

# LCD3703EU CHASSIS SERVICE MANUAL (V1.0)

JUL. 13 2005

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# SAFETY PRECAUTION

## WARNING:

Service should not be attempted by anyone unfamiliar with the necessary precaution on this receiver. The following are the necessary precaution to be observed before serving this chassis.

1. Since the power supply circuit of this receiver is directly connected to the AC power line, an Isolation transformer should be used during any dynamic service to avoid possible shock hazard.
2. 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 cover, shields, isolation resistor-capacitor network etc.
3. When replacing parts or circuit boards, disconnect the power cord.
4. When replacing a high wattage resistor (oxide metal film resistor ) on the circuit board, keep the resistor(1/2in) away from circuit board.
6. Connection wires must be kept away from components with high voltage or high temperature.
7. If any fuse in this LCD TV receiver is blown , replace it with the FUSE specified in the chassis part list.

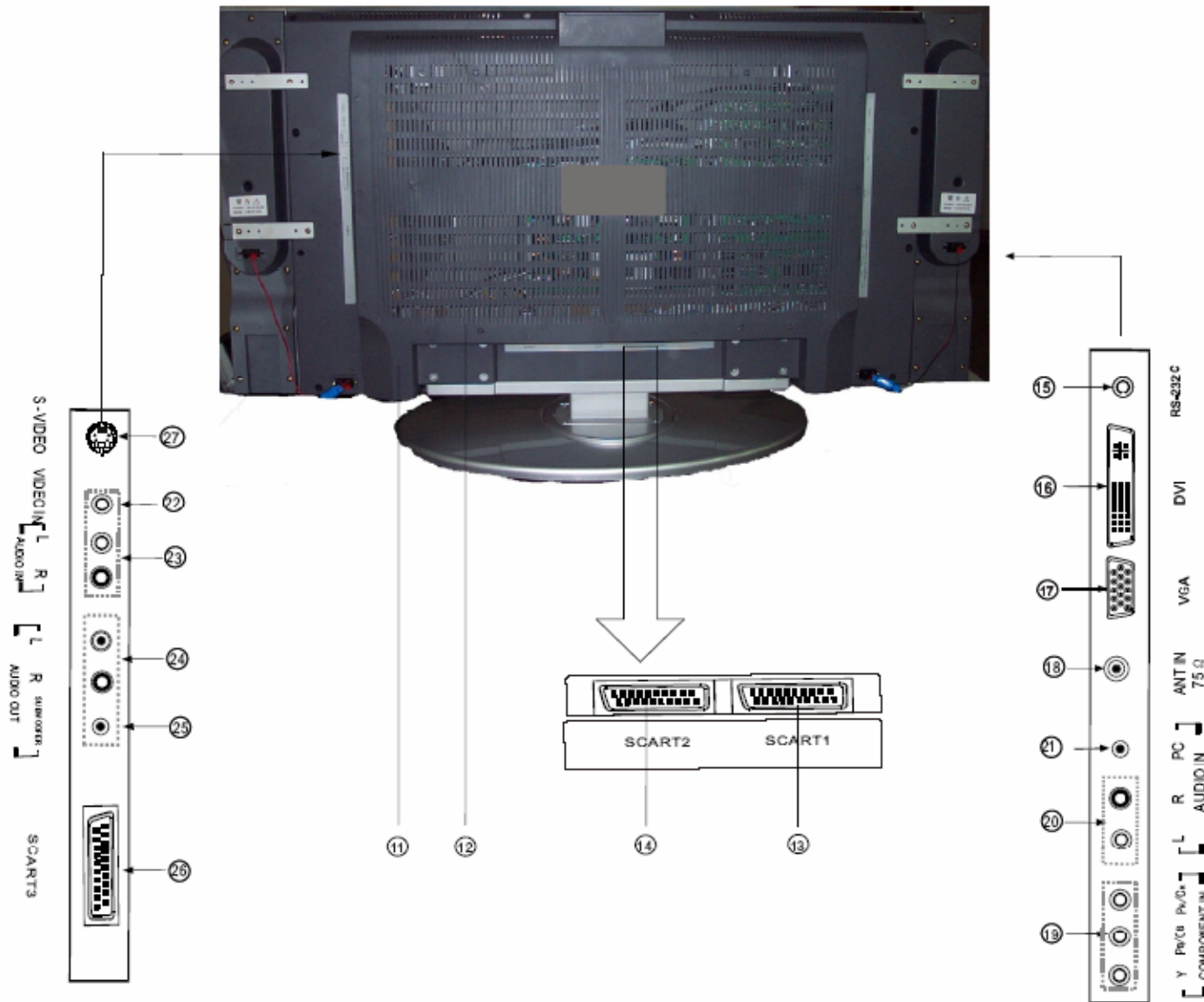
# PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection. When replacement parts are required, be sure the service technician uses replacement parts specified by us that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, injury to persons or other hazards. This LCD TV product should be situated away from heat source such as radiation, stoves, or other product that produce heat.





# PRODUCTFUNCTION



# PRODUCT FUNCTION

- |                              |                        |                        |
|------------------------------|------------------------|------------------------|
| ① Remote Sensing Window      | ⑪ Power Switch(ON/OFF) | ⑳ PC audio input       |
| ② Power indicator            | ⑫ AC Power Socket      | ㉑ AV video input       |
| ③ Headphone output           | ⑬ Scart1 connector     | ㉒ AV audio input       |
| ④ Menu button                | ⑭ Scart2 connector     | ㉓ audio output         |
| ⑤ Source select              | ⑮ RS232C DEBUG input   | ㉔ Subwoofer output     |
| ⑥ Volume down / cursor left  | ⑯ DVI input            | ㉕ Scart3 connector     |
| ⑦ Volume up / cursor right   | ⑰ PC VGA input         | ㉖ S-video input        |
| ⑧ Channel down / cursor down | ⑱ CATV antenna input   | ㉗ PIP headphone output |
| ⑨ Channel up / cursor up     | ㉒ YPbPr/YCbCr input    |                        |
| ⑩ Power button(standby)      | ㉓ audio input          |                        |

