

IBBK

LD1906X(RU)

Service Manual



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Chapter One About Maintenance

1.1 Safety precautions

1.1.1 Power supply

When maintenance personnel are repairing DVD TV, he should pay special attention to the power with 220V 800V AC and 330V DC which will cause hurt and damage to persons!

1.1.2 Precautions for antistatic

Movement and friction will both bring static electricity which causes serious damages to integrated IC. Though static charge is little, when a limited quantity of electric charge is added to large scale integrated IC, as the capacitance is very small in the meantime, now the integrated IC is very much easy to be struck through by static electricity or the performance will decrease. Thus static electricity prevention is of extraordinary importance. The following are several measures to prevent static electricity:

1. Use a piece of electric conduction metal with the length of about 2 metres to insert into the earth, and Fetch the lead wire from the top of the surplus metal and connect to the required static electricity device. The length and depth of the metal embedded under the earth should be determined according to the wettability of the local soil. For humid places, it may be shorter, and longer and deeper for dry places. If possible, it can be distributed and layed in terms of “#” shape.

2. On operating table-board, the antistatic table cushion should be covered and grounded.

3. All devices and equipments should be placed on the antistatic table cushion and grounded.

4. Maintenance personnel should wear antistatic wrist ring which should be grounded.

5. Places around the operating position should also be covered with electric conduction cushion or Painted with antistatic paint.

1.1.3 Precautions for display screen

1. Display screen is breakable article, so please protect carefully when carrying and prevent fingers or hard objects striking the screen to damage structure of the screen.

2. When cleaning screen, do not use organic chemicals. You should use cloth and use small amount of special cleaning liquid in places difficult to clean.

1.1.4 Precautions for laser head

1. Do not stare at laser head directly, for laser emission will occur when laser head is working, which will Hurt your eyes!
2. Do not use wiping water or alcohol to clean laser head, and you may use cotton swab.

1.1.5 About placement position

1. Never place TV in positions with high temperature and humidity.
2. Avoid placing near high magnetic fields, such as loudspeaker or magnet.
3. Positions for placement should be stable and secure.

1.2 Maintenance method

1.2.1 Electric resistance method

Set the multimeter in resistance position and test whether the numerical value of resistance of each point in the circuit has difference from the normal value to judge the trouble spot. But in the circuit the tested numerical value of resistance is not accurate, and the tested numerical value of integrated IC's pins can only be used for reference, so the elements should be broken down for test.

1.2.2 Voltage method

Voltage method is relatively convenient, quick and accurate. Set the multimeter in voltage position and test power supply voltage of the player and voltage of a certain point to judge the trouble spot according to the tested voltage variation.

1.2.3 Current method

Set the multimeter in current position and test current of the player of a certain point to judge the trouble spot. But when testing in current method, the multimeter should be series connected in the circuit, which makes this method too trivial and troublesome, so it is less frequently used in reality.

1.2.4 Element substitution method

When some elements cannot be judged good or bad, substitution method may be adopted directly.

1.2.5 Cutting method

Cutting method should be combined with electric resistance method and voltage method to use. This method is mainly used in phenomena of short circuit and current leakage of the circuit. When cutting the input terminal voltage of a certain level, if voltage of the player rises again, it means that the trouble lies in this level.

1.2.6 Visualized method

Directly view whether abnormalities of collision, lack of element, joint welding, shedding welding, rosin joint, copper foil turning up, lead wire disconnection and elements burning up among pins of Elements appear. Check power supply of the machine and then use hands to touch the casing of part of elements and check whether they are hot to judge the trouble spot. You should pay more attention when using this method to check in high voltage parts.

1.2.7 Comparison method

A same good PC board is usually used to test the correct voltage and waveform. Compared these data with those tested through fault PC board, the cause of troubles may be found.

Through the above maintenance method, theoretical knowledge and maintenance experience, all difficulties and troubles will be readily solved.

1.3 Required device for maintenance

- ◆ Audio Generator
- ◆ Digital oscillograph ($\geq 100\text{MHE}$)
- ◆ SMD rework station
- ◆ Multimeter
- ◆ Soldering iron
- ◆ Pointed-month pincers
- ◆ Cutting nippers
- ◆ Forceps
- ◆ Electric screw driver
- ◆ Terminals connecting cord
- ◆ Headphone
- ◆ Microphone

Chapter Two

Functions and Operation Instructions

2.1 Section One TV SEGMENT

2.1.1 Features

Technical Features

- #High quality color TFT panel(15 inch for LD1506X, 19 inch for LD1906X and inch for LD2006X.)
- #Maximum resolution 1024X768 for LD1506X,1440X900 for LD1906X,640X480 for LD2006X.
- #Built-in DVD player with Slot-in mechanism
- #Multisystem TV tuner with NICAM decoding
- #Biuilt-in stereo audio system
- #USB port to playback compatible files stored on flash memory of external devises(All modes have two USB ports, with external HDD power supply.)
- #Composite video ,audio input
- #Component, RGB/SCART and VGA(Only for LD1906X and LD1506X)video inputs
- #Digital coaxial output for multi-channel sound playback
- #Headphones output
- #Universal holder for furniture or wall fixation with 270° rotation angle

TV Channels Receiving and External Signal Playback

- #Automatic and fine tuning functions with 100 channels memory
- #Adjustable brightness, contrast, saturation, hue and 4 preset image settings
- #Tone and sound balance adjustment and 4 preset audio settings

Disc playback mode

- #Digital video playback: DVD-Video, Super VCD, VCD compatibility
- #MPEG-4 standard support
- #Digital audio playback: CD-DA, and HDCD compatibility
- #Digital graphic albums playback: Kodak Picture CD and JPEG
- #Compatible disc types: CD-R/CD-RW, DVD-R,/DVD-RW, DVD+R/DVD+RW
- #Russia, CIs and Baltic States adaptation interface and filenames ID3-tags and CD-Text support simplifies device operation
- #"Q-Play" function provides direct playback and allows to skip commercial that is not possible to rewind
- #"Browser" function provides easy access to playback control
- #Automatic screensaver function
- #Parental control function to protect children from watching inappropriate discs
- #Super wide range of operating power supplies(~100-240v) automatic short circuit protection

PC monitor mode(Only for LD1506X and LD1906X)

- #Wide resolutions range
- #RGB setting and 4 presets of color temperature
- #Tone and sound balance adjustment and 4 preset audio settings
- #External audio signal playback.

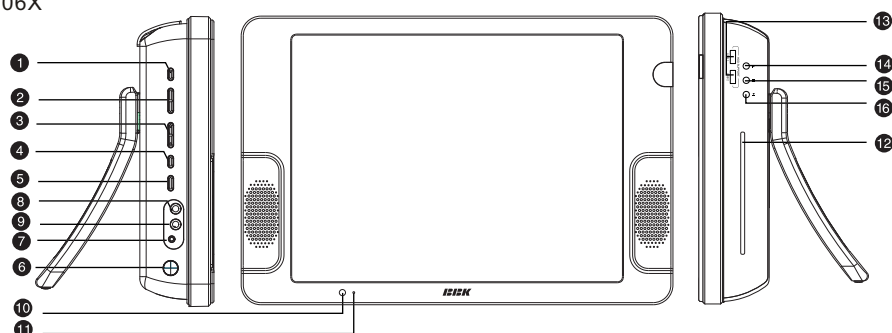
2.1.2 Set list

LCD TV	1pcs
Remote Control	1pcs
AAA Battery	2pcs
Power Adapter(only for LD1506X and LD1906X)	1pcs
Power Cord(only for LD1506X and LD1906X)	1pcs
RCA-RCA cord	1pcs
2XRCA-2XRCA cord	1pcs
Microphone	2pcs
Microphone cable	2pcs
Wall Mount Holder	1pcs
Kickstand	1pcs
Screw M5X15	1pcs
Screw M4X10	1pcs
Screw PA5X25	4pcs
Screw PM4X10	4pcs
Expandable pipe	4pcs
User manual	1pcs
Warranty Card	1pcs

2.1.3 CONTROLS AND FUNCTIONS

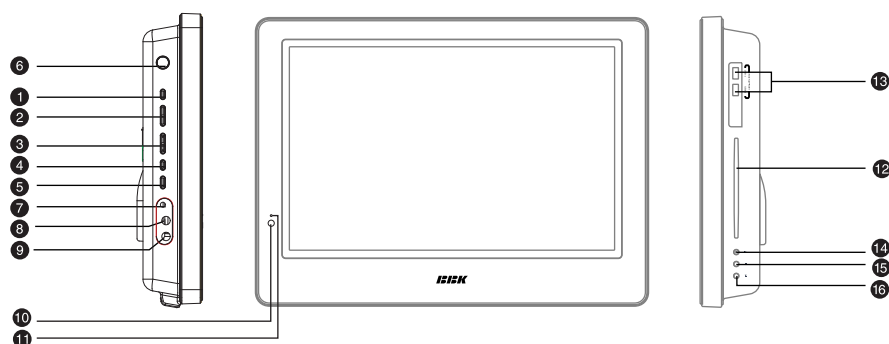
(1) Panel controls and indication

For LD1506X



For LD1906X and LD2006X

Front panel(Panel controls and indication depend on a model of LCD TV.)



Left panel

① SETUP button

Press to switch to setup mode

② _VOL+button

Press to adjust the volume.

③ _CH+button

Press to switch between channels/to choose menu item.

④ SOURCE button

Press to choose the playback mode.

5 STANDBY button

Press to switch on the device/into standby mode.

6 POWER button

Turn on/off the power.

7 Headphones output

8 Microphone input 1

9 Microphone input 2

Front panel

10 Remote control sensor

11 Power supply indicator

Right panel

12 Disc tray

13 USB port

14 EJECT button

Press to open/close the disc tray.

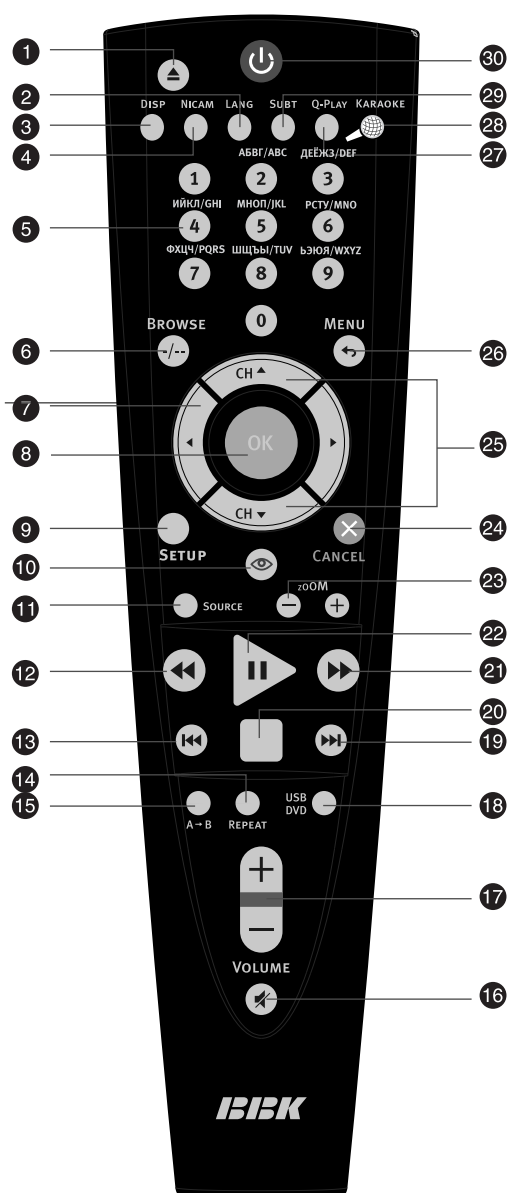
15 STOP button

Press to stop the playback.

16 PLAY/PAUSE button

Press to playback/pause.

(2) Remote control general view



1 EJECT button

Press to open/close the disc tray.

2 LANG button

Press to change language.

3 DISP button

Press to display the disc information.

4 NICAM button

Press to choose audio mode.

5 Numeric buttons

6 BROWSE button

Press to turn on/off the browser function.

7 CURSOR buttons (UP/ DOWN/ LEFT /RIGHT)

8 OK button

9 SETUP button

Press to switch to setup mode.

10 Button

Press to turn on/off the "Virtual Keyboard" function.

11 SOURCE button

Press to change the TV /DVD /AV/ SCART/ YPBPR /VGA/ mode.

12 Button ◀

Press to start rewind/rewind scanning.

13 Button ⏮

Press to skip backward.

14 REPEAT button

Press to repeat.

15 A-B button

Press to repeat the selected section.

16 Button 🔊

Press to turn on/off the sound.

17 VOLUME+/-button

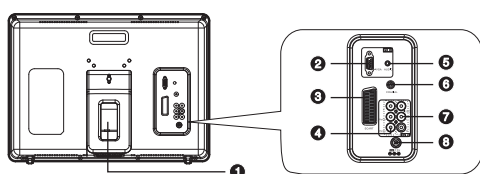
Press to adjust the volume.

- 18 **USB/DVD button**
Press to select USB/DVD mode.
- 19 **Button ►►**
Press to skip forward.
- 20 **Button ◻**
Press to stop the playback.
- 21 **Button ►►**
Press to forward scanning.
- 22 **Button ►▶**
Press to playback/pause.
- 23 **ZOOM+/-button**
Press to zoom in/out.
- 24 **CANCEL button**
Press to go one level back/cancel current operation.
- 25 **CH ▲/▼ button**
Press to switch between channels /to choose menu item.
- 26 **MENU / ◀▶ button**
DVD disk menu/PBC function/Press to return to the previous channel.
- 27 **Q-PLAY button**
Press to turn the Q-PLAY mode on.
- 28 **KARAOKE button**
Press to change the subtitles language.
- 29 **SUBT button**
Press to change the subtitles language.
- 30 **Button ⏻**
Press to switch on the device/into standby mode.

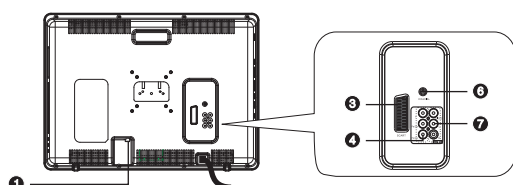
2.1.4 CONNECTION AND STARTING

(1) Switching interfaces

For LD1506X and LD1906X



For LD2006X



- 1 **RF input**
Meant for antenna connection.
- 2 **VGA port**
Meant for PC connection.

- 3 **SCART socket**
Meant for external audio video signal source connection. There is no need to use additional audiocord.
- 4 **Y Cb(Pb) Cr(Pr)**
- 5 **PC AUDIO IN**
Meant for PC stereo audio output connection.
- 6 **COAXIAL OUT**
Meant for multi-channel sound playback.
- 7 **AUDIO VIDEO IN**
Used for external signal source connection.
- 8 **12 V socket**
Meant for adapter connection.

2.1.5 TV MODE

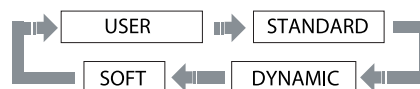
This LCD TV can store up to 100 channels and enables to scan channels thought automatic, manual and fine tuning scanning mode. Built-in TV tuner supports stereo audio playback in NICAM system.

(1) Adjusted channels selection

- #Press +CH-buttons on the left panel or CH▲/▼ buttons on the remote control each time, when you want to change a channel.
- #Use numeric buttons to enter the number of the channel.
- #Press ◀ button to return to the previous channel.

(2) Default picture settings selection

- #You may select one of the default picture settings: USER, STANDARD, DYNAMIC and SOFT.
- #You may adjust necessary parameters in the device menu.
- #Turn to Picture item on this page for details.



(3) Default sound settings selection

- #You may select one of the default sound settings: USER, MUSIC, FILM and NEWS.
- #You may adjust necessary parameters in the device menu.
- #Turn to page.13 for details.

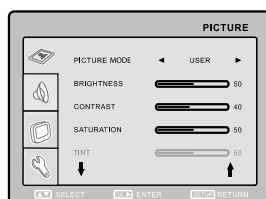


(4)Accompanying sound type

- #Only some of the TV channels have stereo accompanying sound in NICAM system.
- #Press NICAM button to select accompanying sound.

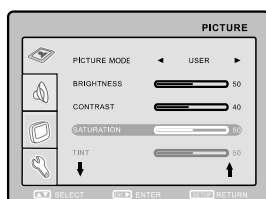
(5) TV settings

- #Press SETUP button to display the menu.
- #Use cursor buttons on the remote control or +CH-buttons on the left panel to select the item. Use ◀/▶ buttons to adjust selected parameter. Use OK button for confirmation. Press SETUP button again to return to the main menu or to exit TV SETUP.



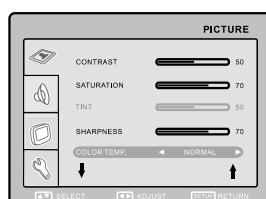
(6) Picture

- #Select PICTURE item to adjust picture parameters.
- #You may adjust BRIGHTNESS, CONTRAST, SATURATION, TINT, SHARPNESS and COLOR TEMP.



NOTE

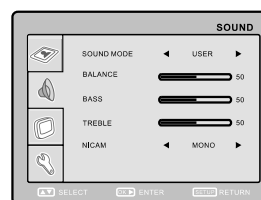
You can't adjust TINT while watching TV channels.



(7) Sound

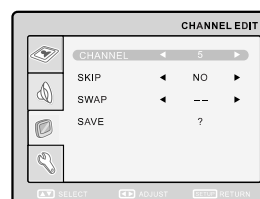
- #Select SOUND item to adjust sound parameters.
- #You may adjust BALANCE, BASS, TREBLE and NICAM.

ATTENTION! We recommend watching TV at half of maximum level of the sound. Continuous listening at higher level may lead to hearing reduction.

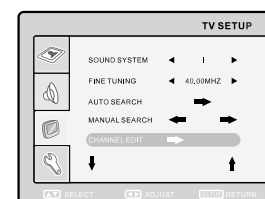
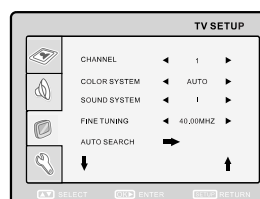


(8) TV setup

- Select TV SETUP item to adjust channels. CHANNEL, COLOR SYSTEM, SOUND SYSTEM, FINE TUNING, AUTO SEARCH, MANUAL SEARCH and CHANNEL EDIT.
- #CHANNEL item enables to select the number of adjustable channel.
- #CHANNEL EDIT submenu enables to select, skip and swap the channel.
- #CHANNEL parameter enables to select current channel.
- #SKIP function enables to make current channel inaccessible while using +CH-button to browse channels.



- #SWAP function enables to select the channel number to swap with current channel.
- #SAVE parameter enables to confirm the swap function.
- #FINE TUNING item enables to adjust the channel frequency accurately.
- #MANUAL SEARCH item enables to change channel settings.
- #AUTO SEARCH item enables to adjust channel setting automatically.
- #COLOR SYSTEM item can be changed between: AUTO, PAL and SECAM. We recommend to set this item to AUTO.
- #SOUND SYSTEM item can be changed between: B/G, D/K, Land I.



(9) Function

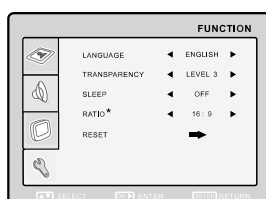
You may select LANGUAGE, TRANSPARENCY, SLEEP and RADIO.
#LANGUAGE item enables to select the OSD language.

