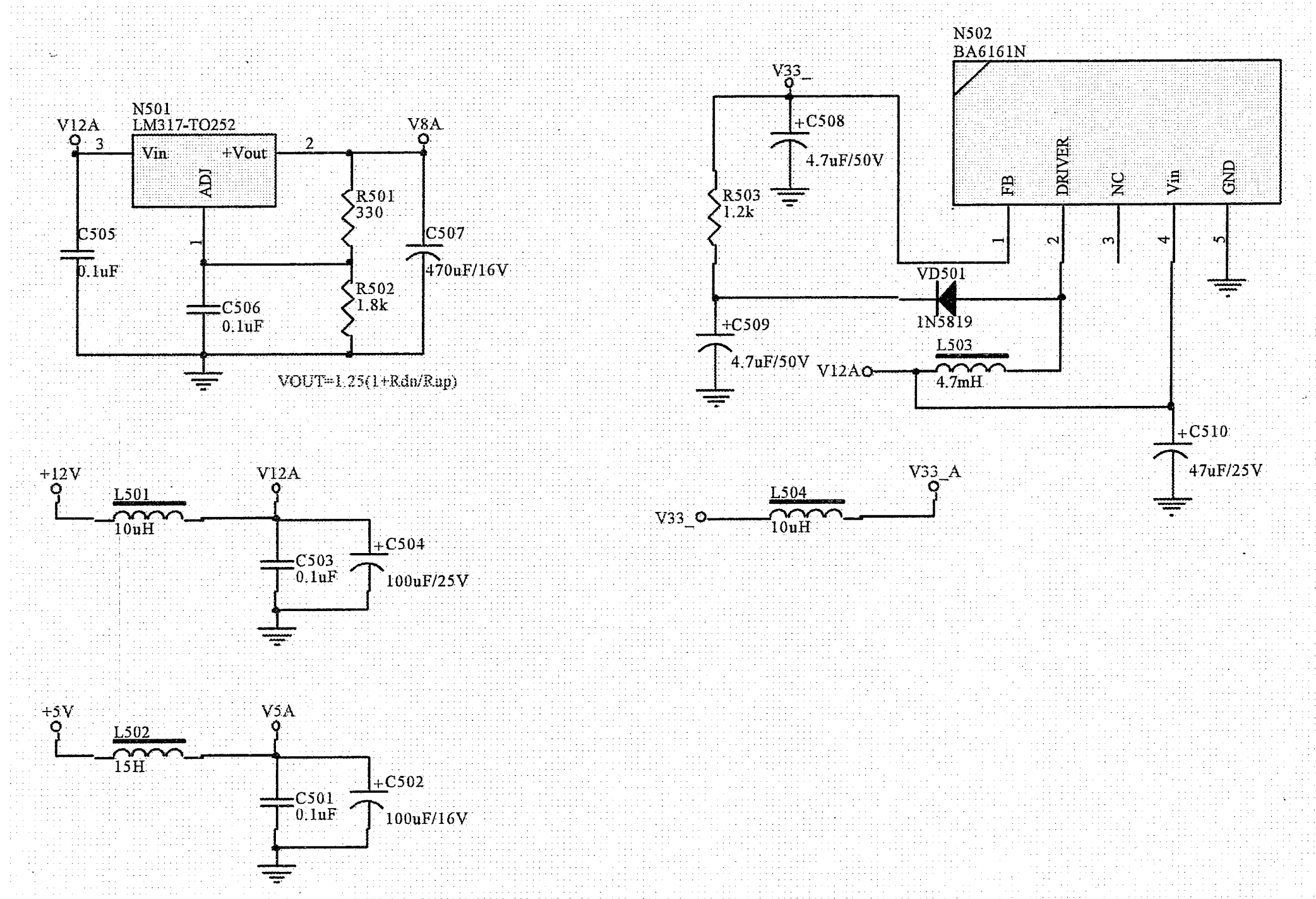


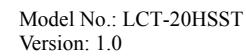
CONNECT IS 20mm PIN Header

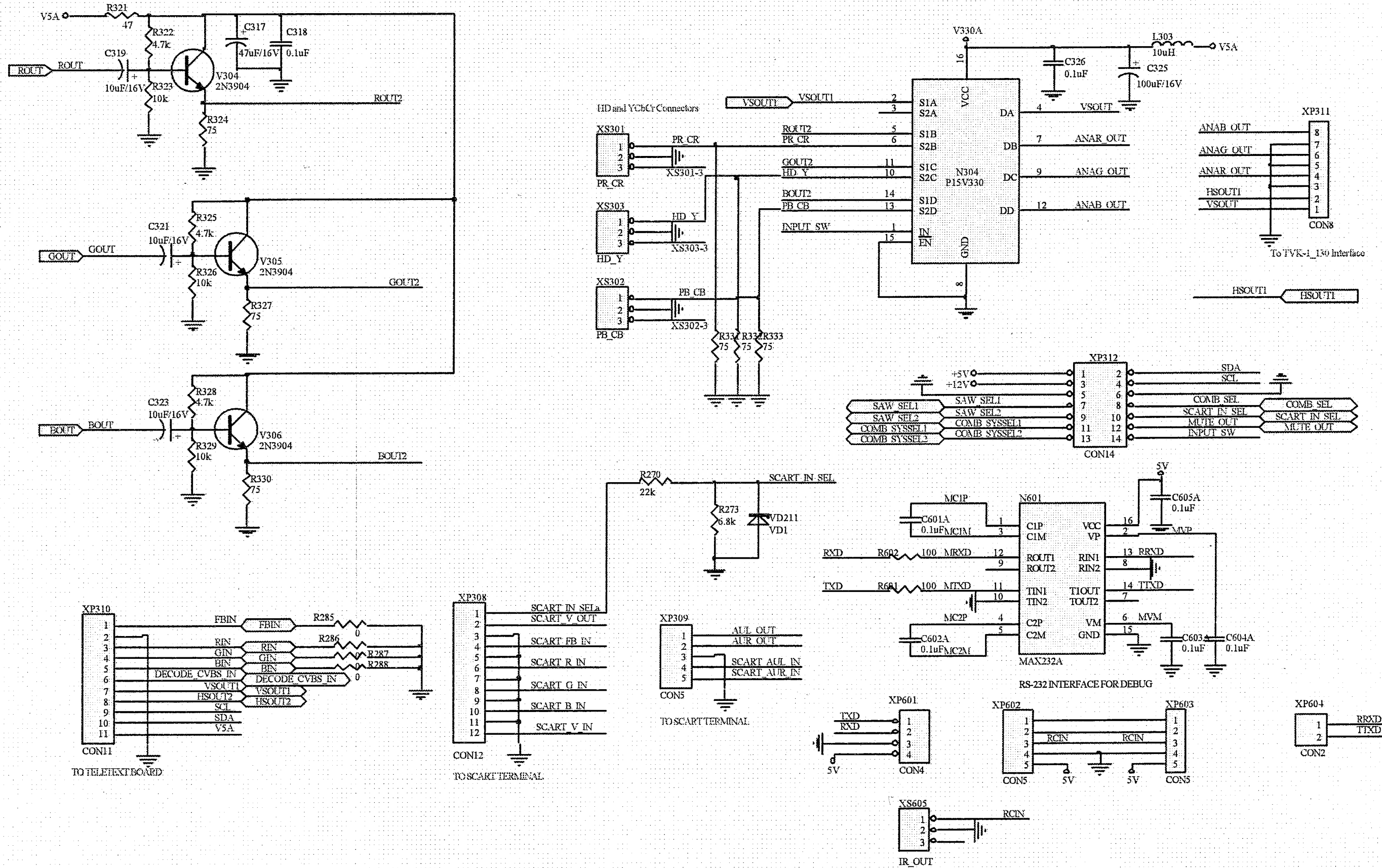


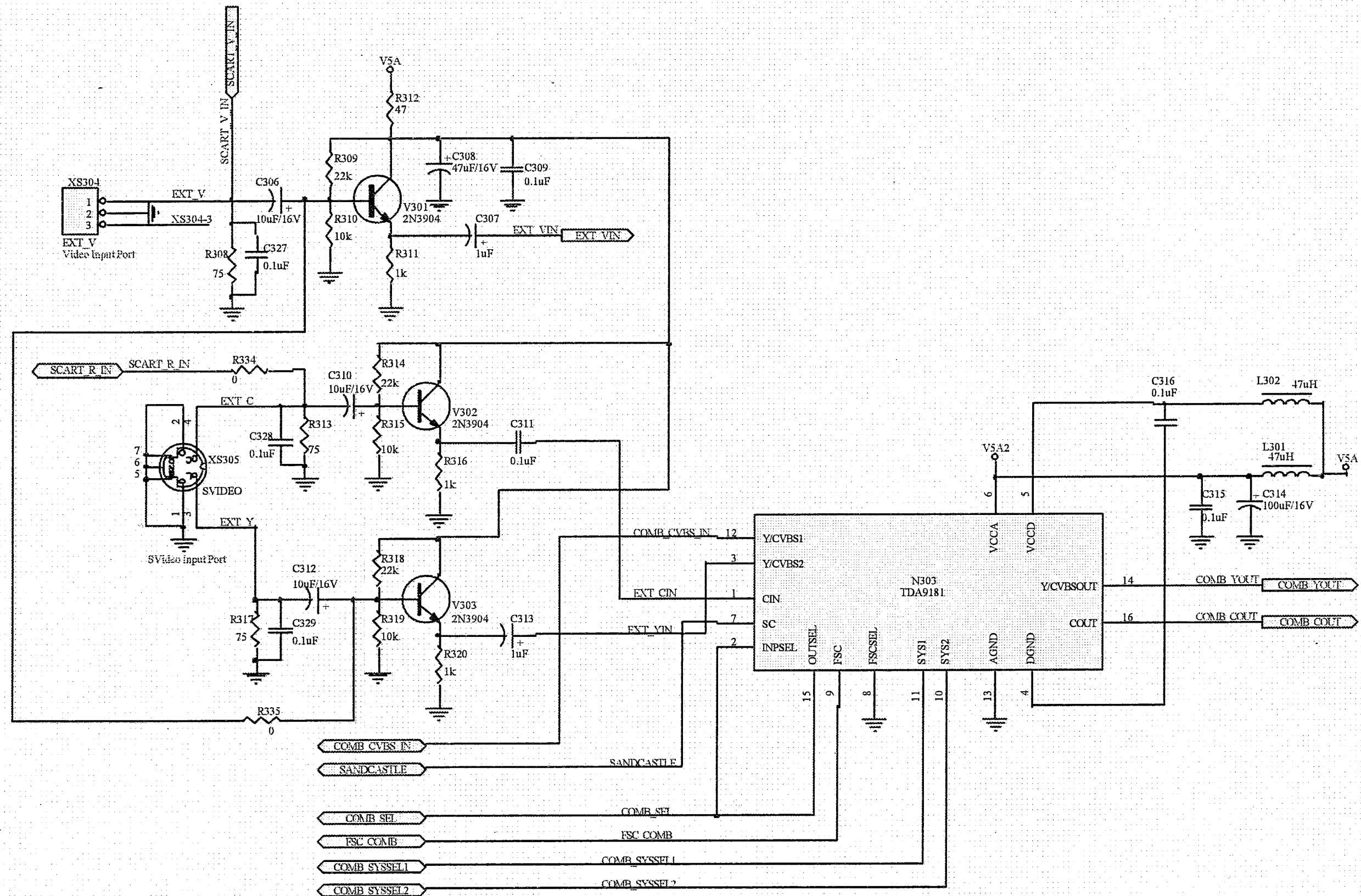


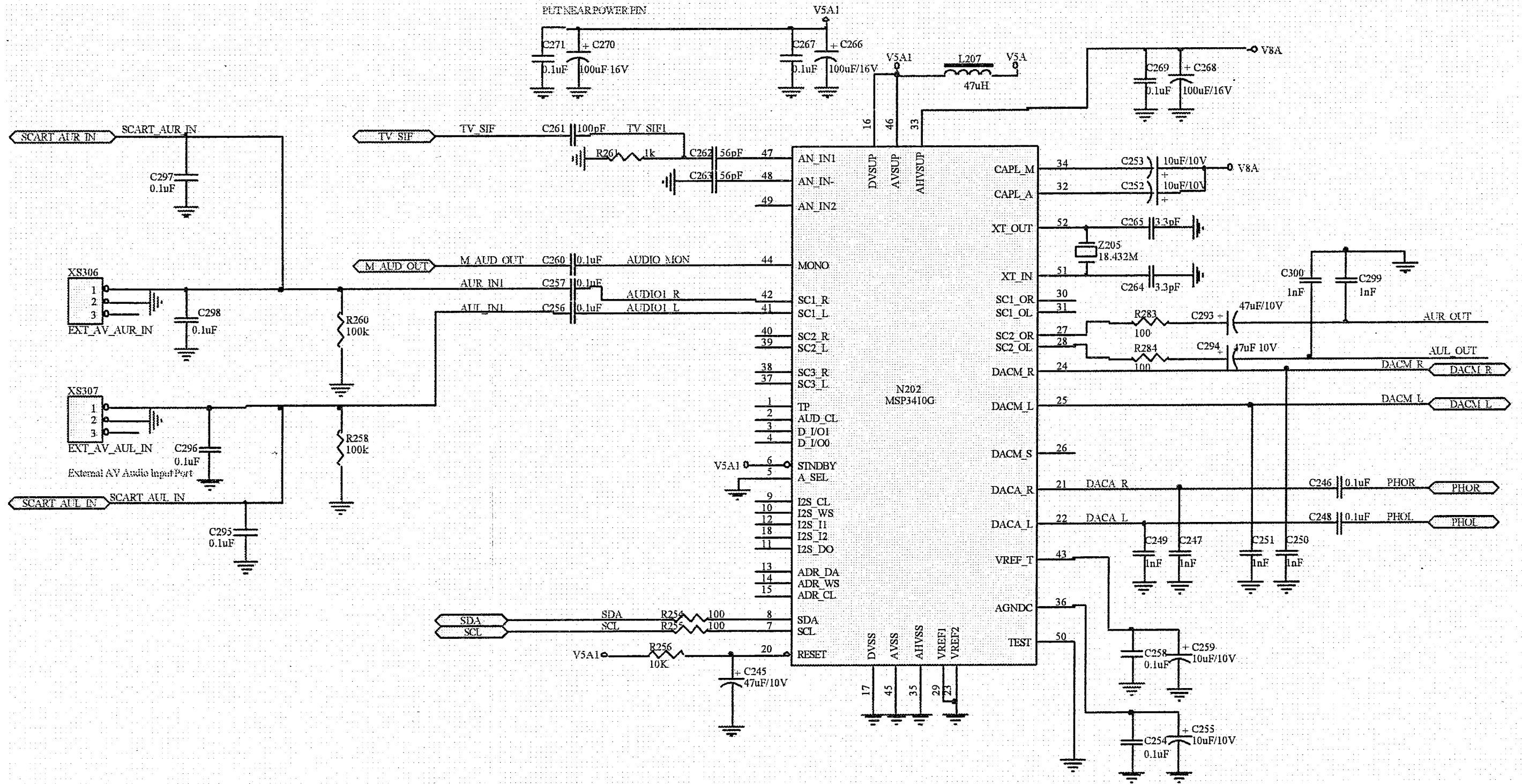


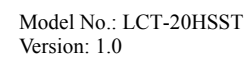












PART LIST

CODE	DESCRIPTION	
101228	Digital board	WT2.908.535
101229	Tuner board	RSAG2.908.330
101189	Front control board	WT2.908.521
101190	Headphone board	WT2.908.522
101232	TELETEXT & SCART board	WT2.908.536
1011689	LCD panel	LC201V02(A3)
1020371	Remote control	HYDFSR-A025AK
1017371	Inverter board	JSY-200602\INV20-606A\JK
1016016	Cable to panel	HX-3003X
1015872	Adaptor	JS-12060-3K
1004699	AC cord	PHP-330+PHS-305RR
1013129	Speaker	YDT511E-5W8R-A
1020339	Front accessory	RSAG8.647.044\黑色\SYN136
1020275	User's manual	IES040933
101227	Back cover	WTG6.170.071
1015400	Front encloser	RSAG8.074.091
1020247	Back label	E/RSR8.807.1371
1020246	Carton box	E/RSR8.865.1506