**Note: The above figures are for reference only, please refer to the actual units to determine their appearance.**

# PRODUCT FUNCTION

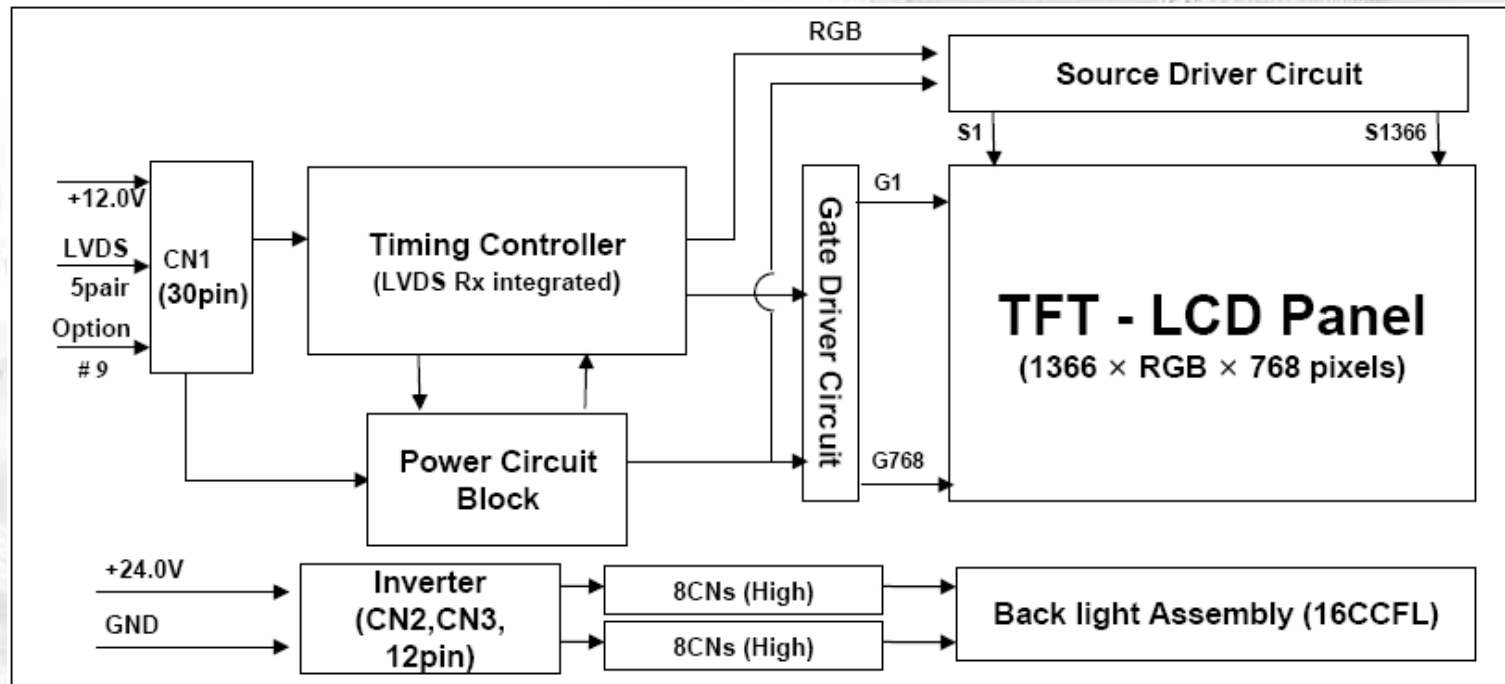
## LCD-TV features

- Multimedia - TV receiver, Video monitor and PC display, all in one.
- Wider viewing angle, over 176 view angle
- Digital display device - truthfully reproducing the images, without distortion or blurring, irrespective of magnetic or geomagnetic effect.
- 200 channels storage
- Sleep timer
- Teletext with 252 pages memory and fastext feature
- NICAM/A2 sound
- Three SCART interface
- Multi-language OSD

# LCD PANEL SPEC.

## General Description

- The LC370W01 is a Color Active Matrix Liquid Crystal Display with an integral Cold Cathode Fluorescent Lamp(CCFL) backlight system. The matrix employs a-Si Thin Film Transistor as the active element. It is a transmissive type display operating in the normally black mode. This TFT-LCD has a 37.02 inch diagonally measured active display area with WXGA resolution (768 vertical by 1366 horizontal pixel array). Each pixel is divided into Red, Green and Blue sub-pixels or dots which are arranged in vertical stripes. Gray scale or the brightness of the sub-pixel color is determined with a 8-bit gray scale signal for each dot, thus, presenting a palette of more than 16.7M(true) colors with 8Bit.
- The LC370W01 has been designed to apply the 8Bit LVDS interface.
- It is intended to support LCD TV, PCTV where high brightness, wide viewing angle, high color saturation, and high color are important.





# LCD PANEL SPEC.

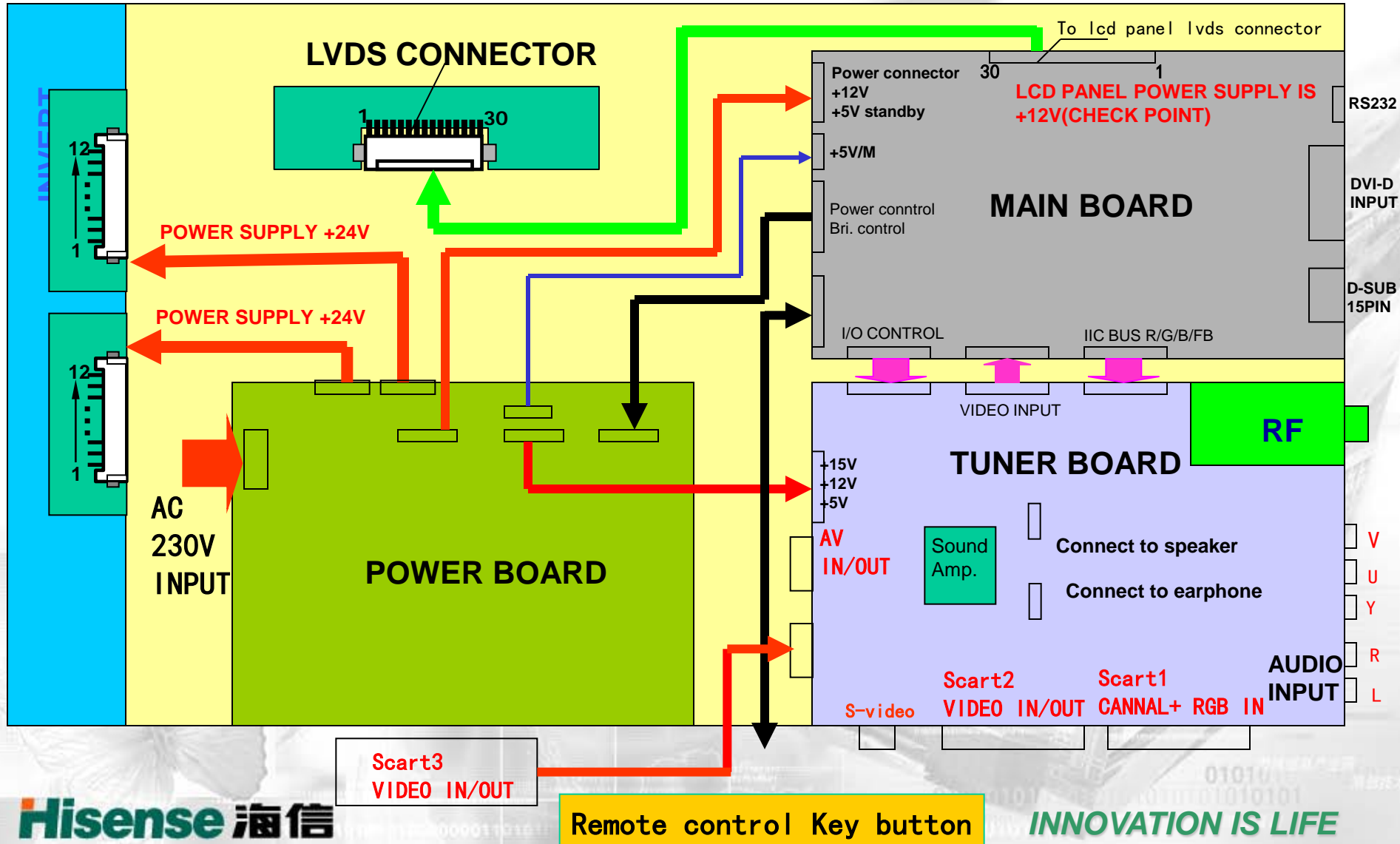
## General Features

Active Screen Size	37.02 inches diagonal
Outline Dimension	960.0(H) x 111.0(V) x 590.0(D) mm(Typ.)
Pixel Pitch	0.42675(H) x 0.42675(W)
Pixel Format	1366 horiz. By 768 vert. Pixels RGB strip arrangement
Color Depth	16.7M colors
Luminance, White	500 cd/m <sup>2</sup> (Center 1 points typ.)
Contrast Ratio	600:1
Viewing Angle(CR>10)	View Angle Free (R/L 176(Typ.), U/D 176(Typ.))
Power Consumption	Total 200 Watt (Typ.)
Response Time	16ms
Display Operating Mode	Transmissive mode, Normally Black
Surface Treatment	Hard-Coating (3H), Anti-Glare, Reflectance < 2%