#TRANSPARENCY item enables to adjust transparency of OSD.

#SLEEP item enables to set the sleep timer.

#RATIO(only for LD1906X)item can be changed between 16:9 and 4:3.

#RESET item enables to reset all values to default.



(10) Video settings

#Press SETUP button to display the menu.

#In external video signal playback mode the menu is the same as the menu, described on pages 12and 13.

NOTE

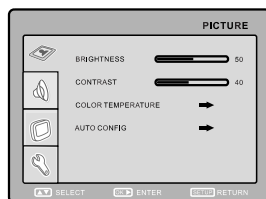
In external video signal playback mode TV SETUP item is inaccessible.

2.1.6 PC MONITOR MODE (only for LD1506X and LD1906X.)

(1)Picture

Select PICTURE item to adjust picture parameters.

You may adjust BRIGHTNESS, CONTRAST, COLOR TEMPERARURE and AUTO CONFIG.



#Select COLOR TEMPERATURE subment to adjust color temperature of the picture.

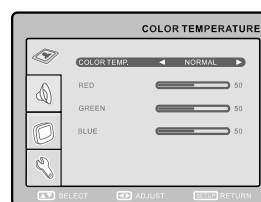
#COLOR TEMP. Item can be set to :USER, NORMAL, WARM and COOL.

#RED, GREEN and BLUE items enables to adjust RGB value of color temperature.

#Use AUTOCONFIG to configure display parameters automatically.

NOTE:

The picture can be displayed incorrectly while adjusting.



(2)Sound

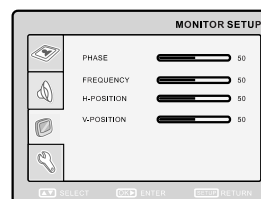
Select SOUND item to adjust sound parameters.

You may adjust BALANCE, BASS, TREBLE and NICAM.



(3)Monitor setup

Select MONITOR item to adjust such parameters as PHASE, FREQUENCY, H-POSITION and V-POSITION.



(4)Function

You may select LANGUAGE, TRANSPARENCY, SLEEP and RADIO.

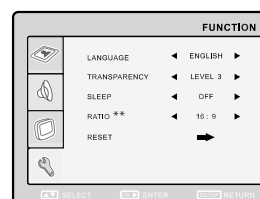
#LANGUAGE item enables to select the OSD language.

#TRANSPARENCY item enables to adjust transparency of OSD.

#SLEEP item enables to set the sleep timer.

#RATIO(only for LD1906X) item can be changed between 16:9 and 4:3.

#RESET item enables to reset all values to defaule except ratio function.

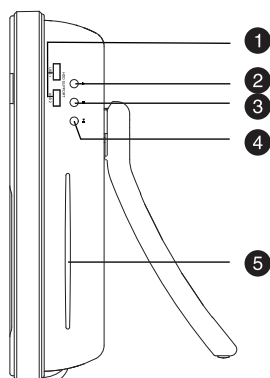


2.2 Section Two DVD SEGMENT

2.2.1 Controls and functions

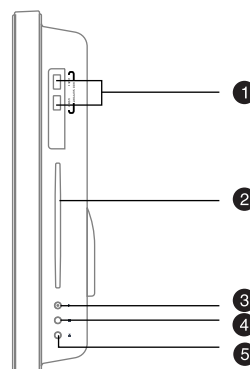
Front panel controls

For LD1506X



- 1 USB port**
- 2 EJECT button**
Press to open/close the disc tray.
- 3 STOP button**
Press to stop the playback.
- 4 PLAY/PAUSE button**
Press to playback/pause.
- 5 Disc tray**

For LD1906X and LD2006X



- 1 Two USB ports**
- 2 Disc tray**
EJECT button
Press to open/close the disc tray.
- 3 STOP button**
Press to stop the playback.
- 4 PLAY/PAUSE button**
Press to playback/pause.
- 5 Disc tray**

Note:

This model does not support the 8cm disc. Do not insert that type of disc into this device to avoid disc jam.

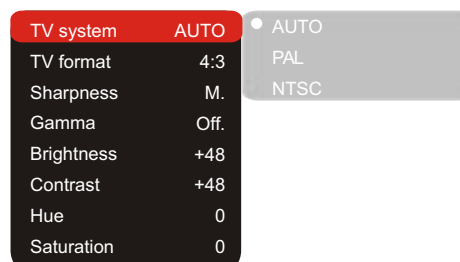
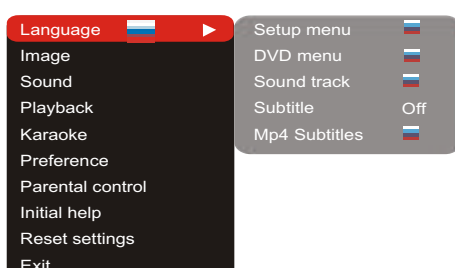
2.2.2 FUNCTION SETTINGS

(1) Function selection and change

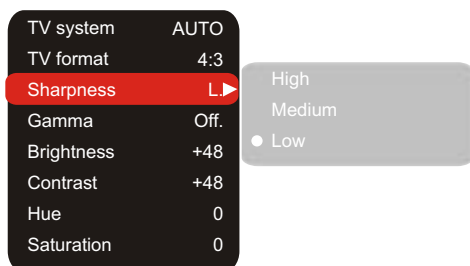
#Press the SETUP key to show the setup menu. You will see the following image on the screen, as show on the figure:

#Select the desired menu item using the UP/DOWN buttons button; press the OK key for confirmation.

1.For example, if you wish to change the image settings, you have to select the image item and press the OK or RIGHT key.



2. Using the UP/DOWN buttons, select the desired item and press OK or RIGHT button. For example, select the Sharpness item. Settings will appear on the screen. Then select the desired sharpness level and press OK for confirmation.



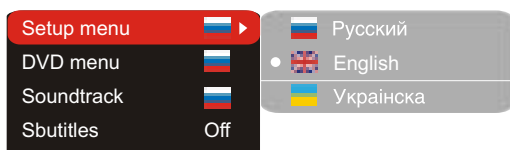
3. Press LEFT for exit to previous menu level.
4. Press SETUP to exit setup menu.

(2) Language settings

1. Setup menu: interface language set-up

#Options: Russian, English, Ukrainian, Romanian.

#Default option: English.



2. DVD menu: selection of disc menu language

3. Sound: selection of translation language

#Disc menu/translation language options:

Russian, English, Estonian, Lithuanian, Kazakh, Romanian, Belarusian, Ukrainian, Chinese, Others.

#Default menu/translation language option: English.

#Selection of other languages: select the OTHERS item using the wheel and press OK. Enter the language code using the numeric buttons and press OK.

#If the language you selected is not recorded on the DVD disc, another available language will be used.

4. Subtitles: selection of subtitles language

#Options: Off, Russian, English, Estonian, Lithuanian, Kazakh, Romanian, Belarusian, Ukrainian, and Chinese.

#Default option: off.

#Selection of other languages: select the OTHERS item using the wheel and press OK. Enter the language code using numeric buttons and press OK.

#If the language you selected is not recorded on the DVD disc, another available language will be displayed.

5. MP4 Subtitles: selection of subtitles language

#Options: Russian, English, Ukrainian and Romanian.

#Default option: English.

(3) Image settings menu

1. TV system: TV system selection

#Options: Auto, PAL, NTSC.

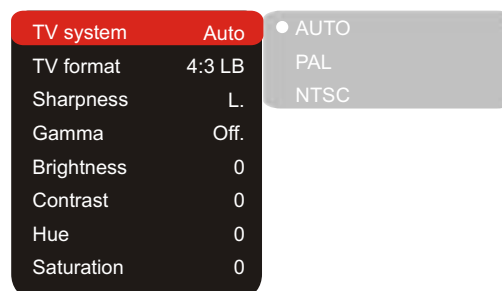
#Default option: PAL.

2. TV Format: image ratio settings

#Options: 4:3 pan& scan, 16:9 letterbox and 16:9 TV, 4:3 LB.

#Default option: 4:3 LB.

#Some discs are recorded with support of only one ratio. The selected ratio must comply with the TV screen.



3. Sharpness: image sharpness adjustment

#Options: High, Middle, Low.

#Default option: Middle.

4. Gamma: adjustment of image color temperature

#Options: High, Middle, Low, Off.

#Default option: Off.

5. Brightness: adjustment of image brightness

6. Contrast: adjustment of image contrast

7. Hues: adjustment of image hues

8. Saturation: adjustment of image saturation

Adjustment of image brightness, contrast, hues and saturation:

#Select the desired item of the image adjustment section using the UP/DOWN buttons. Press OK or RIGHT key to start adjusting the relevant option.

#Change the option value using the wheel.

#Upon completion press the LEFT button of the UP/DOWN buttons to return to image setup menu.

(4) Sound settings menu

1. Digital audio output

a). SPDIF format: set-up of digital audio output options.

#Options: RAW, PCM.

#Default options: RAW.

#When you select the RAW option, the not decoded signal is transferred to the LCD Tv's digital outputs, the decoded signal is transferred to analog outputs. Decoding is performed by the built-in decoder of the LCD TV. This feature is meant to ensure that signal decoding at digital outputs is performed by an external device(e.g.an amplifier).

#If you select the PCM option, a PCM coded signal will be transferred to the LCD Tv's digital outputs.



B) LPCM: set-up of digital audio output options to comply with different amplifiers and receivers.

#Options: 48kHz 16 bit, 96 KHz 24 bit, 192kHz 24 bit.

#Default option: 48kHz 16 bit.

2. Sound correction

A) Equalizer: equalizer modes

#Options: Off, rock, pop, live dance music, Techno classics, soft .

#Default option: off.

B) Echo: echo effects

#Options: Off, concert, living room, hall, Bathroom, cave, arena, church.

#Default option: off.

C) Tone balance: adjustment of tone balance level.

#Adjust the tone balance level using the cursor buttons.

#Press the LEFT button to return to sound correction set-up menu.

(5) Playback settings

1. DVD

Advertisement skip: skip the unskippable block while playing a DVD disc.

#Options: Yes, No.

#Default option: number

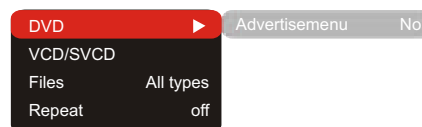
2. VCD/SVCD

PBS menu: PBC menu on/off

#Options: On, Off.

#Default option: On.

#If On option is set, while reproducing discs, a menu will appear, in which you can select the order of playing the disc content. If the Off option is set, the reproducing of content is performed in the order, in which it is recorded



3. Files: selection of reproduced files on the disc

#Options: Audio, Pictures, Video, All types.

#Default option: All types.

4. Repeat: file repeat mode

#Options: Off, Single, All.

#Default option: Off.

(6) Karaoke settings menu

1. Microphone: microphone on/off

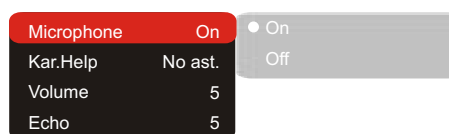
#Options: On, Off.

#Default option: On.

2. Kar.help: karaoke-disc playback mode

#Options: L Channel, R Channel, No ast, No voc.

#Default option: No voc assist.



3. Volume:

Microphone: microphone sound volume level

#Using the UP/DOWN buttons adjust the microphone volume level.

#Press LEFT key of the UP/DOWN buttons to return to karaoke settings menu.



4. Echo: echo level while playing the karaoke-disc

#Adjust the echo level Using the UP/DOWN buttons.

#Press LEFT key of the UP/DOWN buttons to return to karaoke settings menu.



(7) Preference settings

1.Screensaver: screen saver on/off

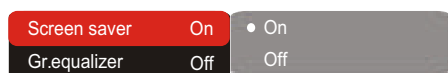
#Options: On, Off.

#Default option: On.

2.Gr.equalizer: spectrum analyzer

#Options: On, Off.

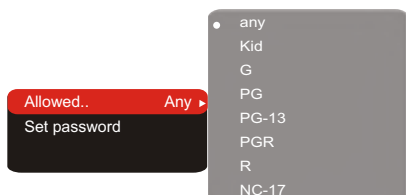
#Default option: Off.



(8) Parental control settings

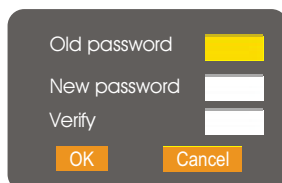
1.Category: set-up of age restrictions to prevent children from seeing undesirable discs.

#Options: Any, Kid, G,PG, PG-13, PGR, R, NC-17.



2.Change password: set-up of a four-digit password to change the level of age restrictions.

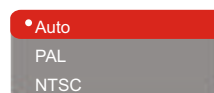
#Default option: 7890



(9) Initial setup menu

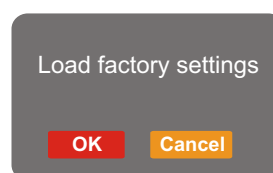
#Press the RIGHT key to enter the initial settings menu, then select the desired item using the cursor buttons and press OK key for confirmation.

#While being in this menu section, you cannot return to the previous level by pressing the



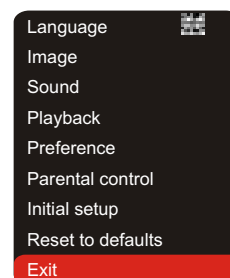
(10) Reset settings to default

#Resetting all settings and restoring default options, except age restrictions level and Password.



(10) Exit settings menu

#Select the exit item using the UP/DOWN buttons and press the OK key to exit the menu.



2.2.3 OTHERS

(1) Useful notes

#To extend the service life of your LCD TV make pauses of not less than 30 seconds between switching off and repeatedly switching on the LCD TV.

#Disconnect the LCD TV from the wall outlet after shutdown.

#Some LCD TV'S functions may not be applied to some discs.

#Use supply sources of rated voltage, otherwise the LCD TV may not function or be damaged.

#In case of the LCD TV's occasional stops, please switch the power supply off and then on again.

(2)Trouble shooting

Please check probable causes of malfunction before addressing the service center.

Sign of trouble	Cause of trouble	Actions to ellminate the trouble
No sound	1.Poor audio cable connection. 2.Disc dirty or damaged. 3.Sound disabled by the MUTE button.	1.Make proper connection. 2.Clean the disc. 3.Press the MUTE button.

No image	1.Poor video cable connection. 2.Incorrect settings of your TV set. 3.The TV is in the progressive scan mode while your TV set does not support this mode.	1.Make proper connection. 2.Correct the settings of your TV set. 3.Place the TV in the interlaced scan mode through the TV's menu.
Black and white image	1.incorrect TV color system selected. 2.Color level on the TV set adjusted incorrectly.	1.Set the appropriate color system via the menu: SETUP>Image>TV scan. 2.Readjust the color system of your TV set.
Discs cannot be read	1.Disc not inserted. 2.Disc inserted incorrectly. 3.Condensate on the DVD player's laser head.	1.Insert the disc. 2.Install the disc with the label side facing up. 3.Switch the TV on without disc for an hour.
Microphone does not operate	1.Microphone is unplugged. 2.Low level of the microphone's sound volume.	1.Connect the microphone. 2.Adjust the level of the microphone's sound volume.
Remote control does not operate	1.Remote control is incorrectly directed at the TV's screen. 2.Distance to the TV is in excess of 8 meters. 3.Run out batteries.	1.Use the remote control according to the manual. 2.Decrease the distance to the TV. 3.Replace both batteries.
some functions do not work	1.Disc is recorded incorrectly. 2.Incorrect key sequence. 3.Static voltage on the housing.	1.Wait 5-10 seconds and the device will automatically return to normal state. 2.Repeat the operation one more time. 3.Switch the device off for 1-2 minutes and then switch it on again.
Unstable image or abnormal picture color	1.Incorrect TV set setting. 2.There is something wrong with the data in the EPROM.	1.Correct the TV set settings. 2.Reset the TV set to default setting.

(3) Technical characteristics

		LD1506X	LD1906X	LD2006X
Display	Type class	TFT,colored II(ISO 13406-2)		
	Size(")	15	19	20
	Height(mm)	228.19	256.5	306
	Width(mm)	304.13	410.4	408
	Dot Pitch(H mm × V mm)	0.297×0.297	0.285×0.285	0,637×0,637
	Viewing Angle(H)	120 °	170 °	140 °
Frequency	Vertical(Hz)	50-75		
	Horizontal(kHz)	30-75		
	Display color	16 700 000		

Maximum Display Mode	Resolution Vertical frequency(Hz)	1024×768 75	1440×900 75	640×480 75
Inputs	Video Composite Component VGA RGB/SCART Audio Stereo PC audio Others Karaoke USB RF	1 1 1 1 2 1 2 2 1	1 1 1 1 2 2 2 2 1	1 1 - 1 2 2 1
Audio outputs	Headphone Digital coaxial	1 1	1 1	1 1
Cdolor system	TV tuner Video inputs	PAL,SECAM PAL, SECAM, NTSC 3.58, NTSC 4.43,PAL60		
Sound system	TV tuner	DK,I,BG,L		
Built-in DVD player	Disc types	CD-R/RW,DVD-R/RW,DVD+R/RW		
	Formats	DVD-Video, DivX,XviD, SV CD,V CD,CD-DA,HDCD,MP3,WMA,Kodak Picture CD,JPEG		
Power adapter	Voltage and frequency(V ,Hz)	~100-240,50/60		
	Voltage of external (V,A)	= : + 12	= : + 12	-
Power supply	Power Consumption (Maximum)(w)	54		65
	Power Consumption (Power Saving)(w)	<3		<3
Environmental consideration	Operating temperature(° ,C)	+5___+35		
	Operating humidity(%)	10-80		
	Storing temperature (° ,C)	-20___+45		
	Storing humidity(%)	5-95		
Dimensions(mm)		438.7×295.7×73.4	498×370.6×82.5	620×450×202
Weight	Net weight(kg)	6.5	6.9	7.9

#We are permanently improving the quality of our products; hence the product's design, functionality and technical characteristics may be modified without prior notice.

#We do not guarantee that all discs can be played smoothly due to the disc quality, disc recording quality and recording format.