# BLOCK DIAGRAM

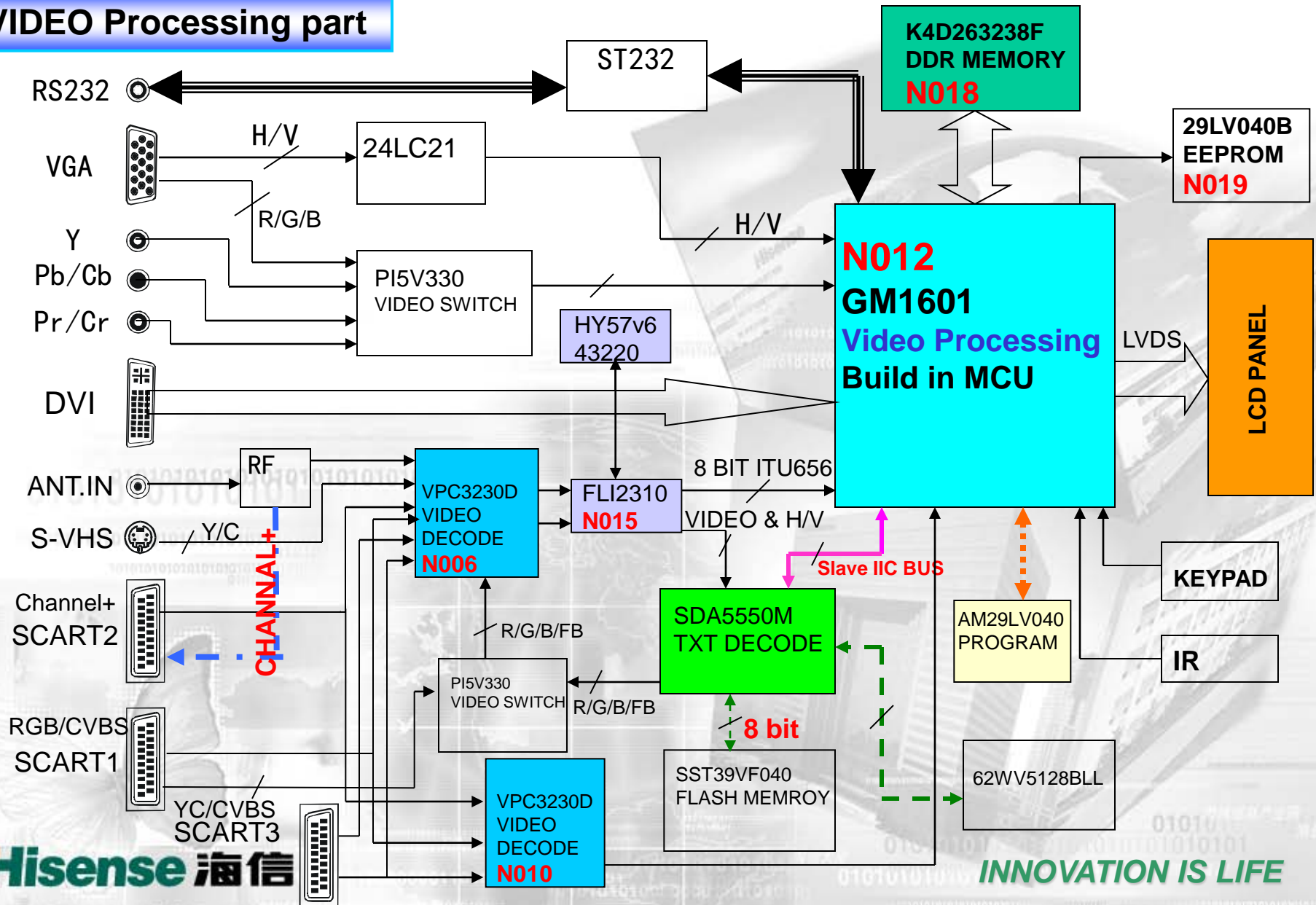
## Chassis Block Diagram

### LCD PANEL



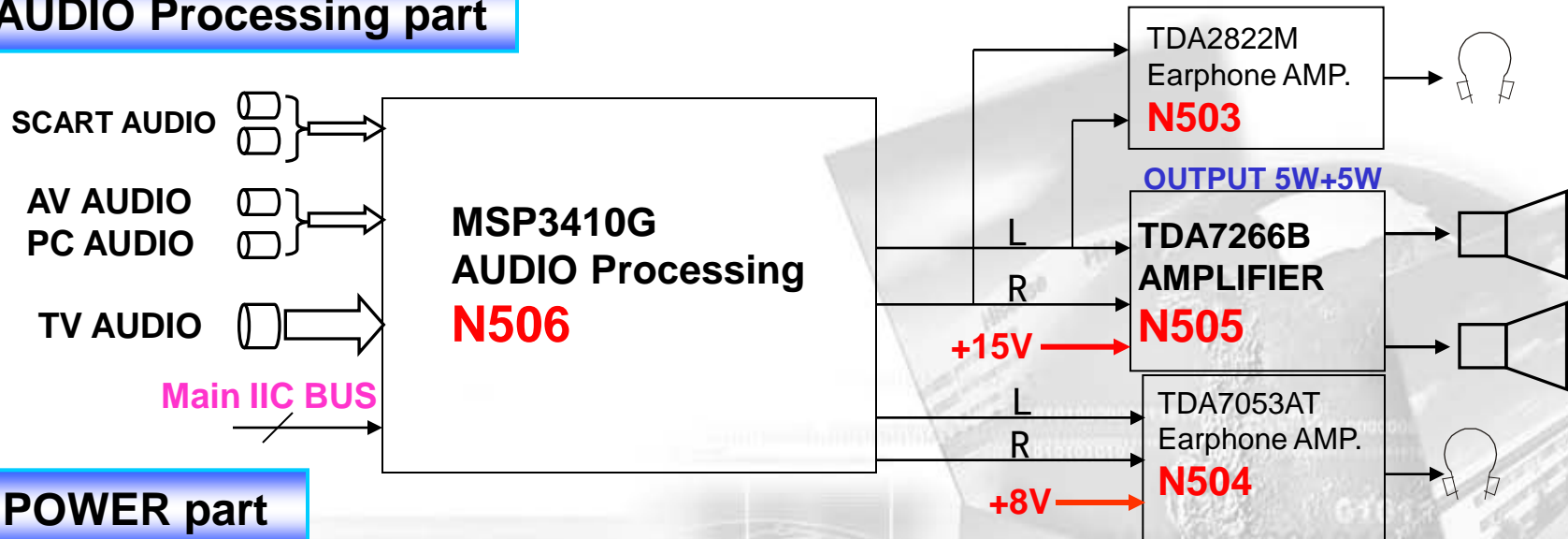
# BLOCK DIAGRAM

## VIDEO Processing part

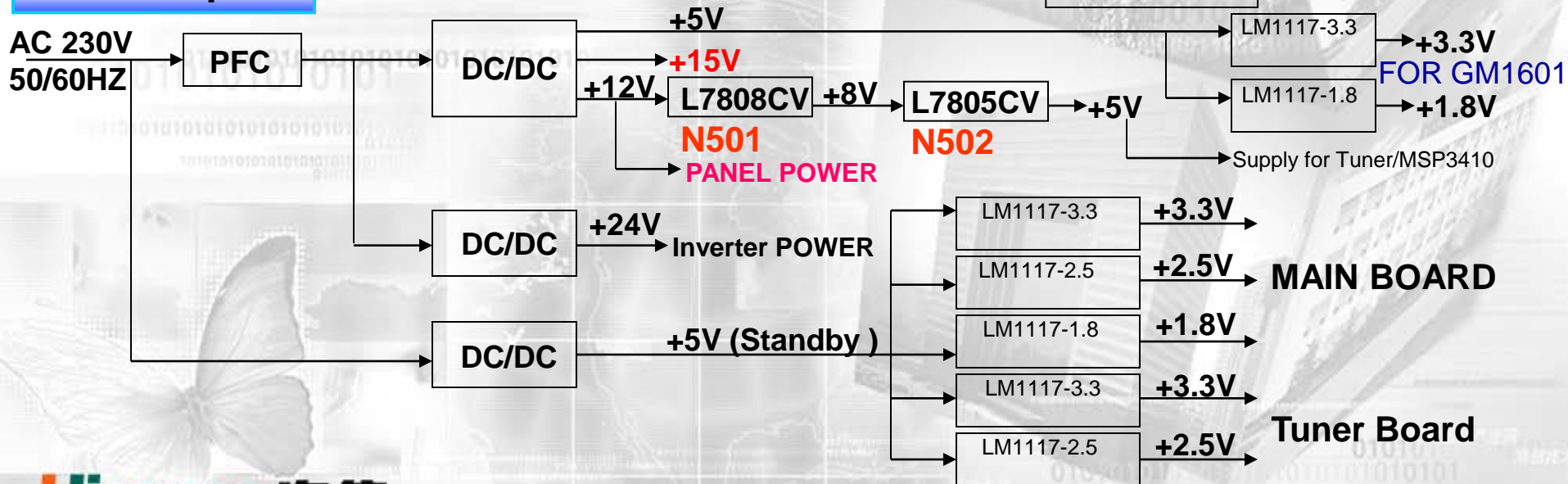


# BLOCK DIAGRAM

## AUDIO Processing part



## POWER part



## Main Board:Graphic input Part



# INNOVATION IS LIFE

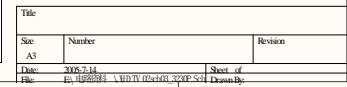


## Main Board:Video decode Part



**INNOVATION IS LIFE**

## Main Board: PIP Video decode Part



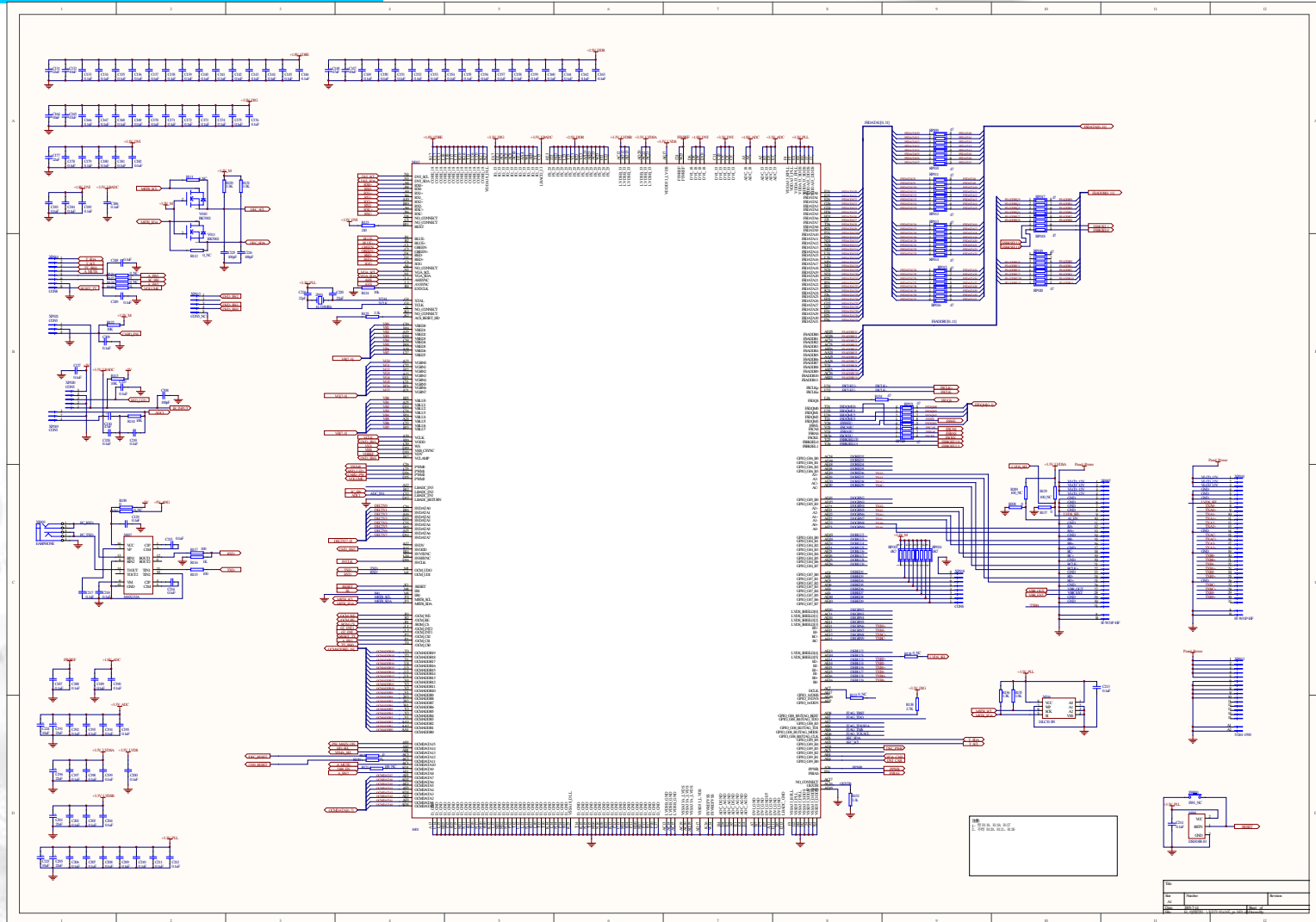
## Main Board: FLI2310 part



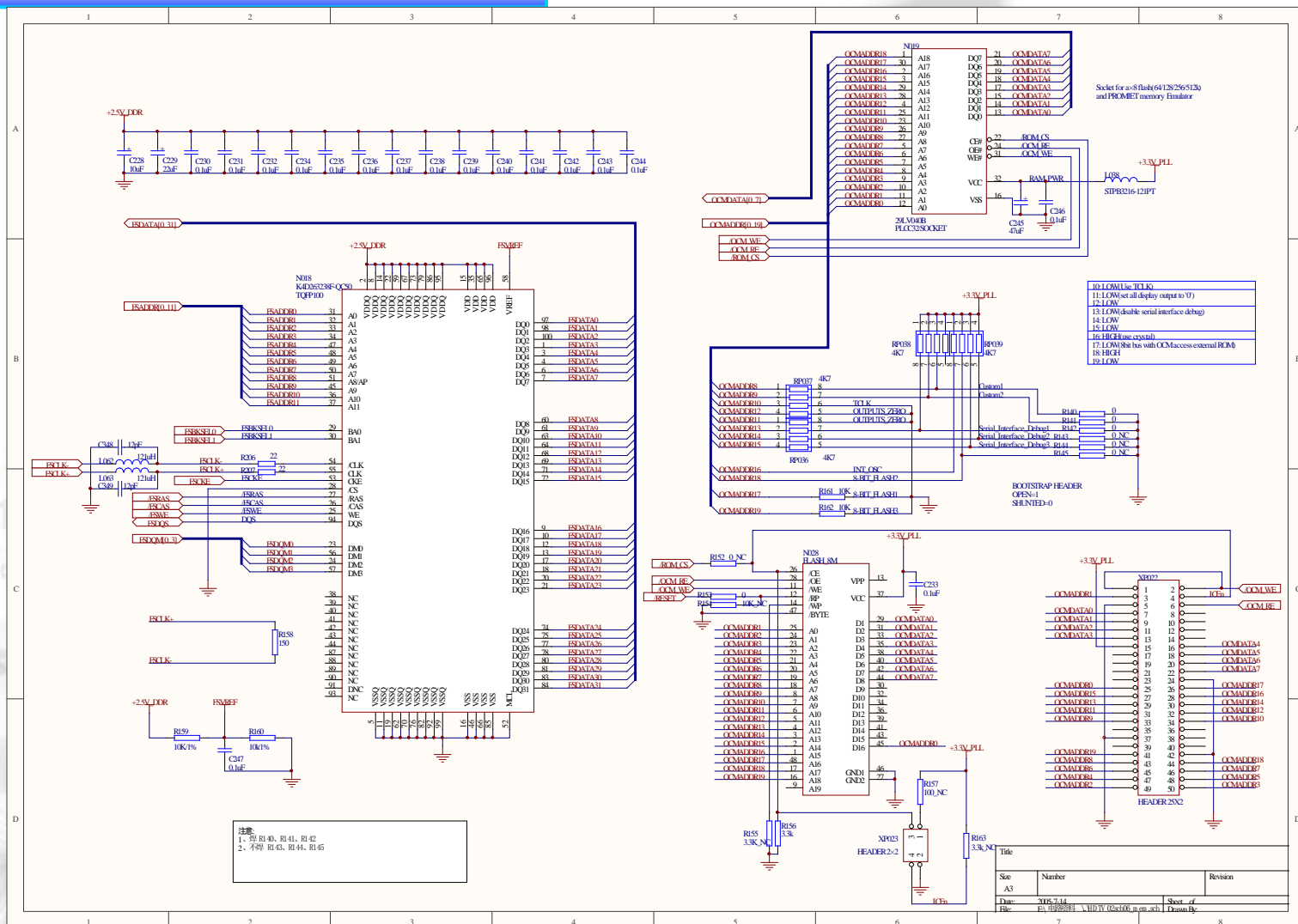
# INNOVATION IS LIFE

# CIRCUIT DIAGRAM

## Main Board:GM1601 Part



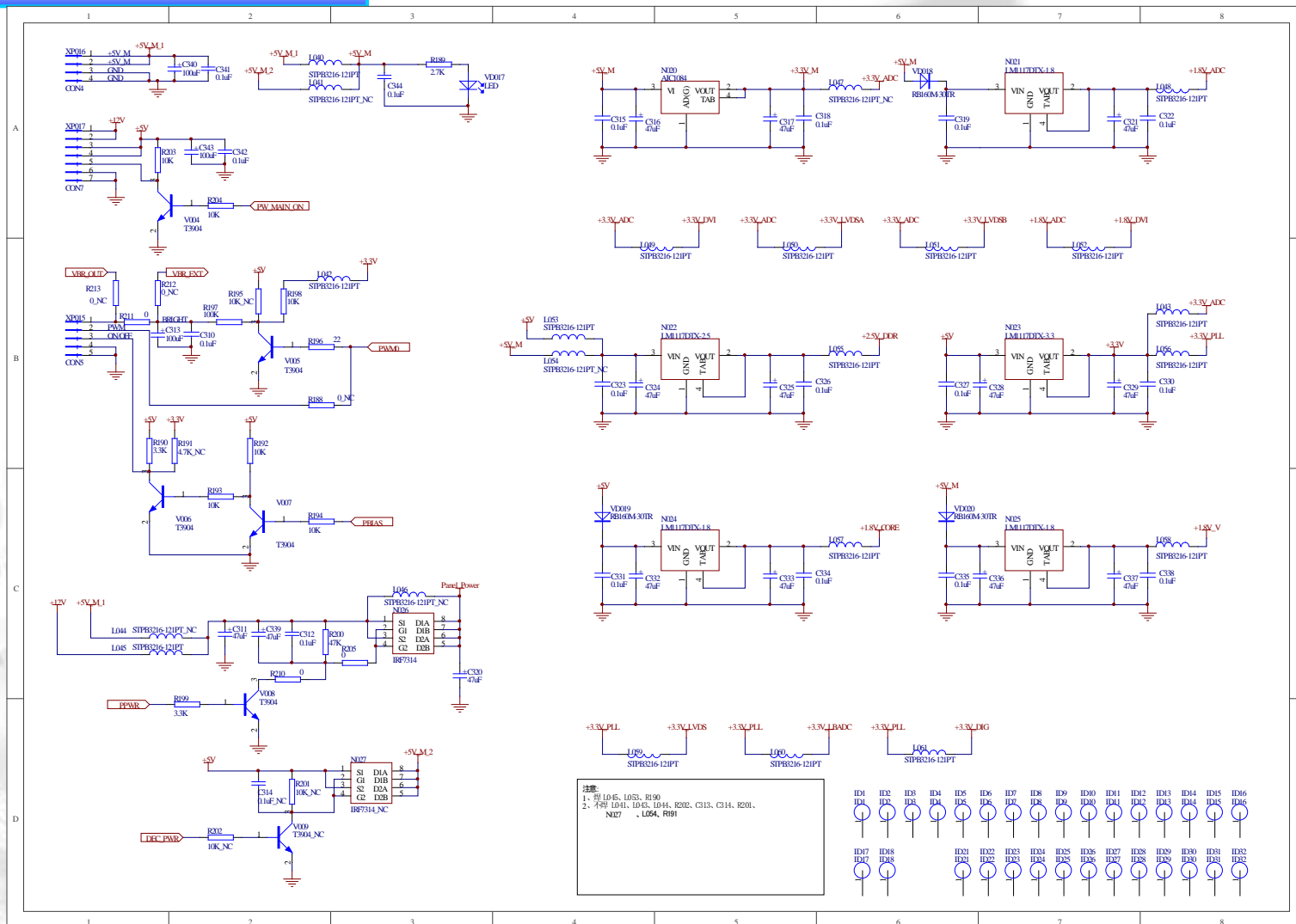