Chapter Three Principle and Servicing

The previous manual: TV part

Section One Principle of the player

3.1.1 System control principle

System control schematic diagram is shown in the figure 3.1.1.1:

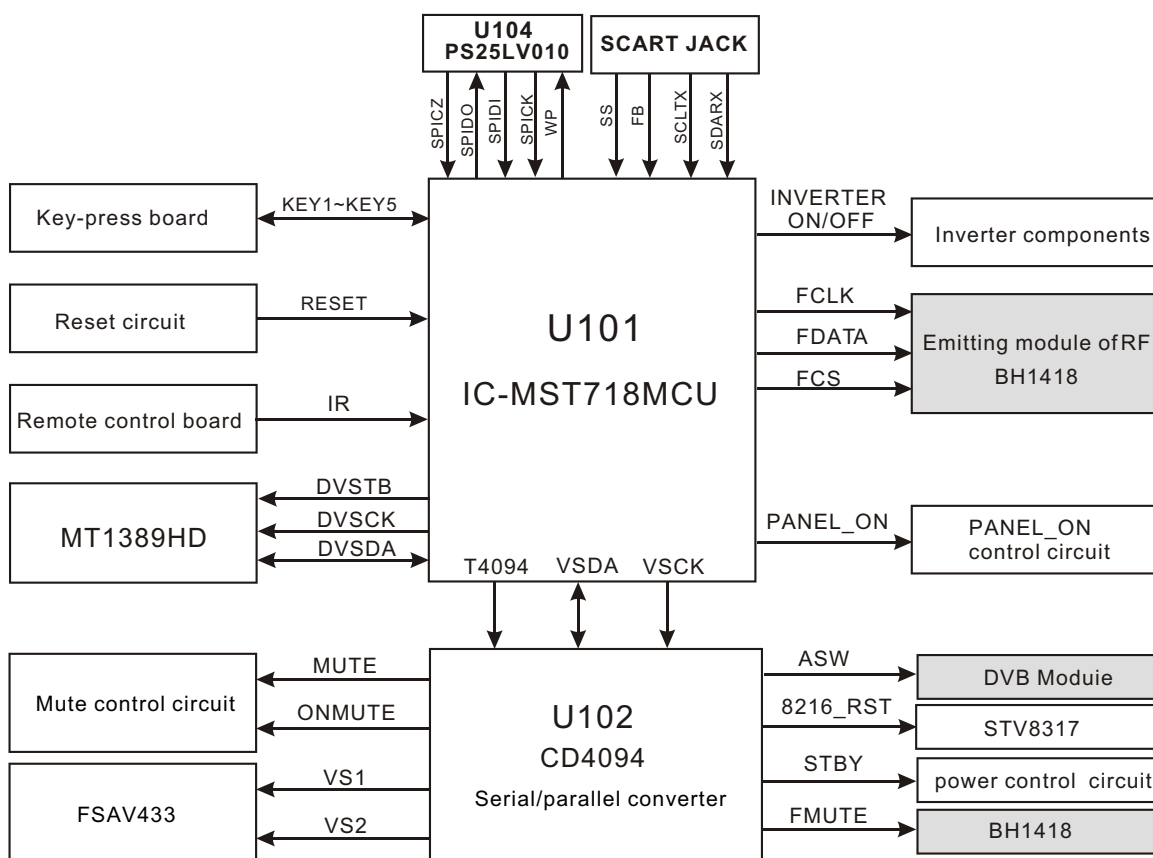


Figure 3.1.1.1 System control schematic diagram

3.1.2 OVERALL WIRING DIAGRAM

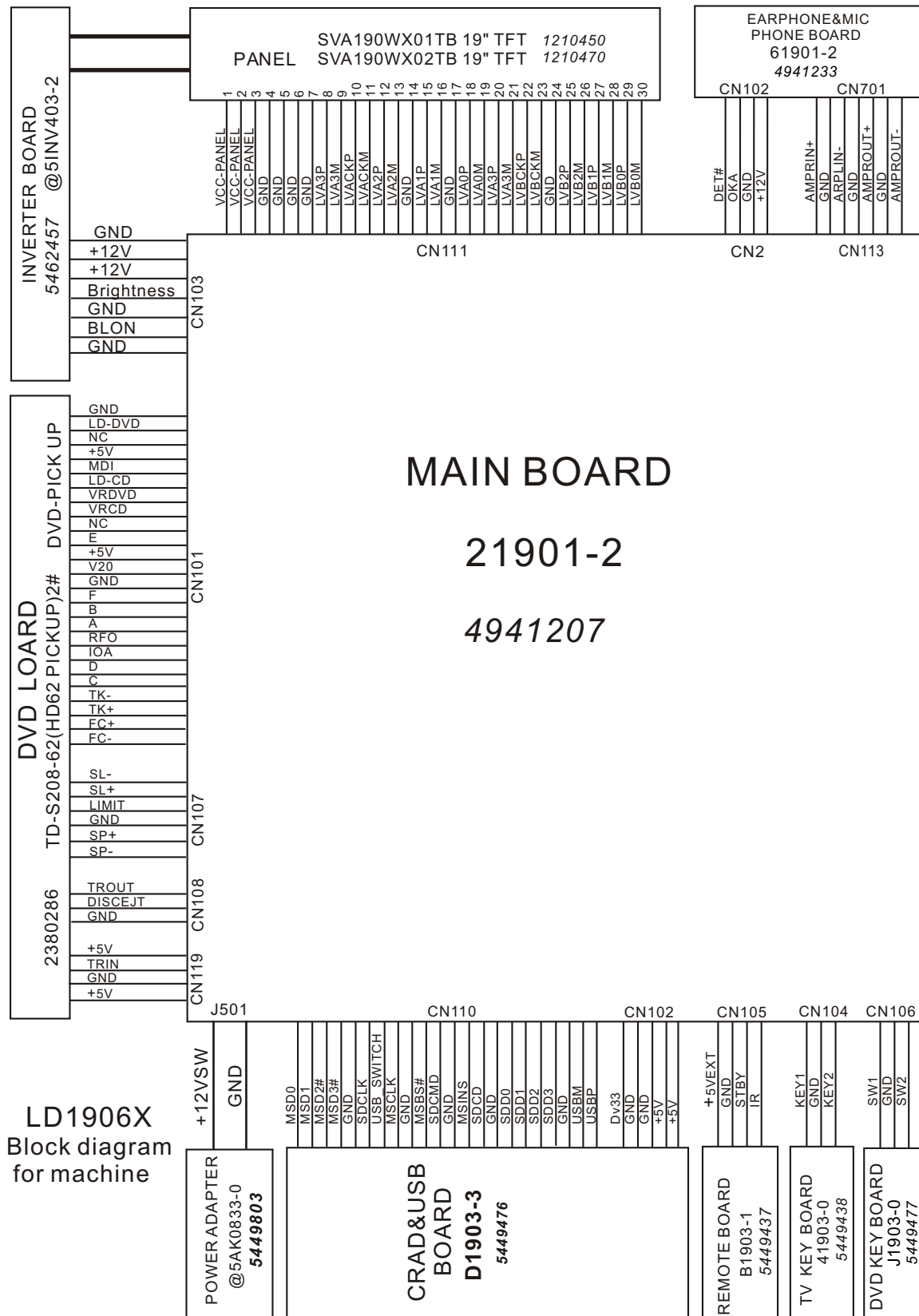


figure 3.1.2.1 overall wiring diagram

3.1.3 Block diagram of the player

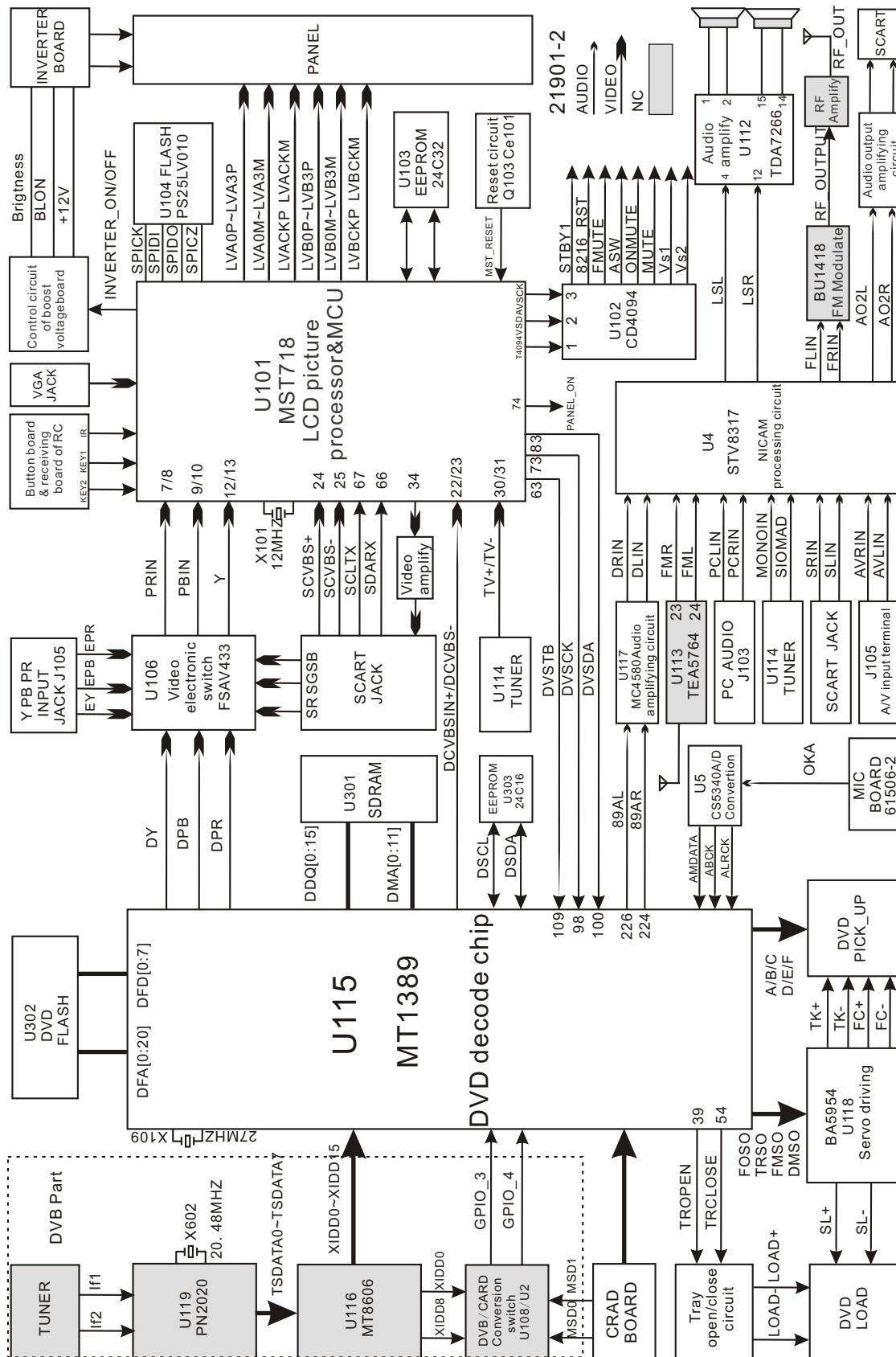


figure 3.1.3.1 Block diagram of the player

3.1.4 Audio circuit

Audio processing circuit is mainly responsible for the switch, amplifying and restore of audio and composed of audio source input selection and NICAM processing circuit, audio amplifying circuit and mute control circuit. Audio processing circuit block diagram is shown in the figure 3.1.4.1:

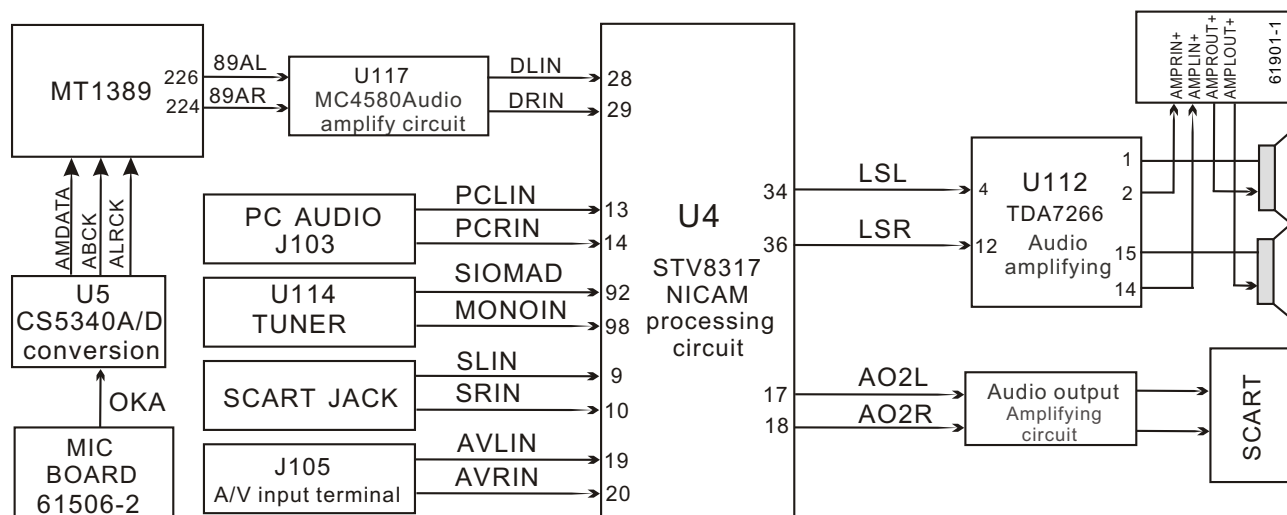


Figure 3.1.4.1 Audio processing circuit block diagram

3.1.5 Power circuit

Power circuit supplies stable and pure power for each unit circuit to ensure normal working of the player. Power circuit block diagram is shown in the figure 3.1.5.1:

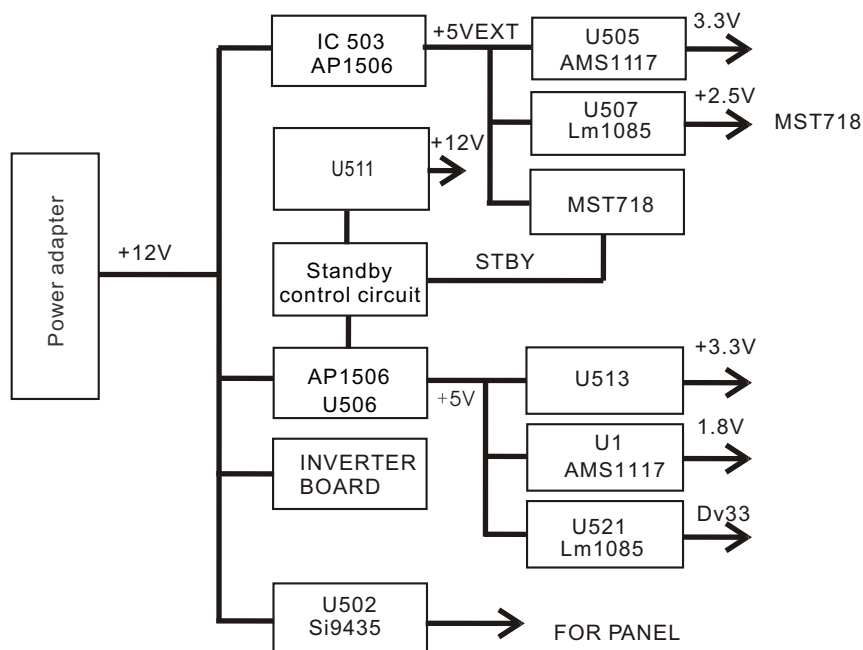


Figure 3.1.5.1 Power circuit block diagram

3.1.6 Video circuit

Video circuit is mainly responsible for the input of external video signals, the processing of video signals send from tuner, and the drive processing of LCD screen, including video input selection, video A/D conversion circuit, LCD picture processing circuit and video output circuit. Video circuit block diagram is shown in the figure 3.1.6.1:

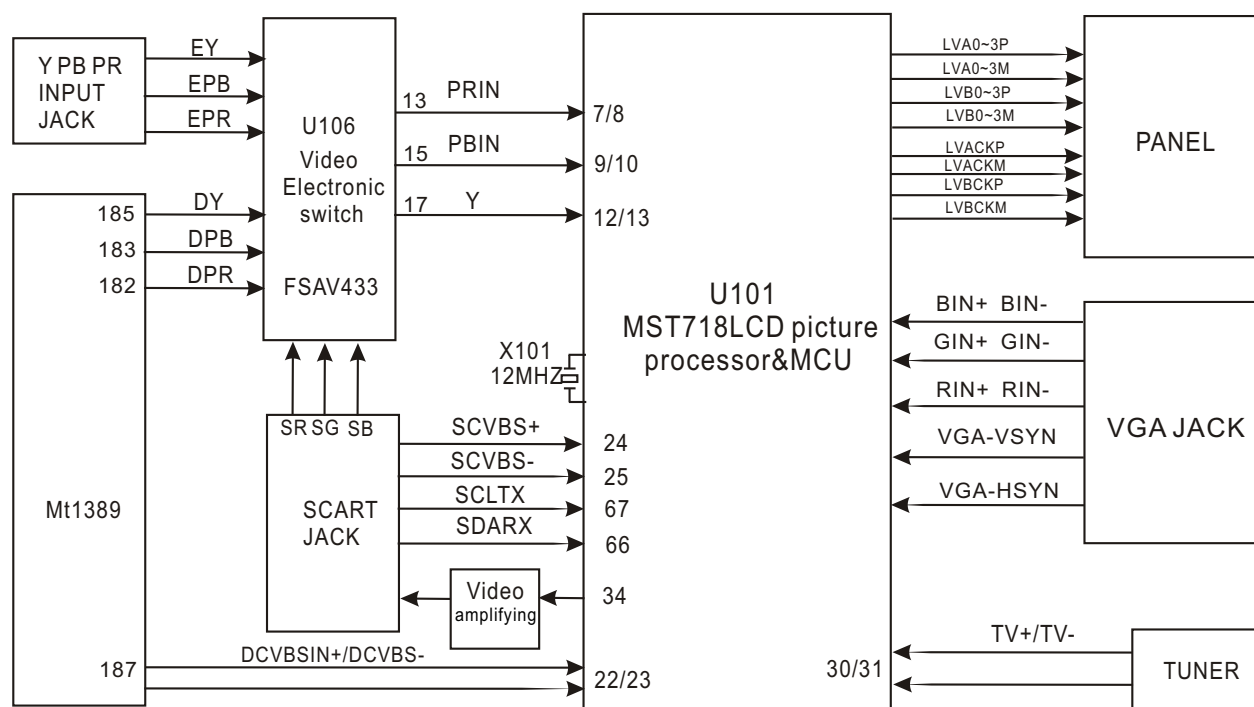
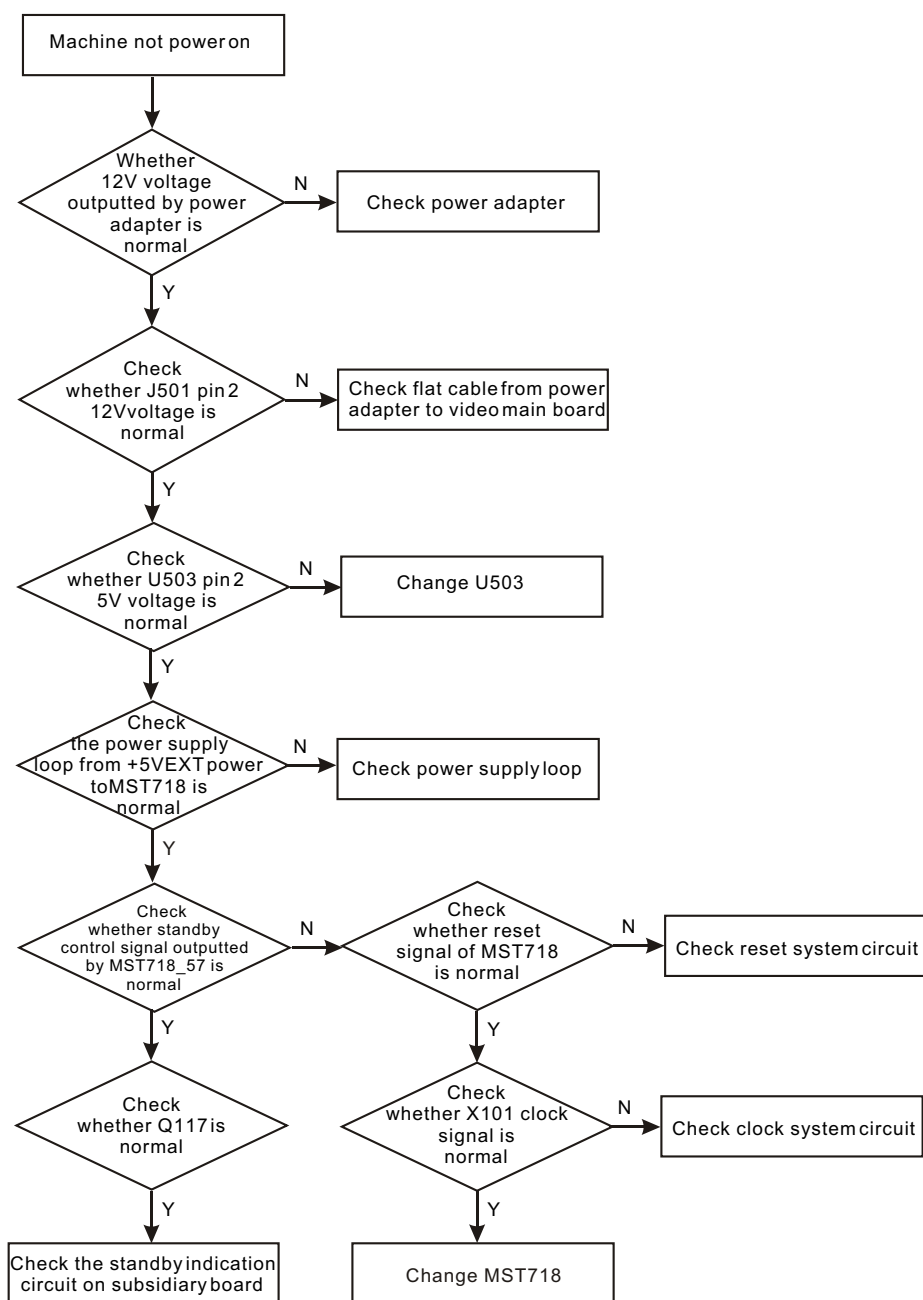