## Main Board:Frame & Memory Part





## CIRCUIT DIAGRAM

## Main Board:Power part



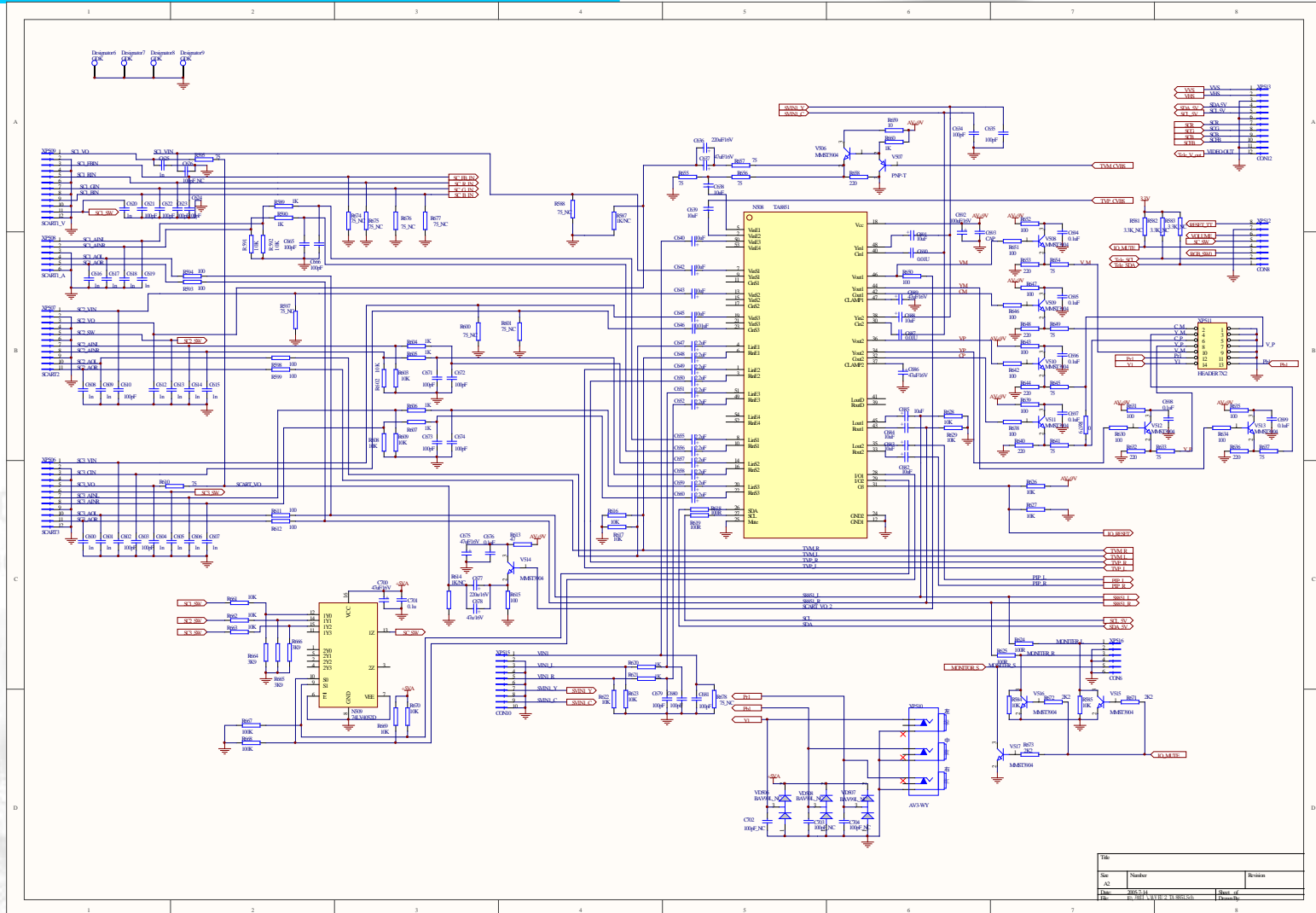
## Tuner Board: sound Processing Part



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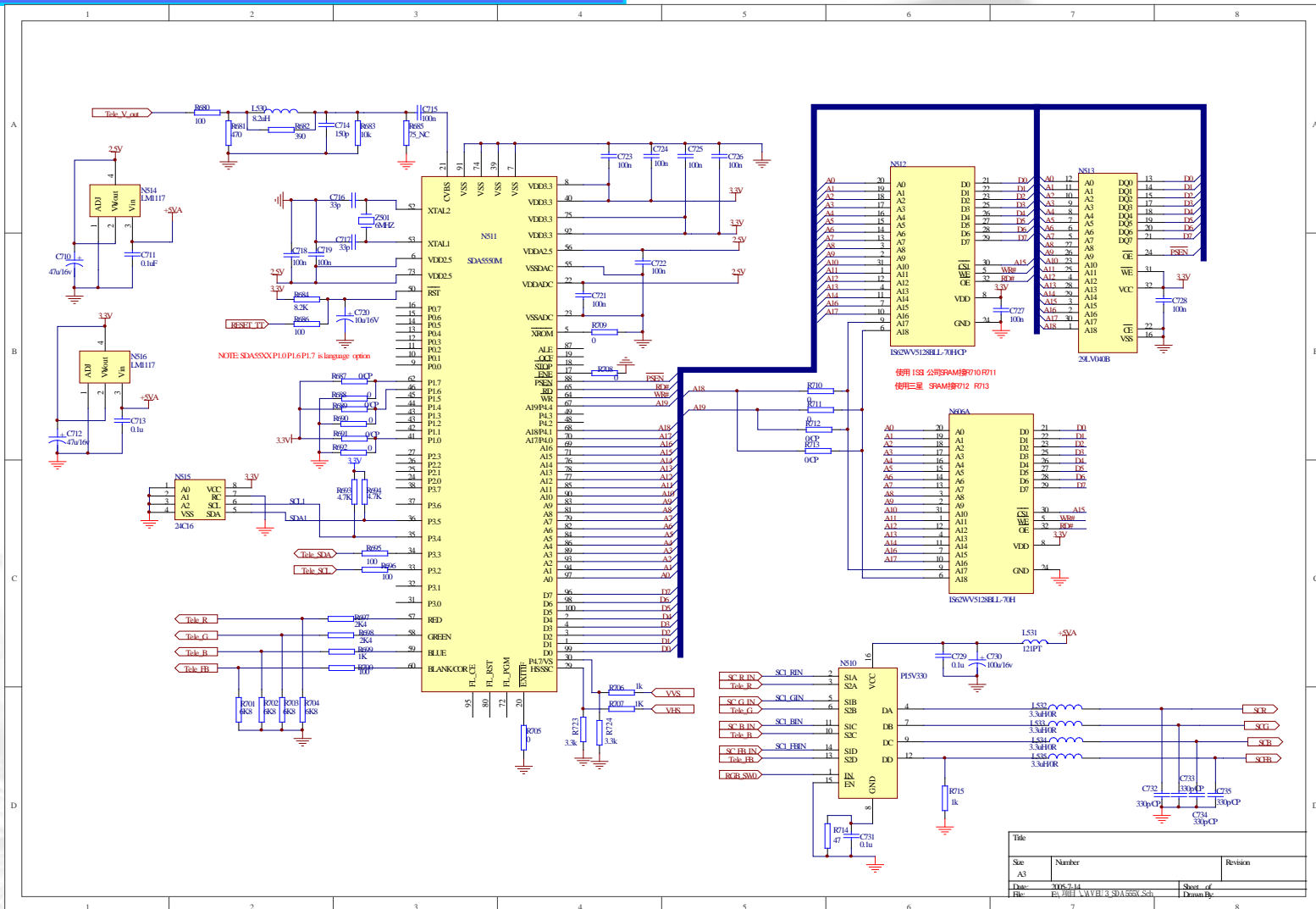
# CIRCUIT DIAGRAM

## Tuner Board: AV SWITCH Part



# CIRCUIT DIAGRAM