Figure 3.1.6.1 Video circuit block diagram

Section Two Troubleshooting flow chart

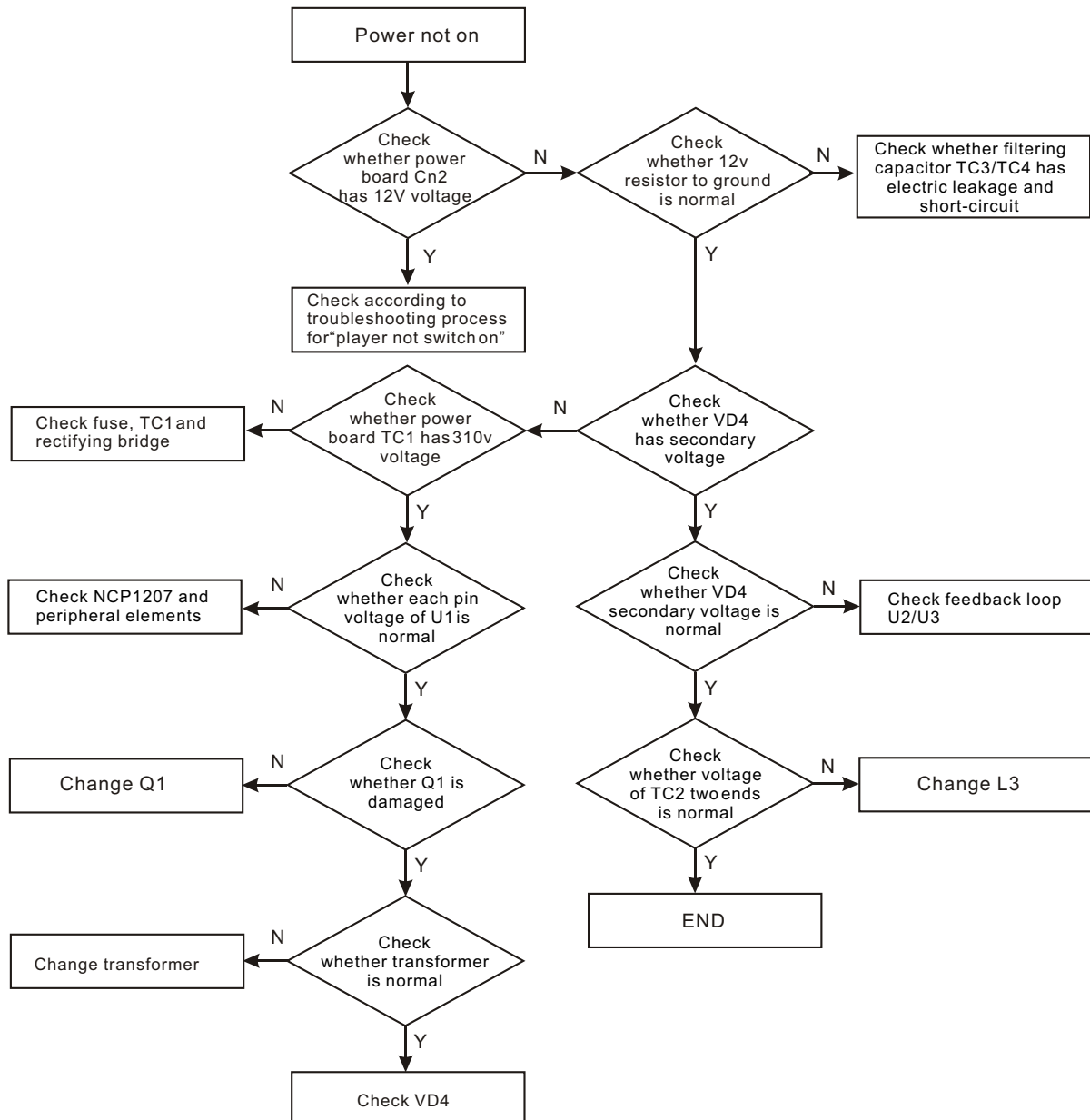
[Flow chart 1] Trouble symptom: standby light is not on

Trouble description: connect with power, standby indicator light is not on, machine has no response and buttons have no function.



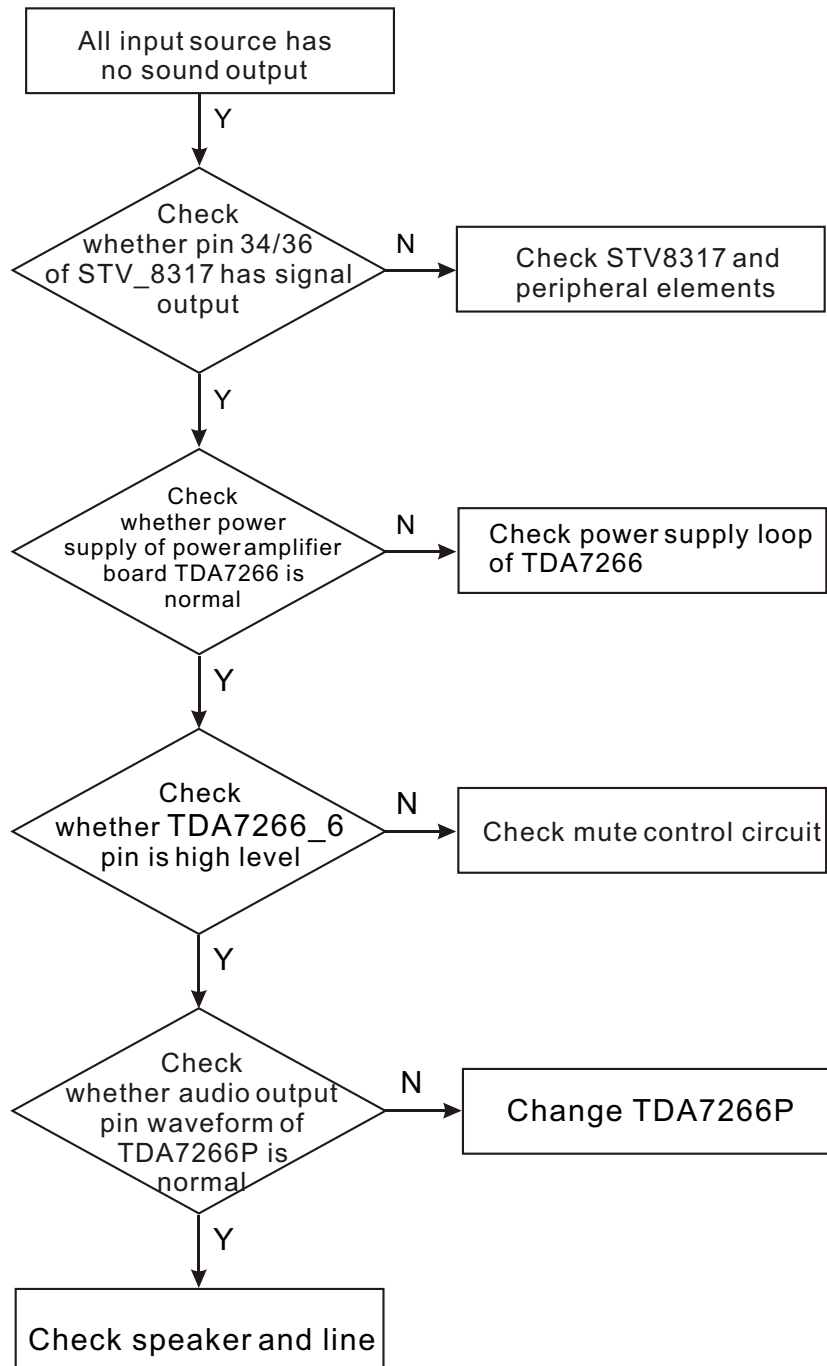
[Flow chart 2] Symptom: power not on

Trouble description: test after machine power on, standby indicator light is not on and +12V power outputted by power adapter is abnormal.



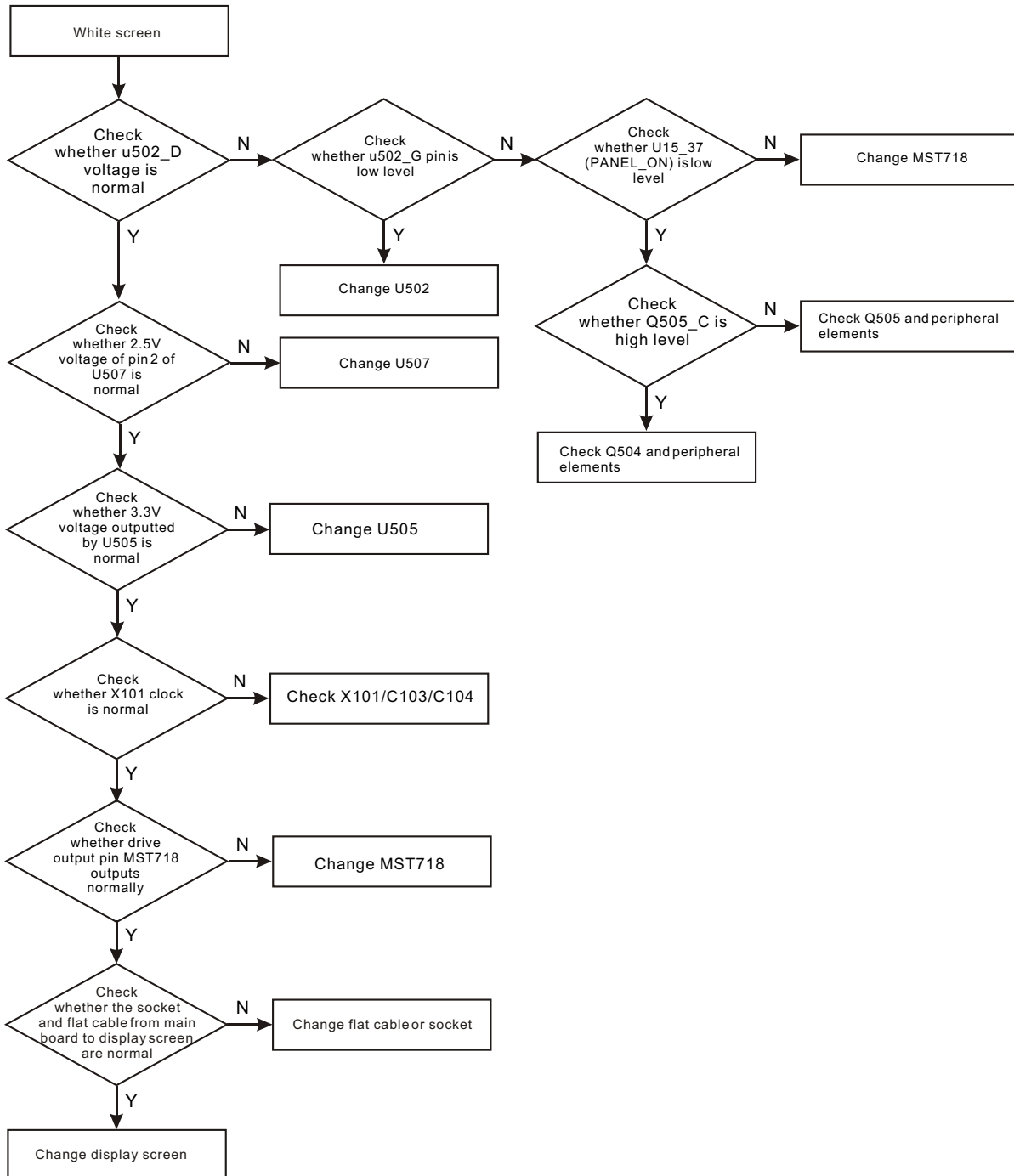
[Flow chart 3] Symptom: no sound

Description: there is image, but no audio output.



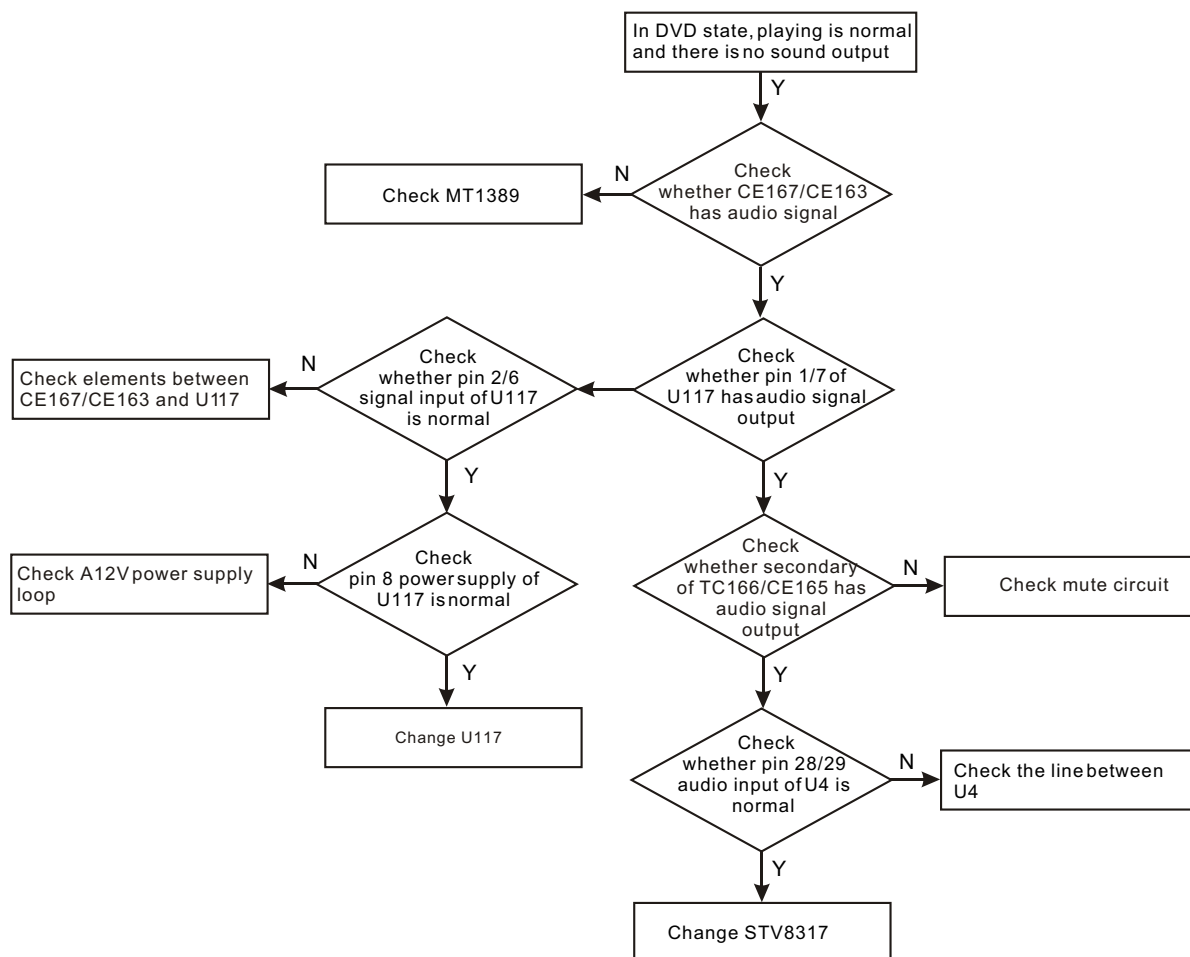
[Flow chart 4] Symptom: white screen

Description: screen is white and indicator on.



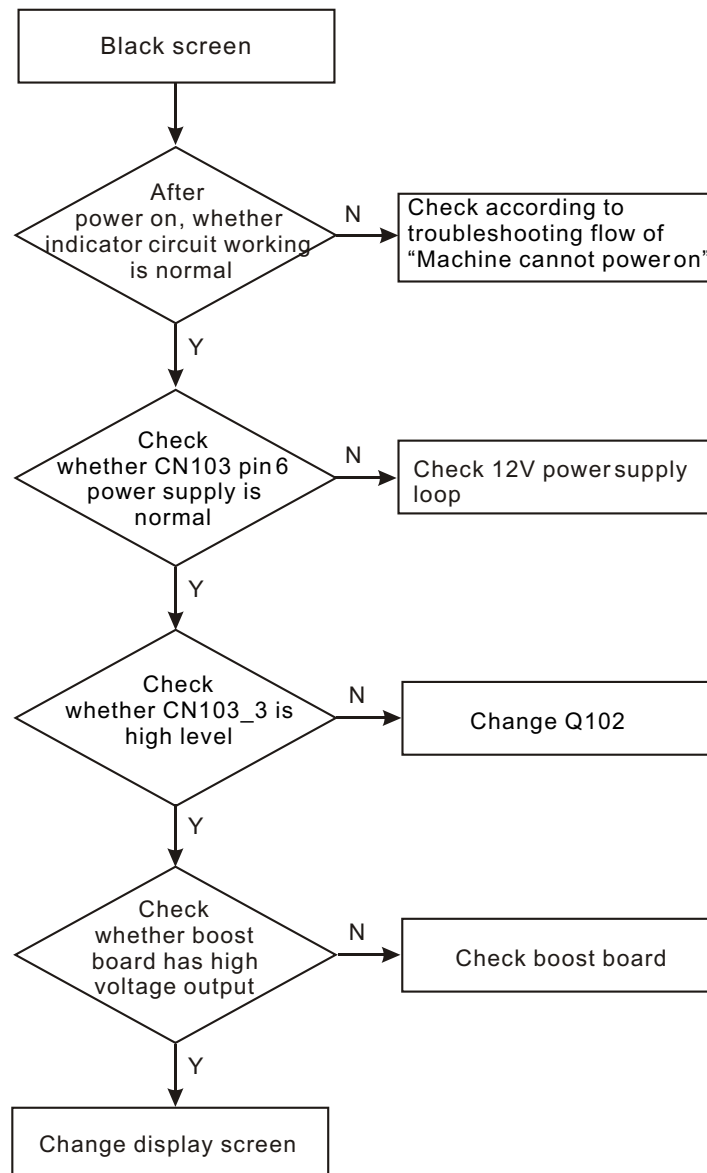
[Flow chart 5] Symptom: DVD has no sound

Trouble description: when machine is set in DVD state, there is image but no sound. External input and TV sound are normal.