## Tuner Board: Teletext decode Part



# Power Board

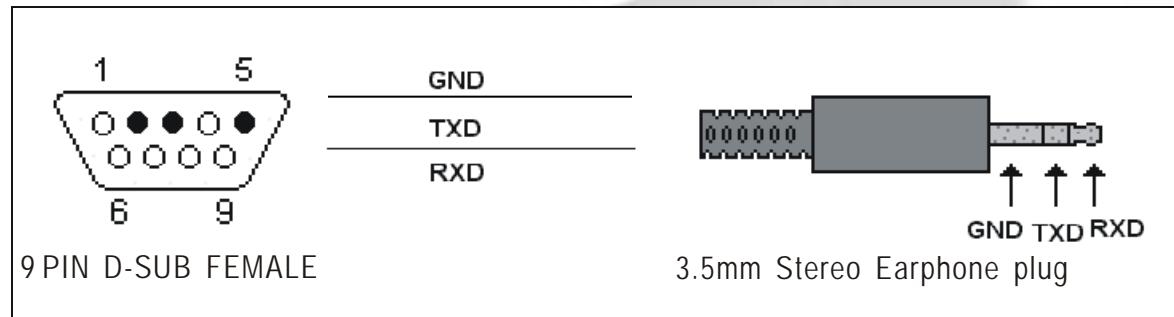




# SOFTWARE UPDATING

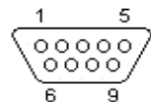
## Updating CABLE

- You can update our LCD's software through a special RS232 cable(show 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 show

## Serial (PC 9)



(At the Computer)