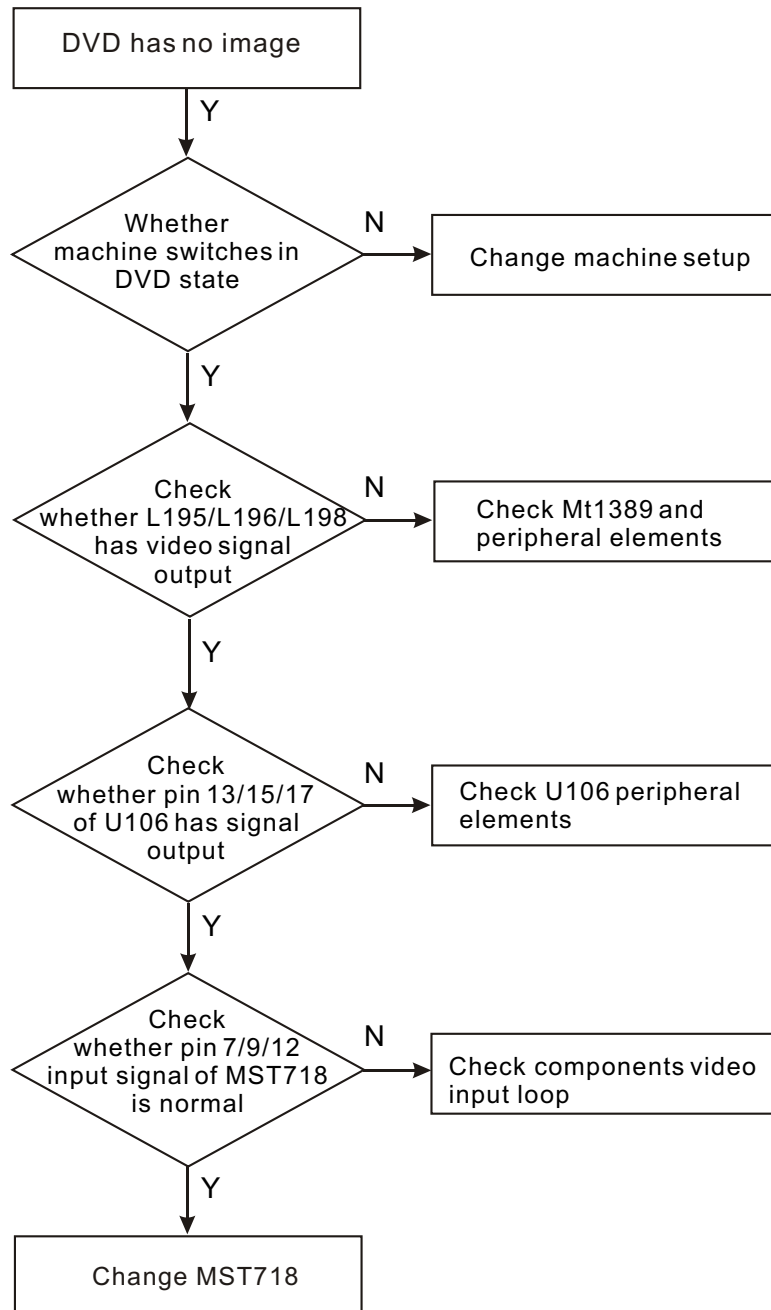
[Flow chart 6] Symptom: black screen

Trouble description: after power on, screen has no display and backlight cannot be on.



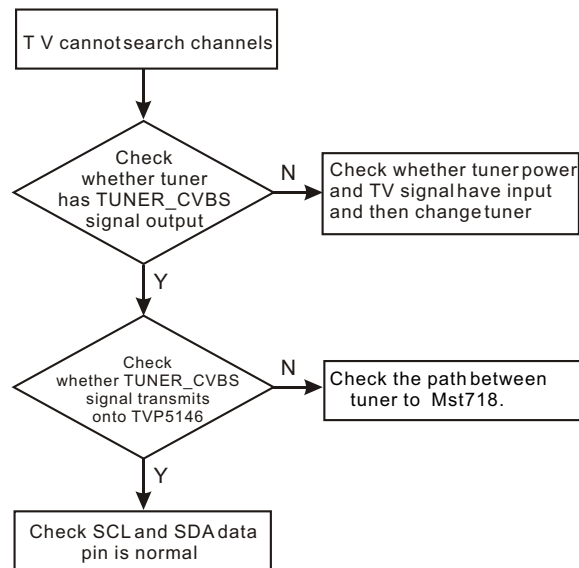
[Flow chart 7] Symptom: DVD has no image

Description: DVD has no image but has sound.



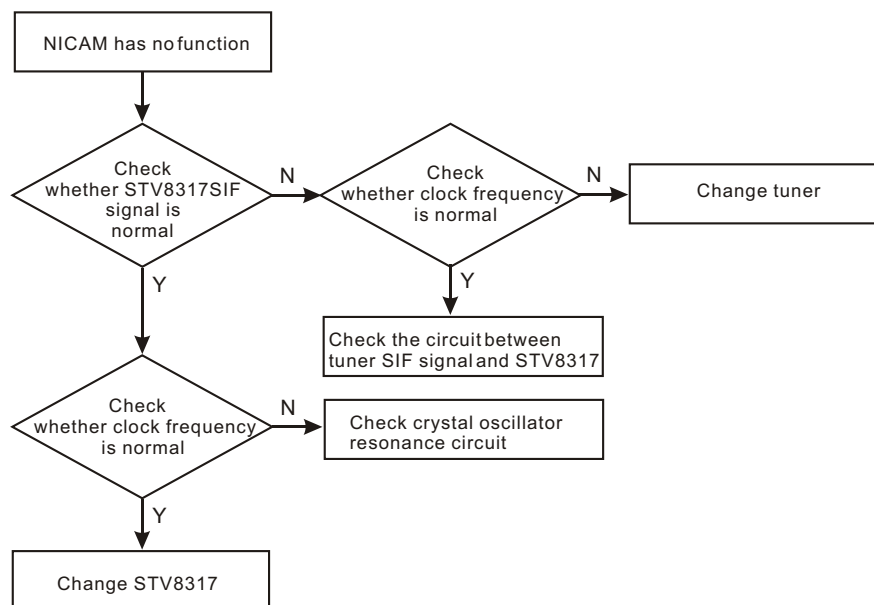
[Flow chart 8] Symptom: TV cannot search channels

Description: channel cannot be searched.



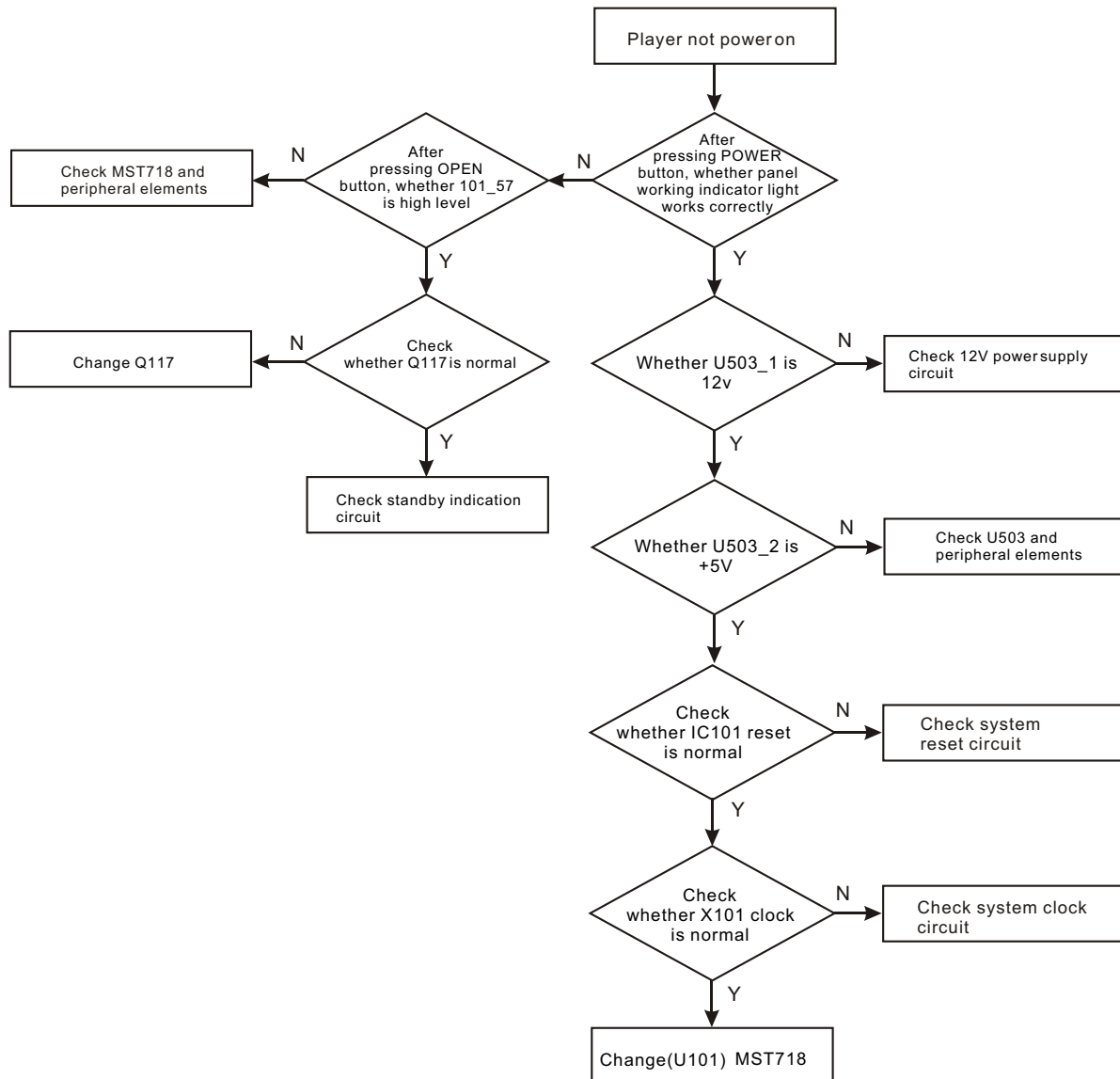
[Flow chart 9] symptom: NICAM has no function

Description: NICAM has no function and cannot be realized.



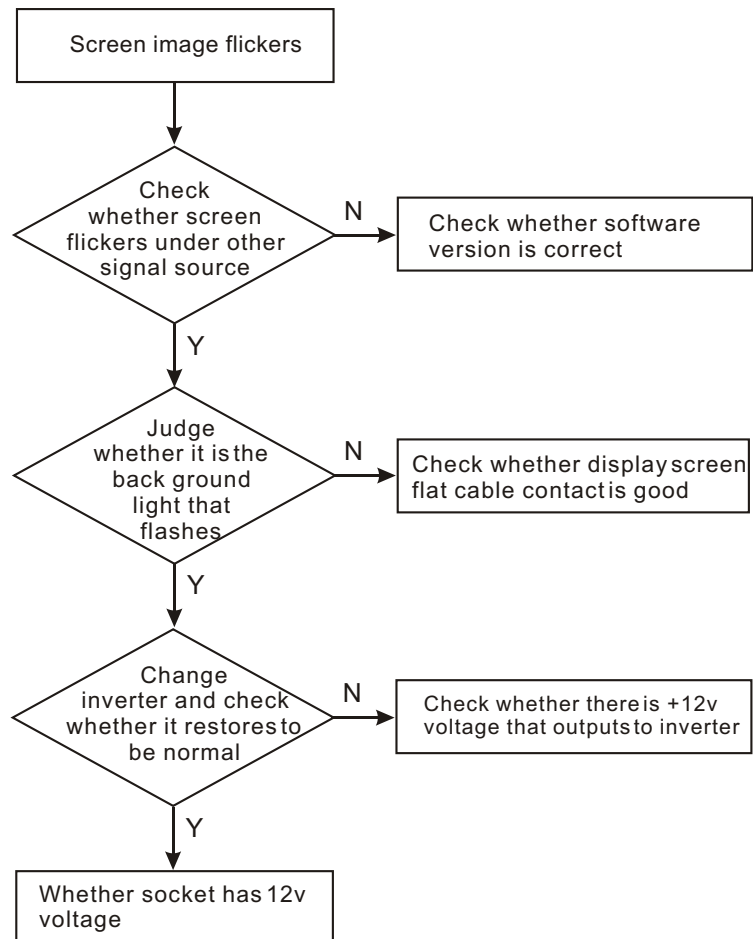
[Flow chart 10] Symptom: player not power on

Description: switch on power, indicator light is not on and buttons have no function.



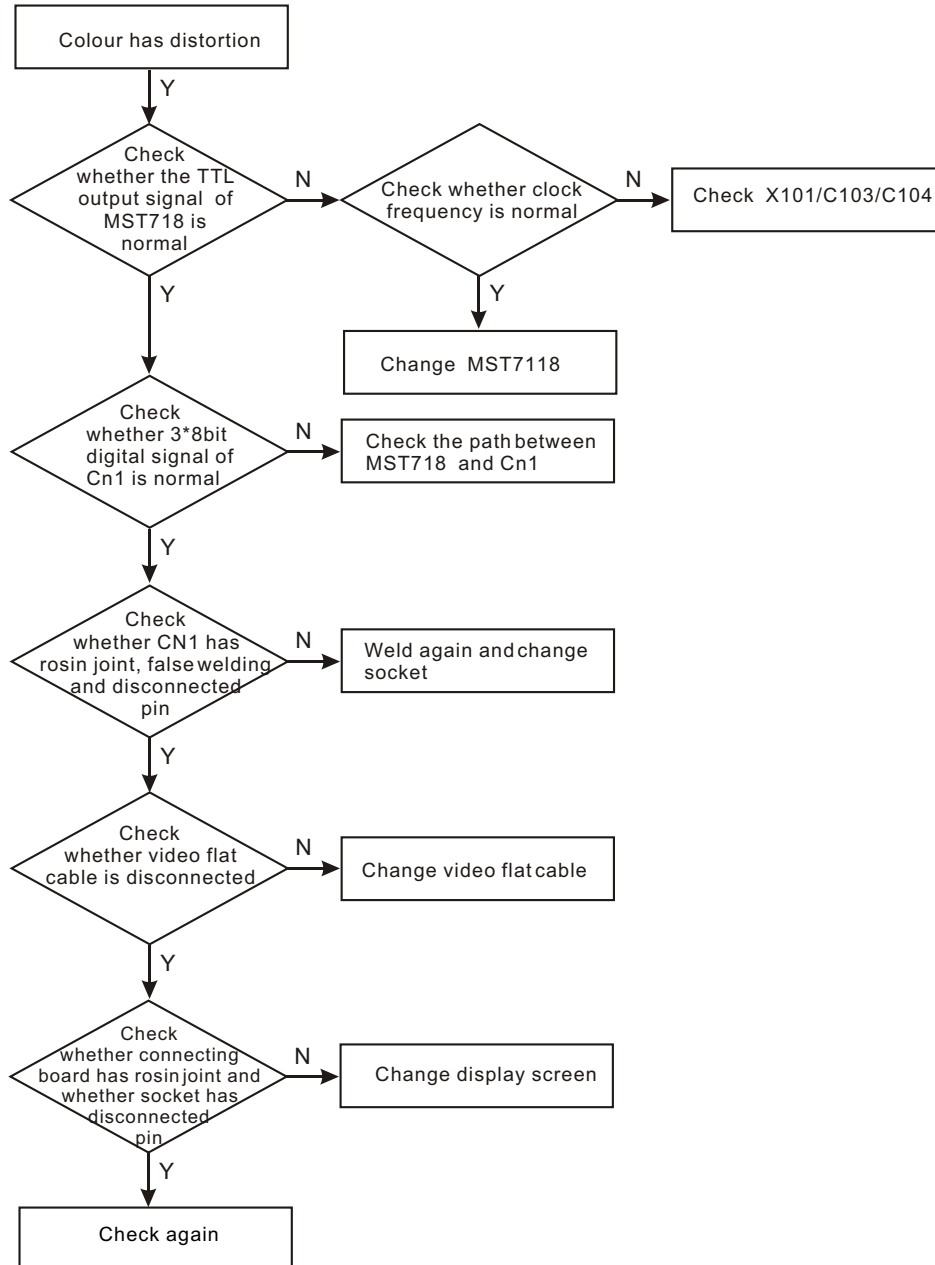
[Flow chart 11] Symptom: screen image flickers

Description: screen image flickers and sound is normal.

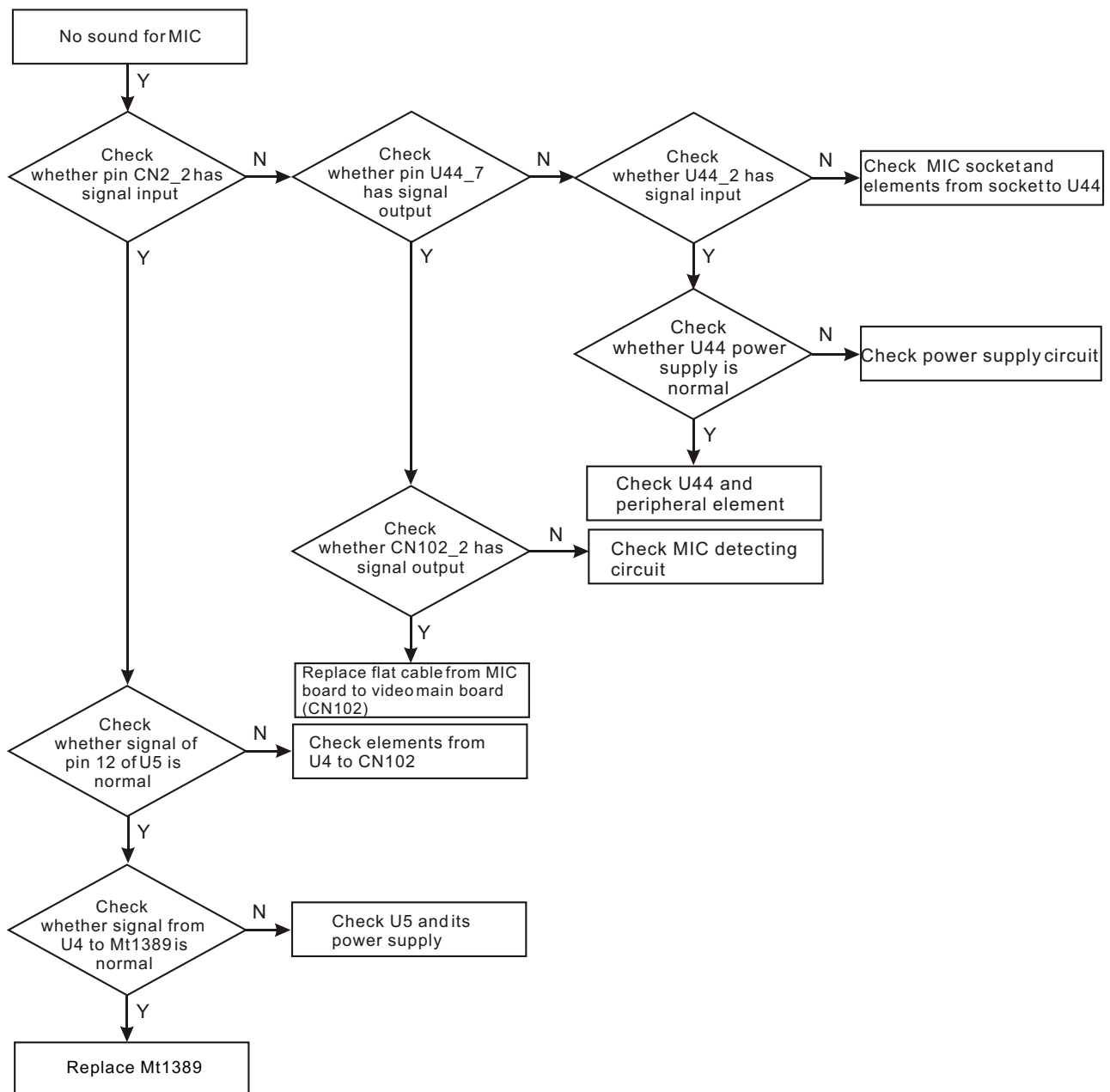


[Flow chart 12] Symptom: colour has distortion

Description: picture colour has distortion.



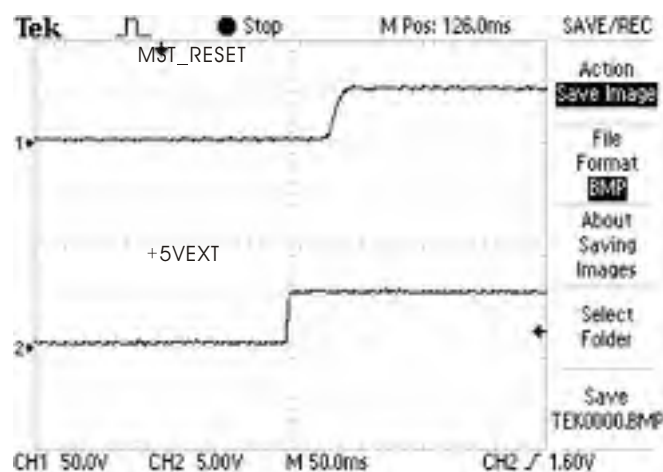
[Flow chart 13] Symptom: Troubleshooting flow chart of no sound for MIC(check whether MIC is on before detecting, whether player outputs sound normally).



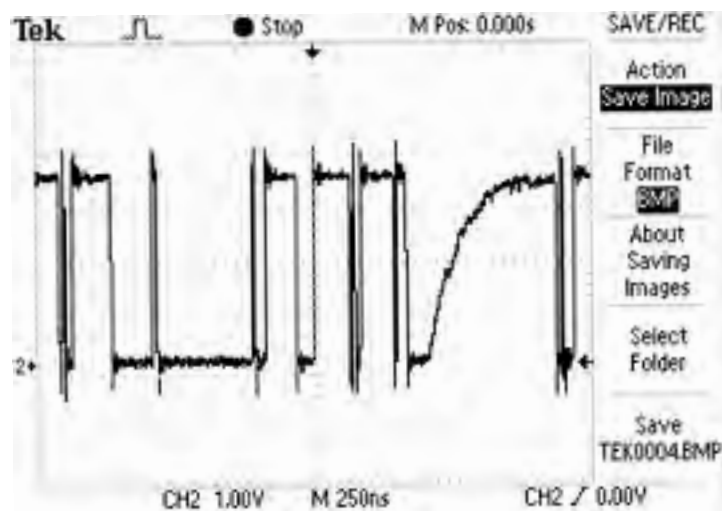
Section Three Waveform diagram

This section collects signal waveform diagram of audio, video and each unit circuit with the purpose to help servicing personnel to judge where trouble lies in accurately and quickly to improve servicing skills. For the difference of oscillograph's type, model and tuner, a certain difference may exist, so the servicing personnel are expected to pay more attention to check in daily operation.

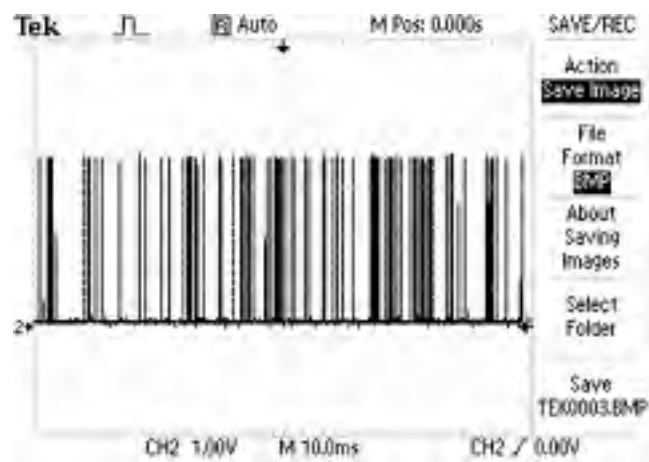
1. System reset signal waveform diagram: waveform comparison diagram for +5VEXT and system reset pin during the course of power on.



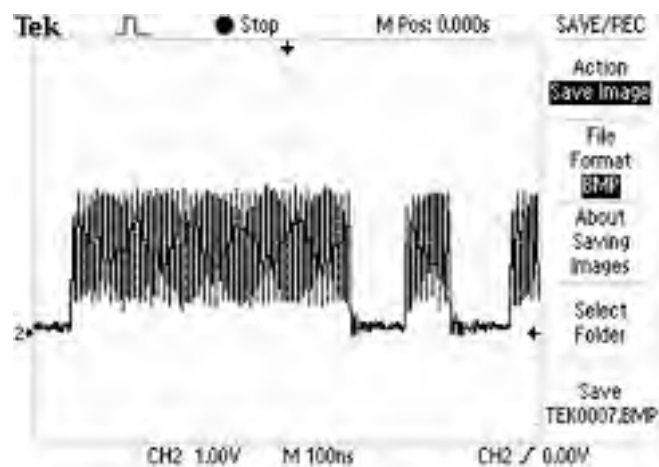
2. U104_2(SO) waveform diagram.



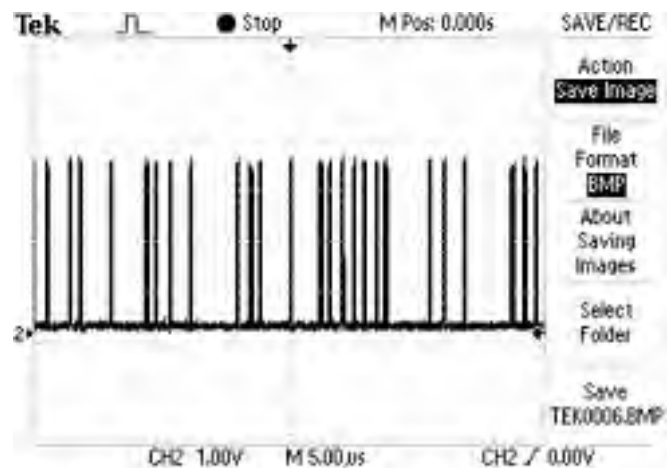
3. U104_1 (CE) gating signal waveform diagram.



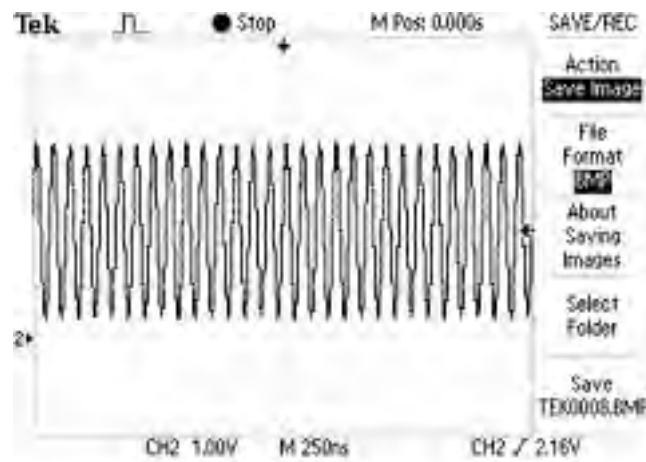
4. U104_6 (SCK) clock signal input waveform diagram.



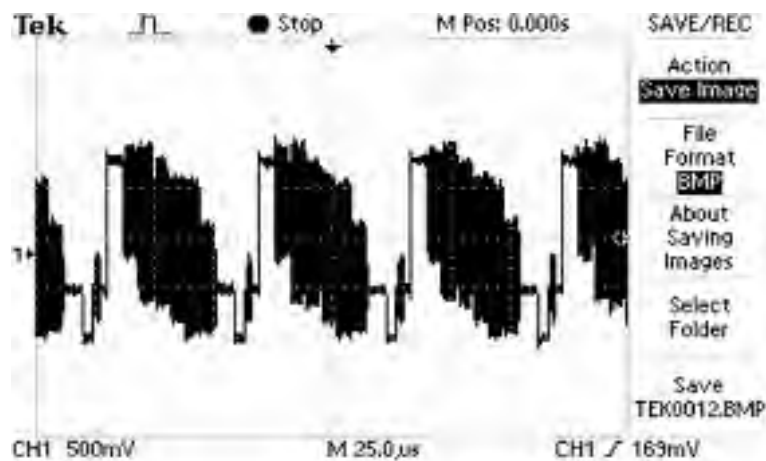
5. U104_5 (SI) data input pin waveform diagram.



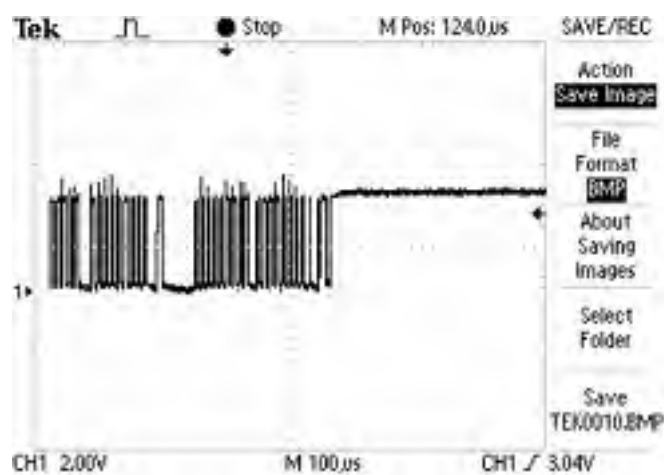
6. MST718 clock signal waveform diagram: waveform diagram when X101 is working (frequency 12MHZ).



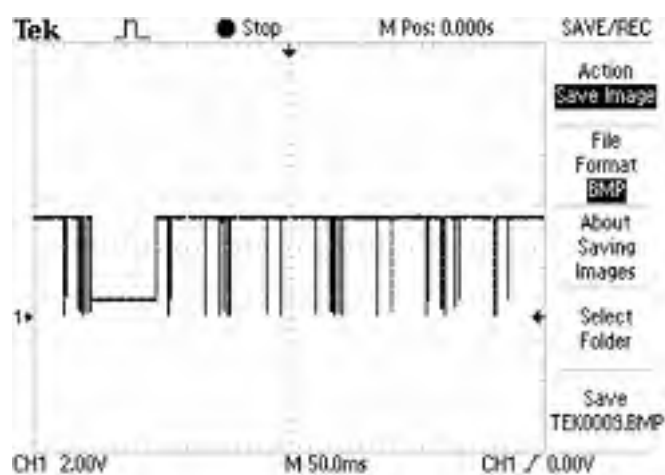
7. Q1_C:video signal waveform diagram for pin when machine is receiving Q1_C standard signal source in TV mode.



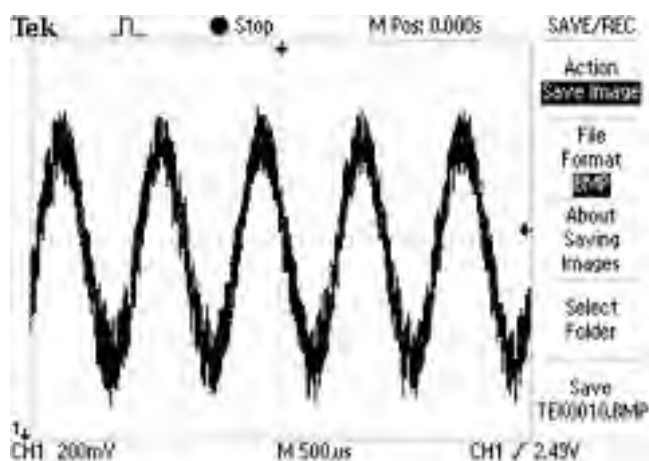
8. U103_6: waveform diagram of SCL in IIC bus.



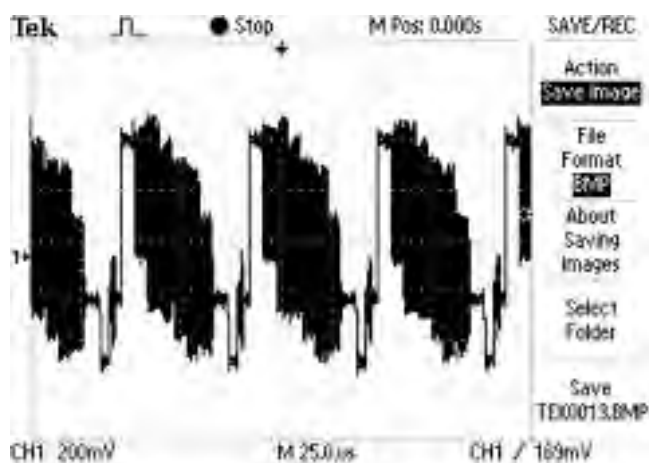
9. U103_5: waveform diagram of SDA in IIC bus.



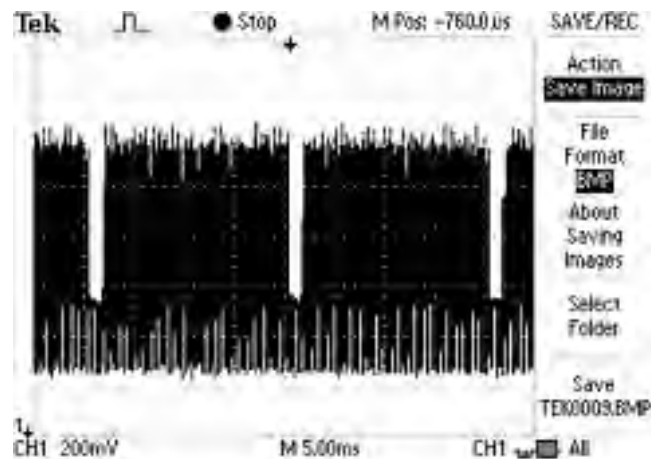
10. TV audio signal waveform diagram: waveform diagram for audio signals outputted by U114_14 pin when machine is receiving standard signal source in TV mode.



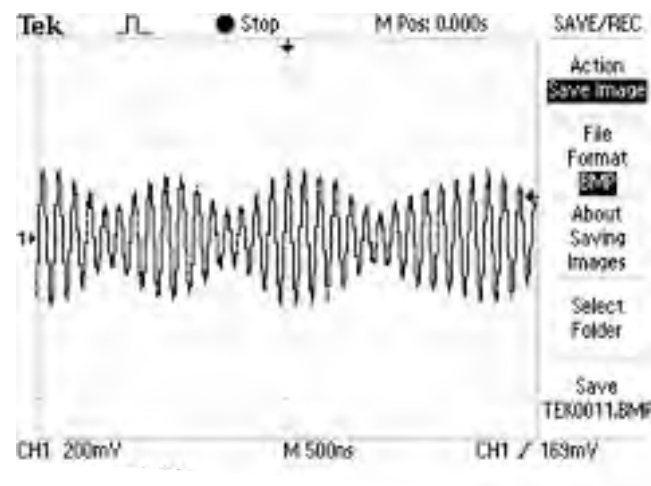
11. TV video signal waveform diagram: waveform diagram for video signals outputted by U114_12 pin when machine is receiving standard signal source in TV mode.



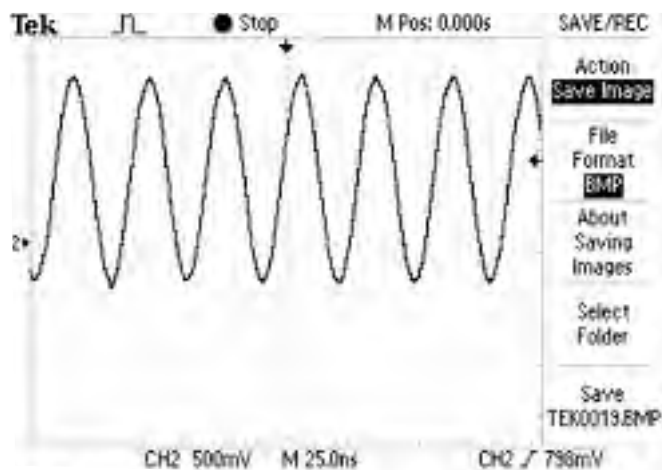
12. U114_12: waveform diagram for video signals outputted by pin 12 of tuner when machine is receiving TV signal in TV mode.



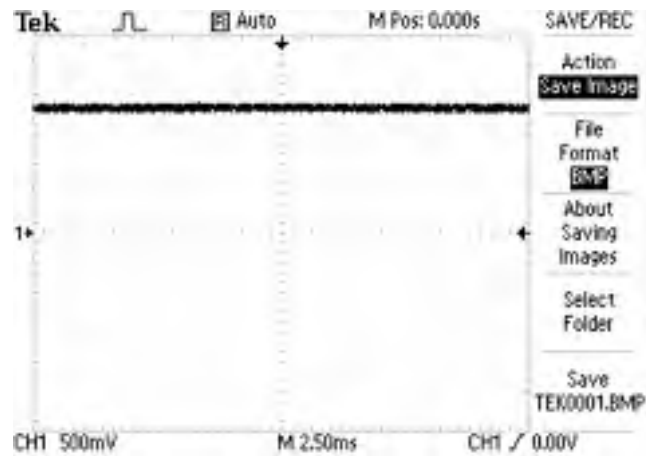
13. U114_11: output waveform diagram of NICAM output pin.