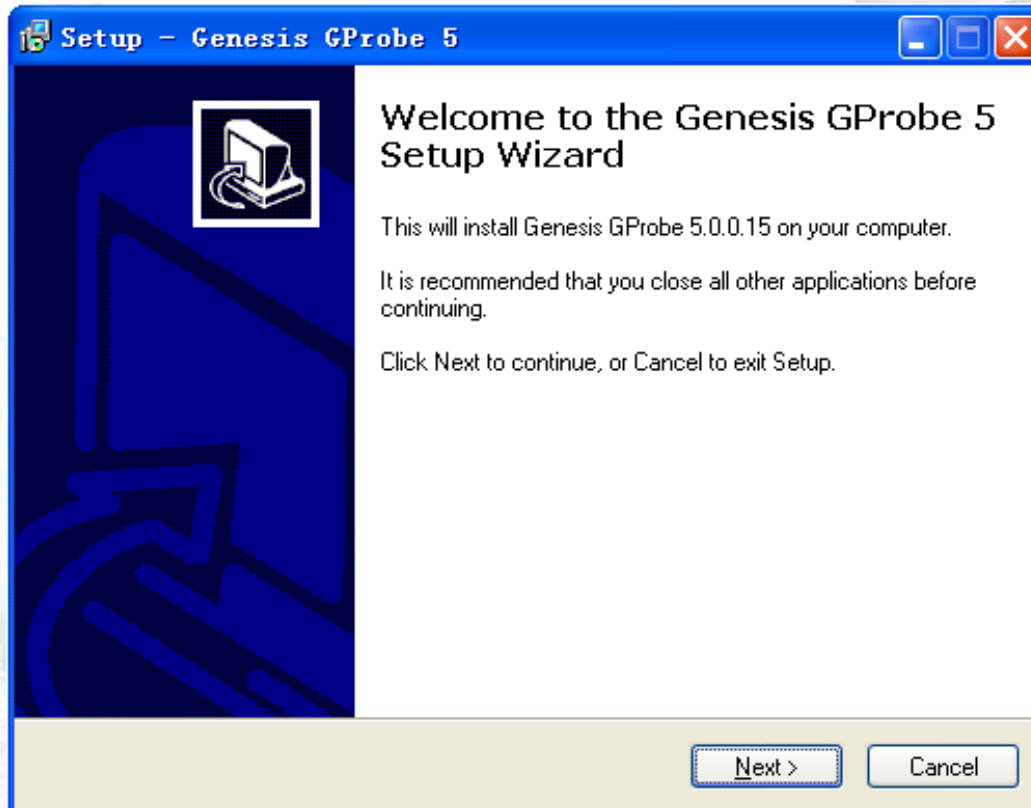
9 PIN D-SUB MALE at the Computer.

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

# SOFTWARE UPDATING

## Updating Steps:

1. Gprobe5 is a communication software for update fireware from PC to our LCD. Double-click the Gprobe5.exe to install it. If the installation is completed, The Gprobe5 icon will be produced on the desktop.



# SOFTWARE UPDATING

## Updating Steps:

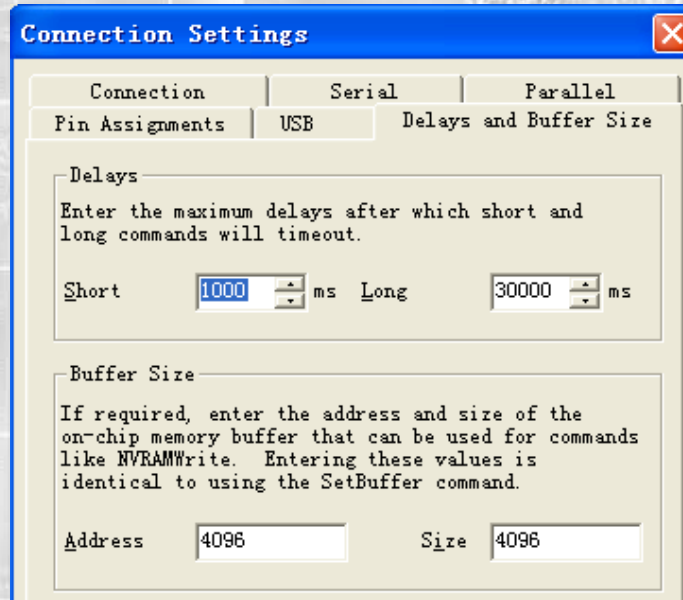
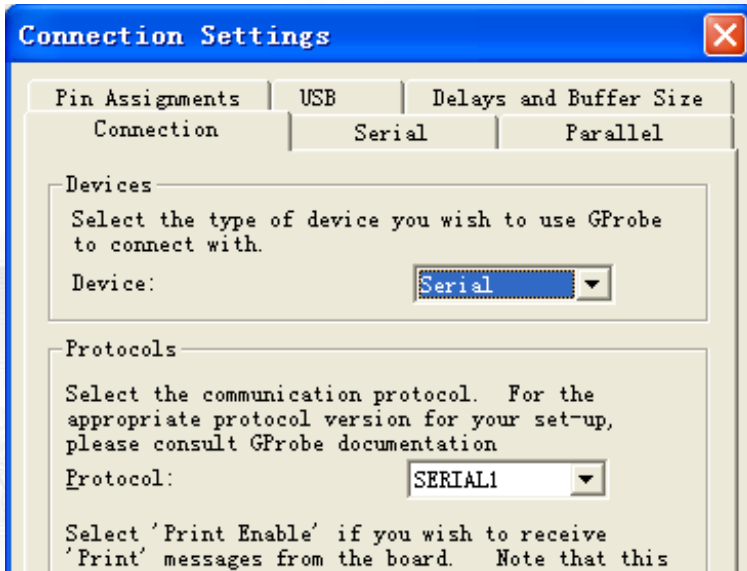
2. When running the Gprobe5 for the first time, there are some parameter need to be set.

Select the OPTIONS item form the menu bar of Gprobe5, then click the Connection Setup item to set up serial communication.