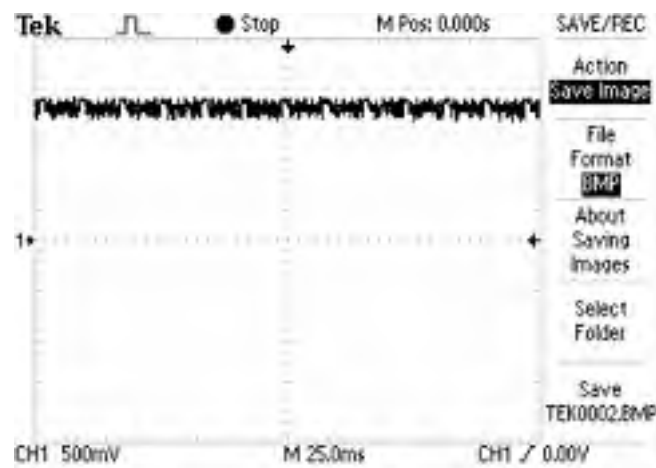
14. NICAM processing circuit clock signal waveform diagram: waveform diagram when :X301 is working (frequency 27MHZ).



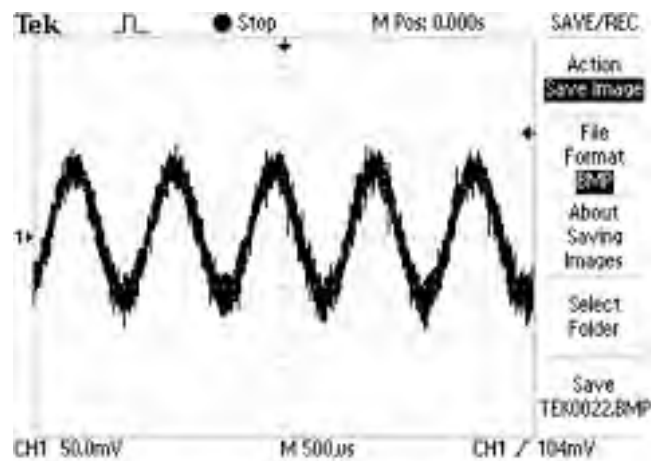
15. Waveform of clock signal outputted by MST718 in LVDS output mode. (MST718_101).



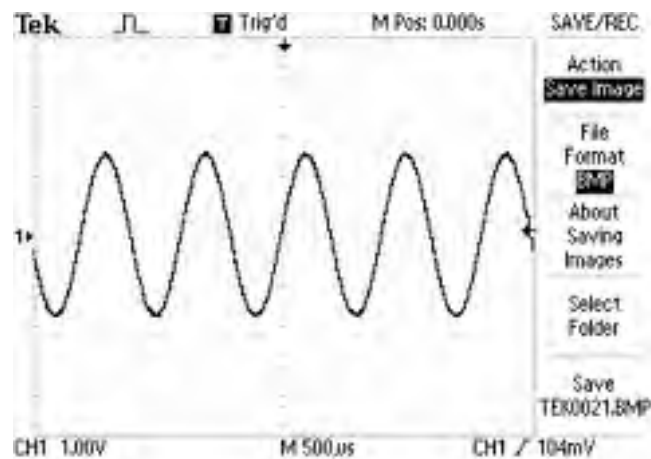
16. Waveform of digital signal outputted by MST718 IN LVDS output mode. (MST718_99).



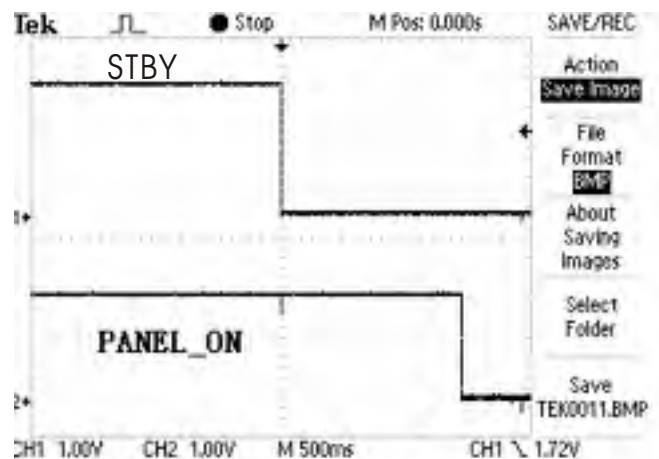
17. 8317_34: waveform diagram after the audio signals from tuner are processed by STV8317 and then output from pin 34/36 when machine is receiving standard signal source in TV mode.



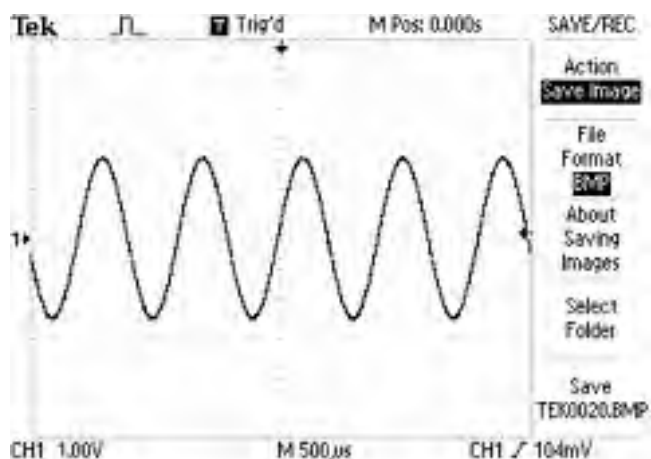
18. 8317_28: when machine is in DVD state, audio signals outputted by Mt1389 output from pin 18/19 after being processed by STV8317.



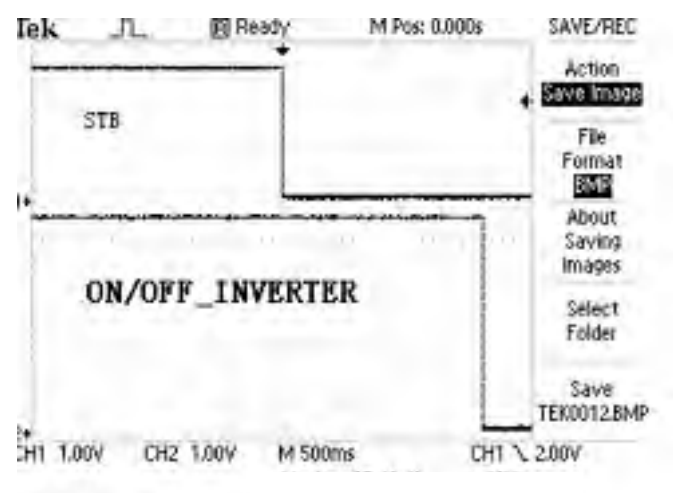
19. PANEL_ON: waveform comparison diagram for STBY and PANEL_ON signal when machine enters from standby to power-on.



20. 8317_17: output waveform of standard signal source in TV mode.



21. INVERTER: waveform comparison diagram for STBY and ON/OFF_INVERTER signal when machine enters from standby to power-on.



Section Three Servicing and Principle

The next manual: DVD part

Section One Principle of the player

3.1.1 Audio circuit

1. Audio signal process block diagram is shown in the figure 3.1.1.1:

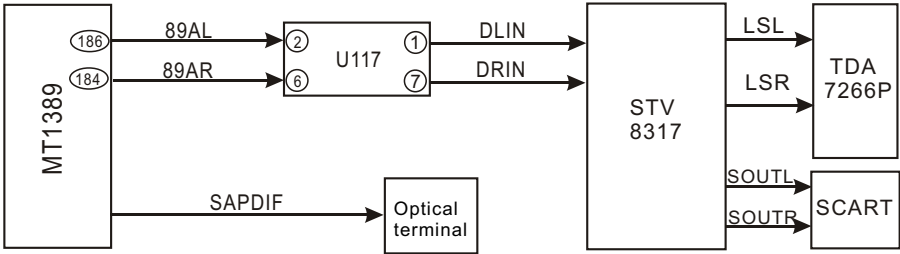


Figure 3.1.1.1 Audio signal flow chart block diagram

3.1.2 Video circuit

1. Video signal flow chart diagram is shown as in the following figure 3.1.2.1 :

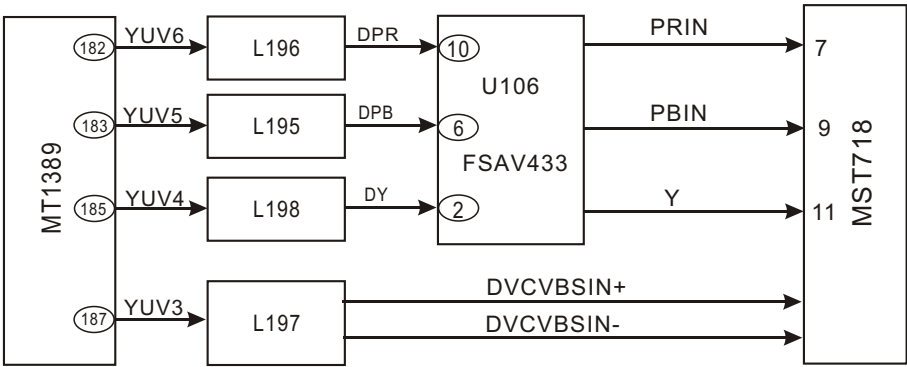


Figure 3.1.2.1 Video signal flow chart

3.1.3 Servo circuit

1. Servo circuit block diagram is shown as in the following figure 3.1.3.1:

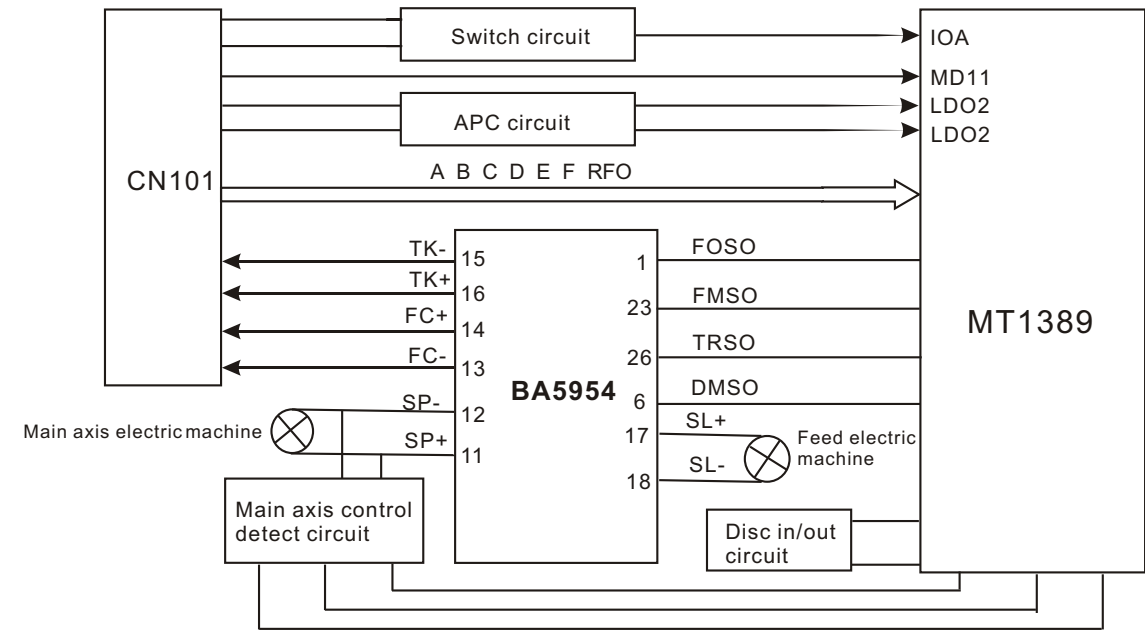


Figure 3.1.3.1 Servo circuit block diagram

3.1.4 USB/CARD circuit

1. USB/CARD circuit is shown as in the following figure 3.1.4.1:

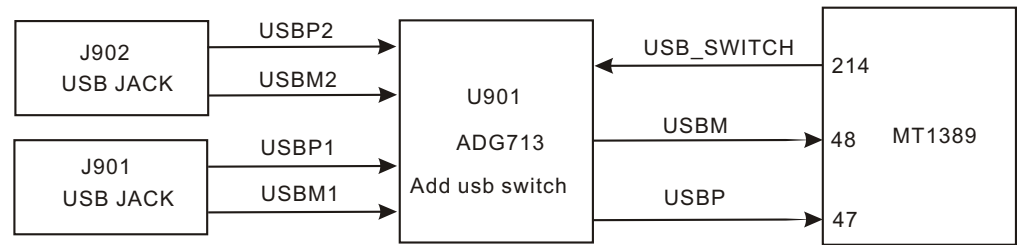


Figure 3.1.4.1 usb/card circuit diagram

3.1.5 Decode circuit

1. Decode circuit block diagram is shown as in the following figure 3.1.5.1:

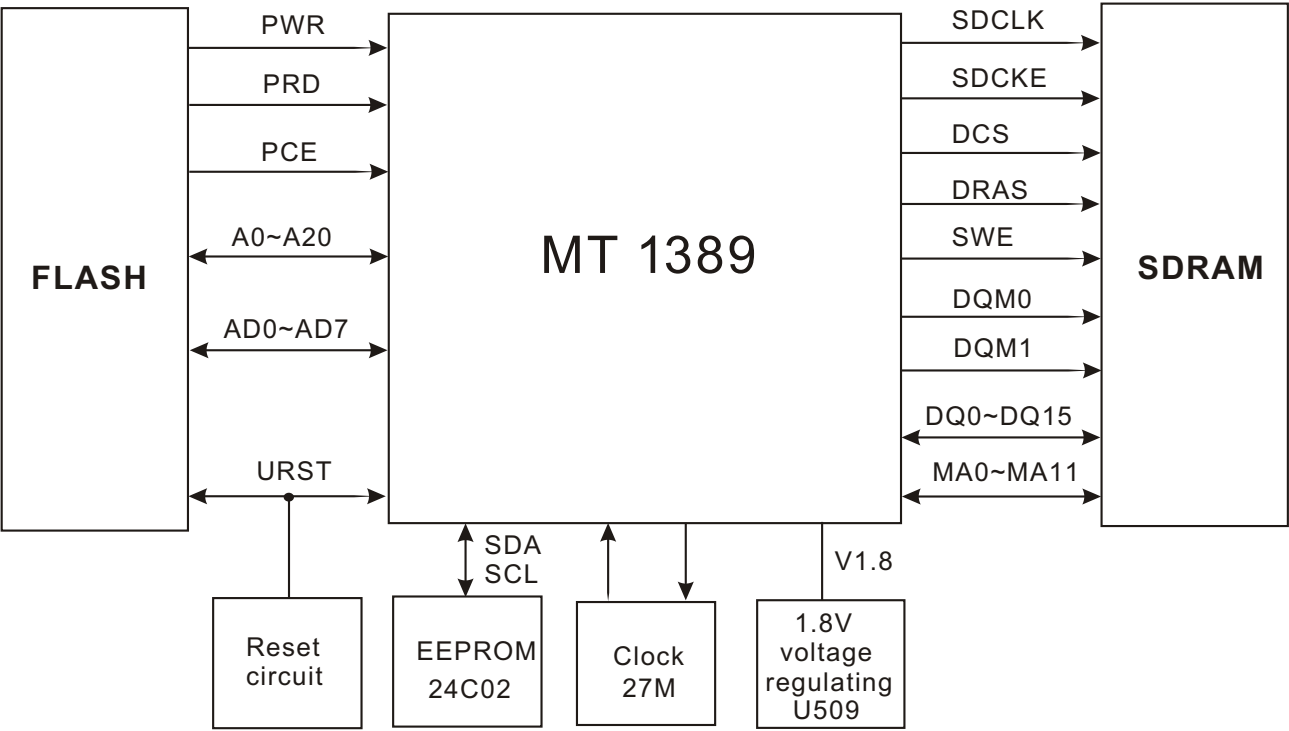
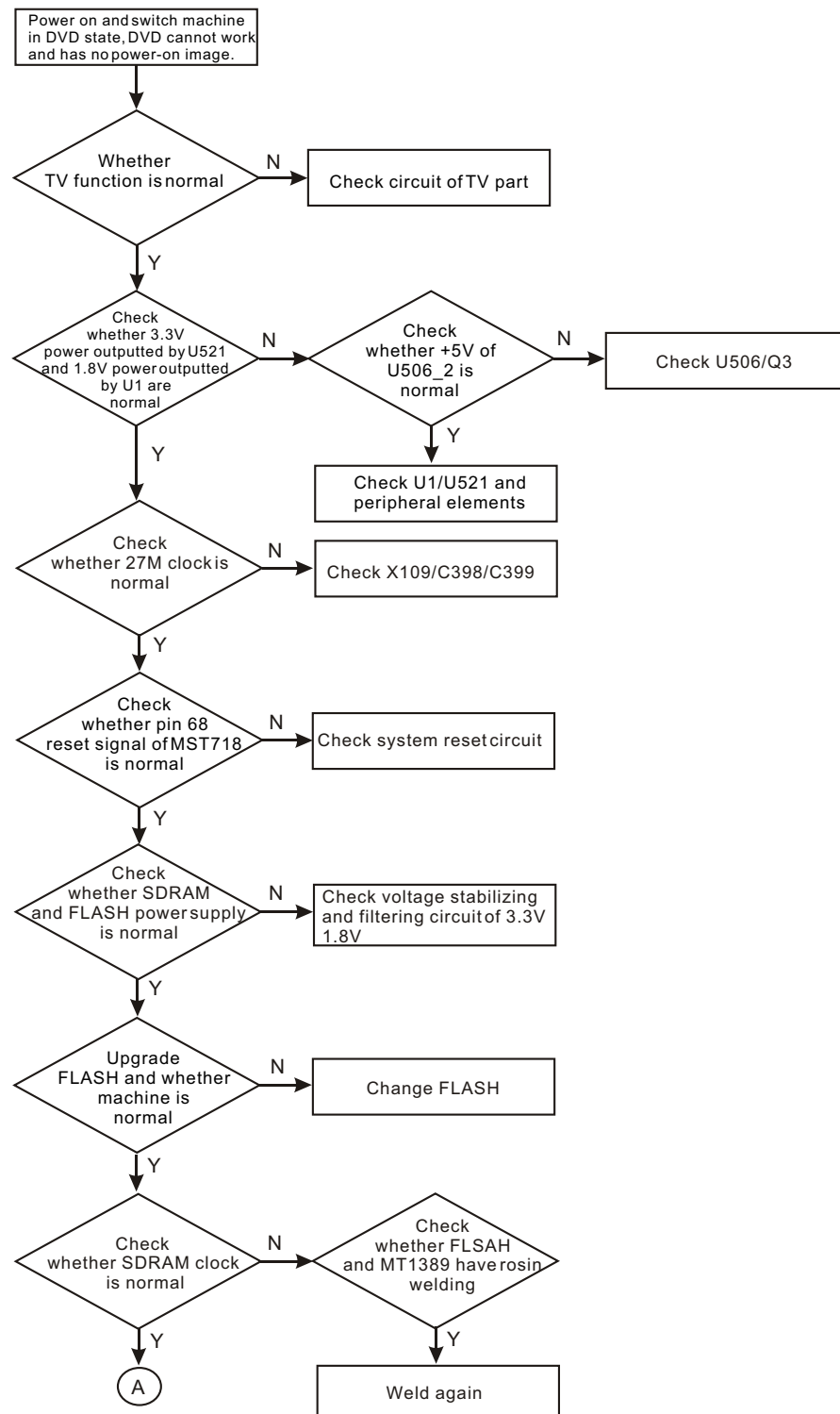


Figure 3.1.5.1 Decode circuit block diagram

Section Two Troubleshooting flow chart

1. Troubleshooting process for "DVD has no output" is shown in the figure 3.2.1.1:

Trouble description: when switching in DVD state, there is no DVD image and loader has no action of drawing in disc.