*Devices : Serial    Protocol : SERIAL1*

*Port : select the corresponding serial interface.(for example: com1)*

*Speed : 115200    Delays short:1000ms    Long 30000ms*

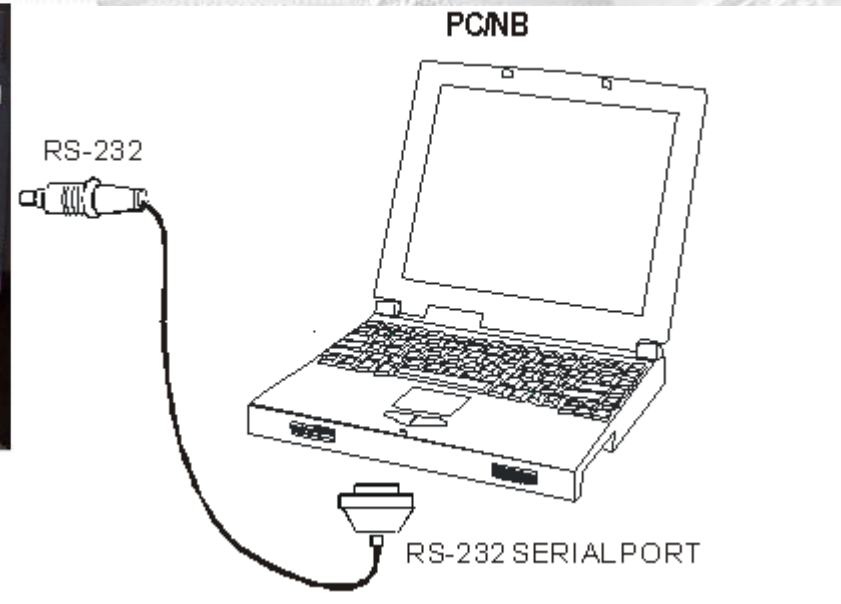


# SOFTWARE UPDATING

## Updating Steps:

### 3. Connecting the cable:

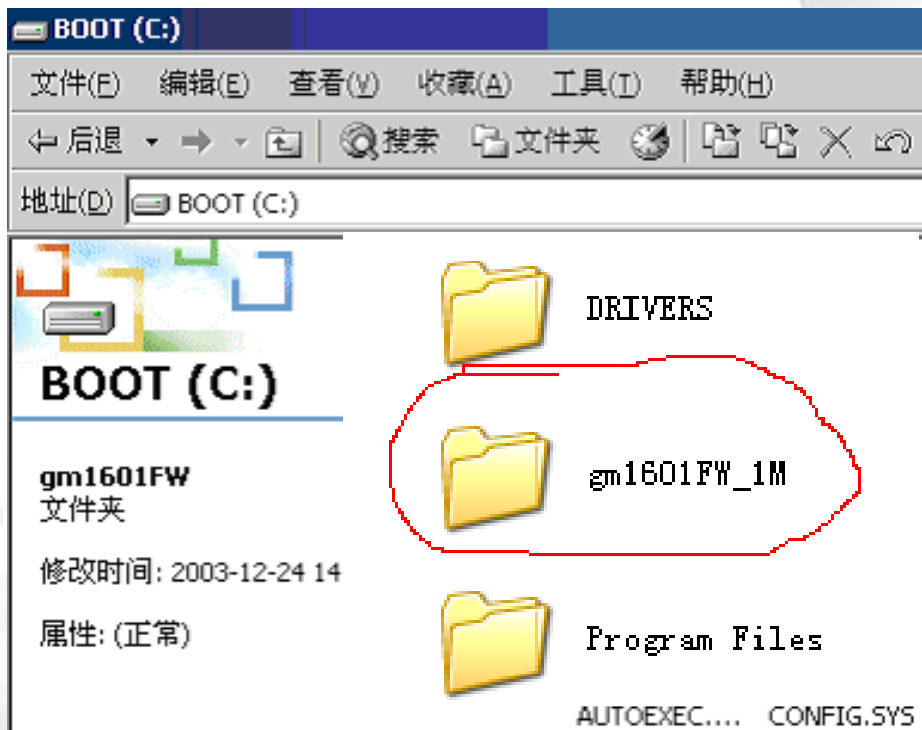
Connecting the cable's 9 pin serial interface(female) to a computer, and connect the cable's headphone plug to RS232 terminal on the side of the LCD TV.



# SOFTWARE UPDATING

## Updating Steps:

4. Unzip the firmware file firmware.zip to C:\

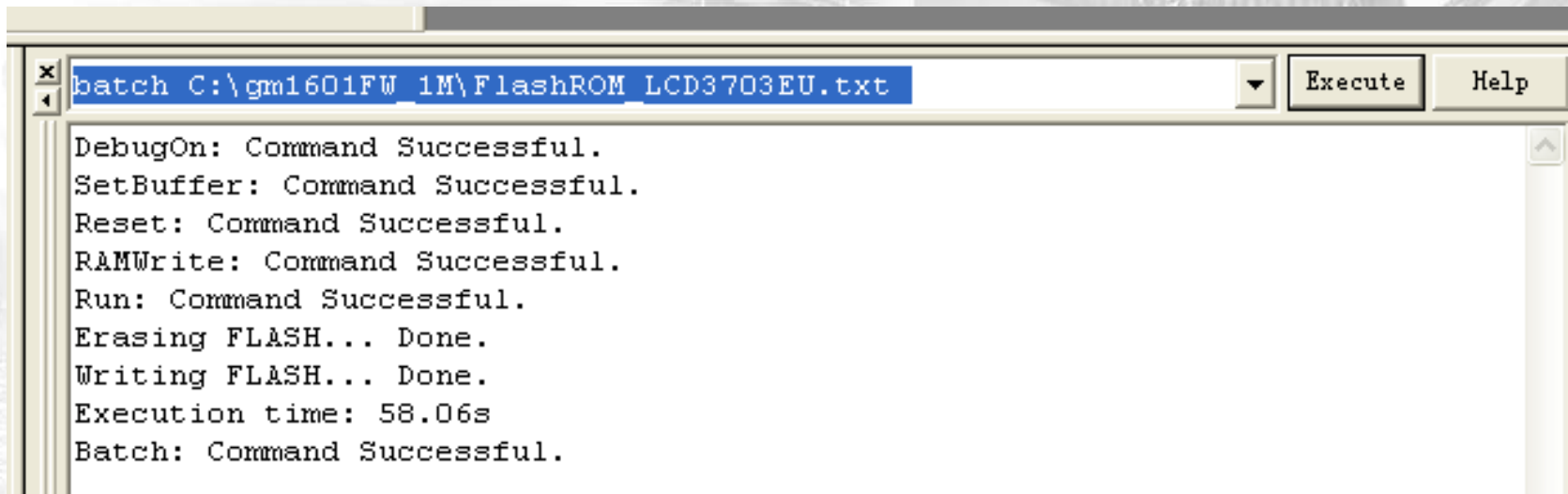




# SOFTWARE UPDATING

## Updating Steps:

5. Open the folder which the firmware is in, open the file Command.txt, copy the content in it.  
(batch *C:\gm1601FW\_1M\FlashROM\_LCD3703EU.txt*)
6. Run the Gprobe5 and turn on the LCD TV, copy the content in command.txt to the command line and touch the enter key, the updating is executing. About 60 seconds later the updating will be completed. The screen will display as below:



The screenshot shows a Windows command prompt window. The title bar is partially visible. The command line at the top shows the batch file path: `batch C:\gm1601FW_1M\FlashROM_LCD3703EU.txt`. To the right of the command line are two buttons: "Execute" and "Help". The main area of the window displays the output of the batch file, which consists of several status messages indicating successful execution of various commands, followed by the execution time and a final success message.

```
batch C:\gm1601FW_1M\FlashROM_LCD3703EU.txt
DebugOn: Command Successful.
SetBuffer: Command Successful.
Reset: Command Successful.
RAMWrite: Command Successful.
Run: Command Successful.
Erasing FLASH... Done.
Writing FLASH... Done.
Execution time: 58.06s
Batch: Command Successful.
```

# SOFTWARE UPDATING

## Updating Steps:

7. When the updating finishes, restart (turn off and turn on) the LCD, then the LCD will work with a new version of firmware.\

Note:

Don't turn off the LCD in the updating process!

# FAQ

- 1、 Turn on the TV,The LED is red, no display on screen
  - pls replace the main board or updating the software.(the software is wrong)
- 2、 Turn on the TV,The LED is blue, but no picture and no sound
  - you should to change the tuner board
- 3、 When turn on the TV, you can hear the “ZI ZI” voice
  - you should to changed the power board
- 4、 In TV state,can not to tuning
  - you should to change the tuner board (I think the tuner bad)
- 5、 No teletext
  - You should to change the tuner board (the teletext IC is bad)
- 6、 No sound
  - You should to change the tuner board
- 7、 can not to updating software
  - You should to change the main board
- 8、 In VGA/YPBPR state, the picture colour is wrong
  - You should use the “auto colour” function to make the colour to be good  
( press the [MENU] button of RC enter the main menu,and press the [VOL+] button enter the PC PARAMETERS,and press the [CH+] button to select the item AUTO COLOUR,and press the [VOL+] button to enable the AUTO COLOUR.
- 9、 No reaction with RC
  - You should change the main board

# SPARE PARTS

MODEL : LCD3703EU

	PART NUMBER	SAP NO.	REMARK
MAIN BOARD	RSAG2.908.590-2	105768	
SOUND BOARD	RSAG2.908.606	105770	
POWER BOARD	RSAG2.908.523-1	105772	
BOX	E/RSR8.865.1728	1023639	
FRONT COVER	RSAG6.179.062\W9套B2(不罩光)	106496	
BACK COVER	RSAG6.170.058	106173	
REMOTE COTROL	EN-20515B	1023570	
底座组件	RSAG6.121.026	1020715	
壁挂支架	RSAG6.162.015	1020716	