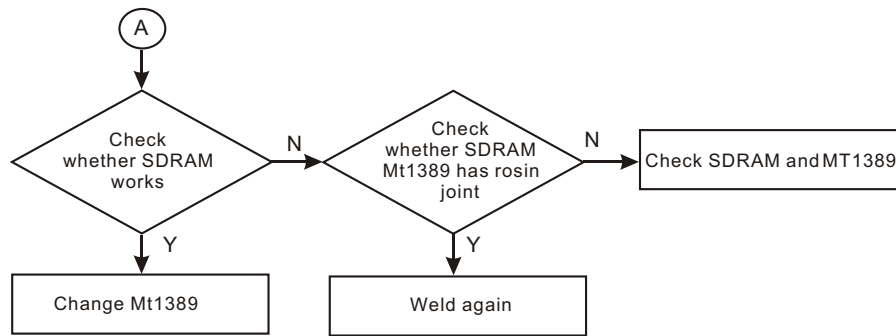
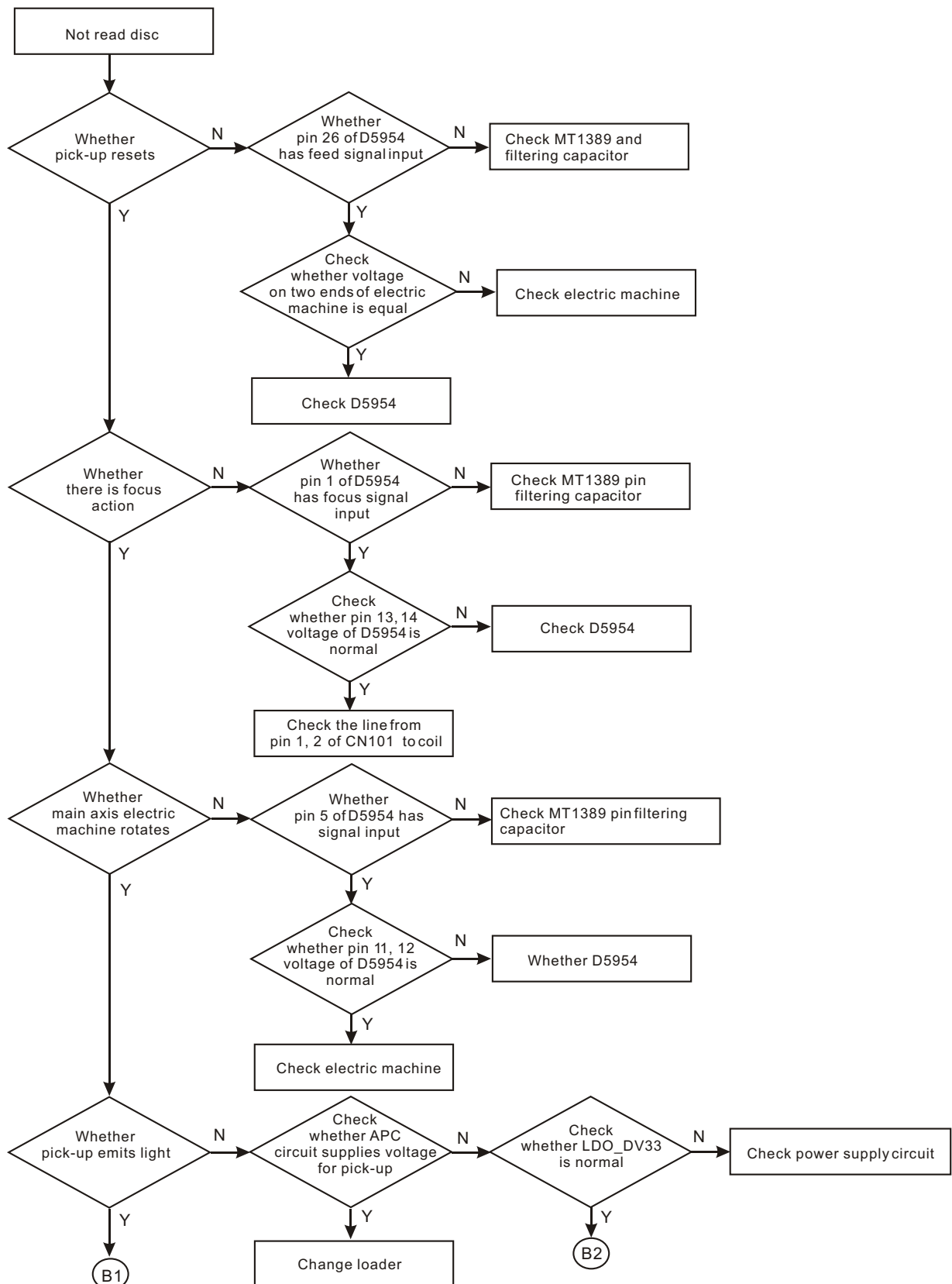


Figure 3.2.1.1 Troubleshooting flow chart for “DVD has no output”

2. Troubleshooting process for “Not read disc” is shown in the figure 3.2.2.1:

Trouble description: switch machine in DVD state, load disc and machine displays that there is no disc or cannot read disc for a long time.



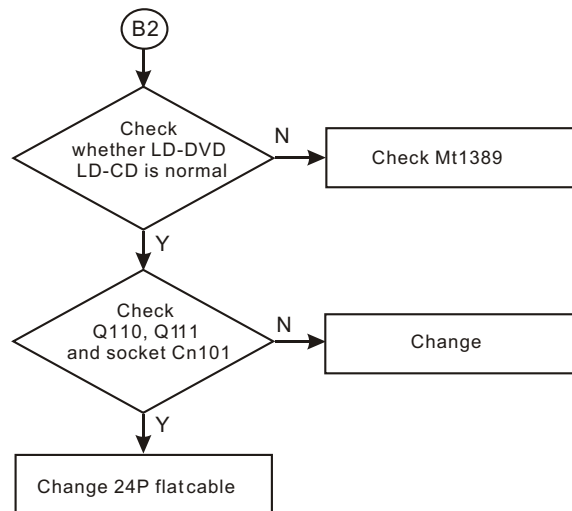
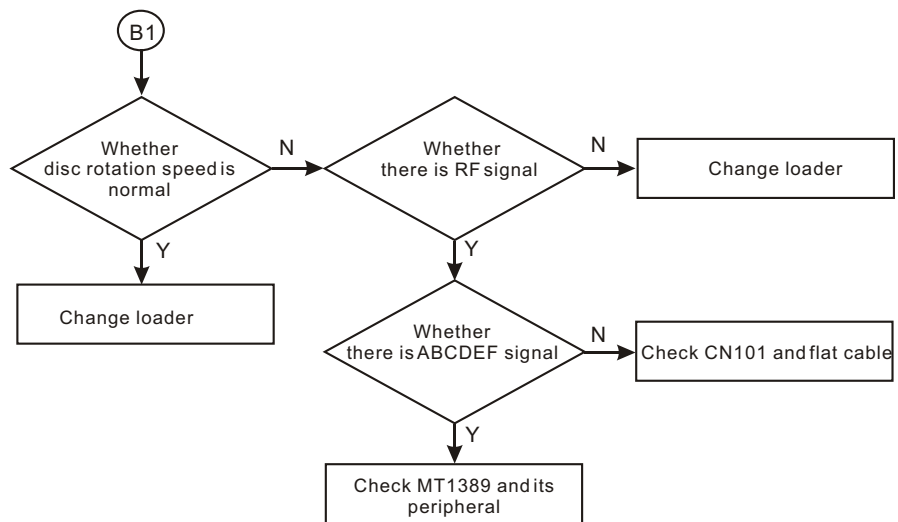


Figure 3.2.2.1 Troubleshooting flow chart for “Not read disc”

3. Troubleshooting process for “DVD has no video output” is shown in the figure 3.2.3.1:

Trouble description: machine works normally in other state; when switching in DVD state, there is sound output but no image output.

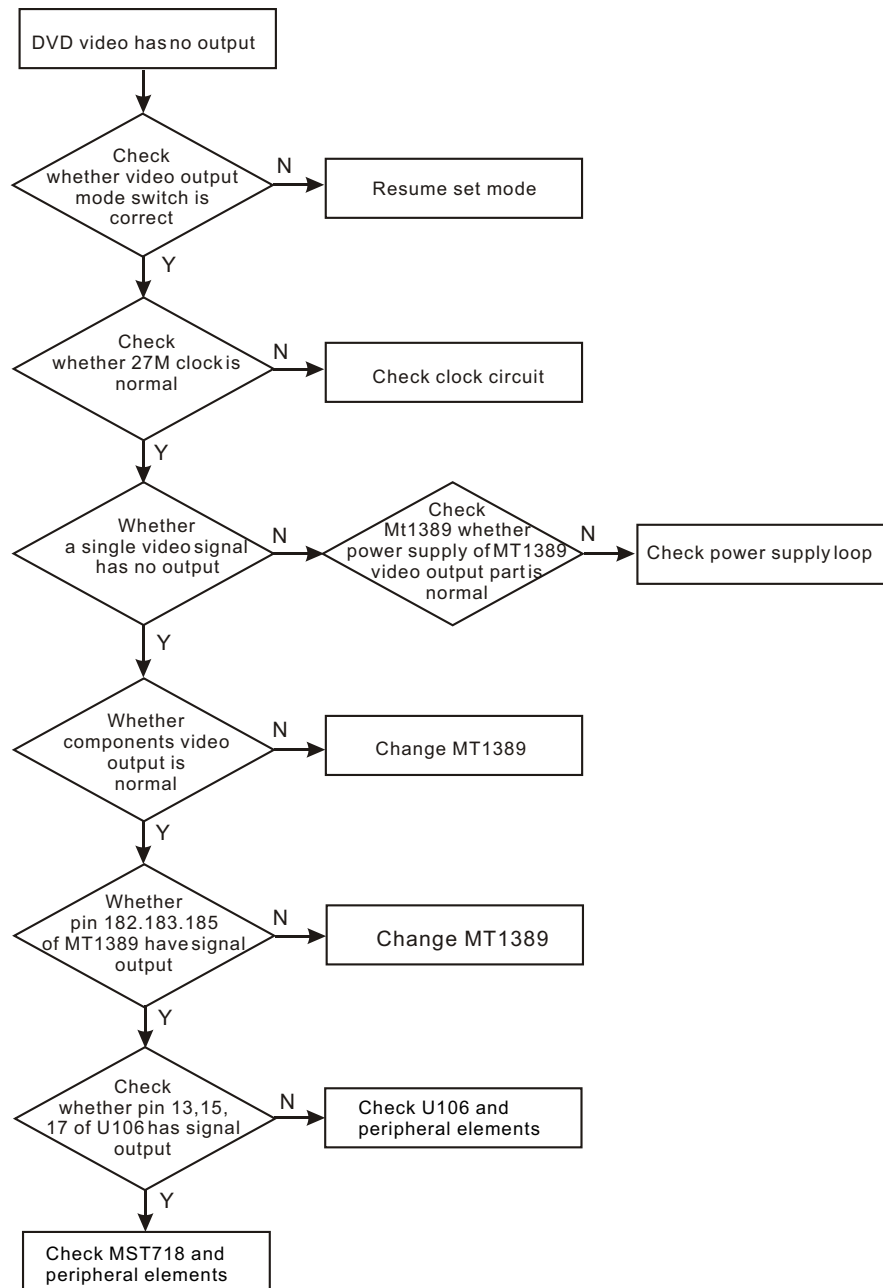


Figure 3.2.3.1 Troubleshooting flow chart for “DVD has no video output”

4. Troubleshooting process for “DVD has no sound output” is shown in the figure 3.2.4.1:

Trouble description: when machine switches in DVD state, disc read is normal, image is normal, no sound output and external sound input is normal.

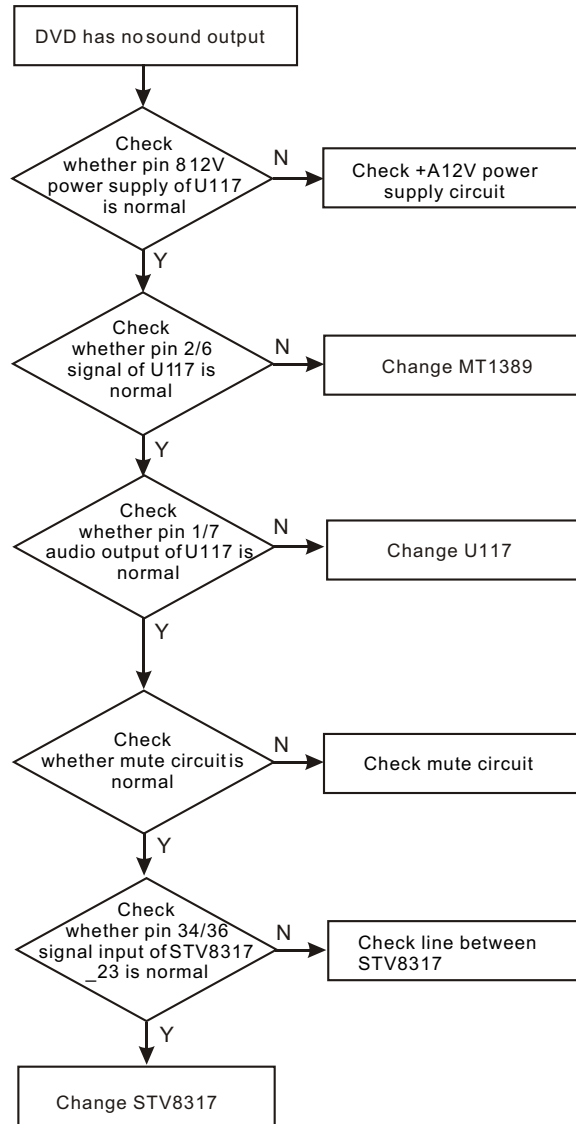
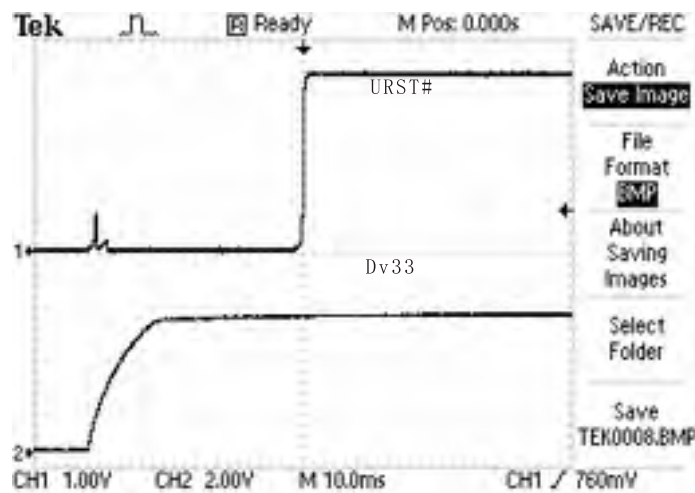


Figure 3.2.4.1 Troubleshooting flow chart for “DVD has no sound output”

Section Three Waveform diagram

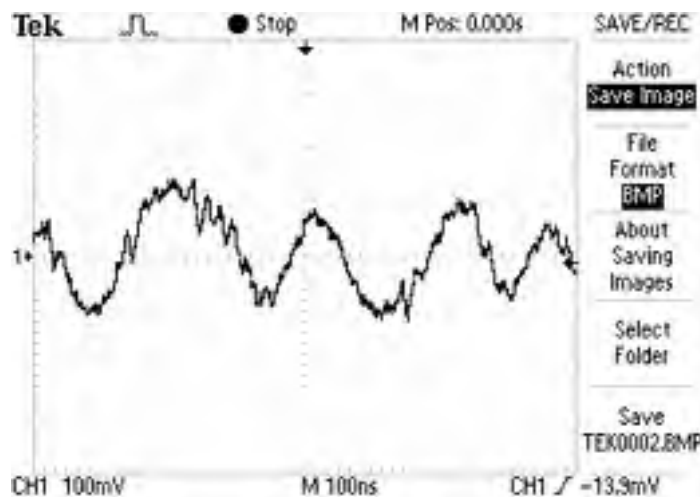
This section collects signal waveform diagram of audio, video and each unit circuit with the purpose to help servicing personnel to judge where trouble lies in accurately and quickly to improve servicing skills. For the difference of oscillograph's type, model and tuner, a certain difference may exist, so the servicing personnel are expected to pay more attention to check in daily operation.

1. Reset waveform diagram

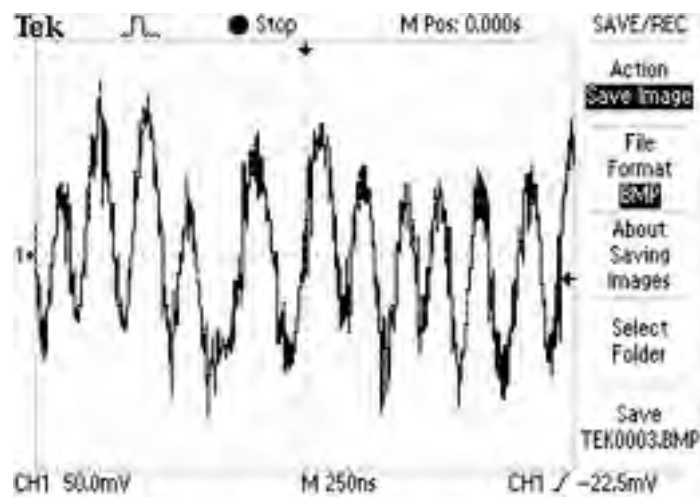


2. Decode board

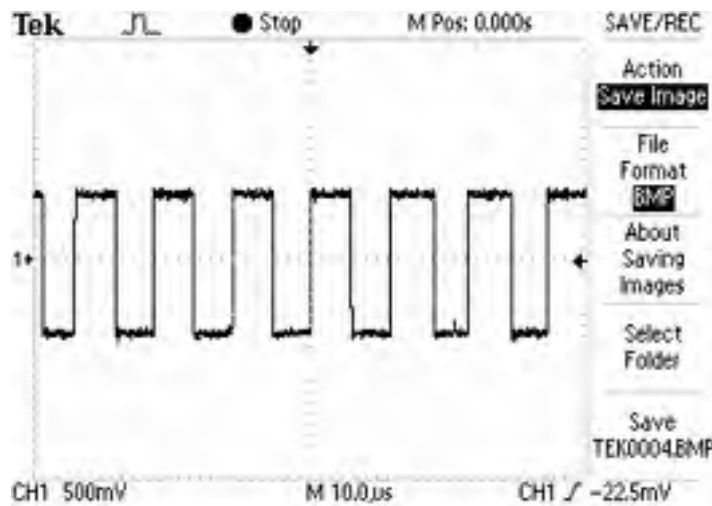
(1). RFO signal waveform diagram of pin 8 of CN101



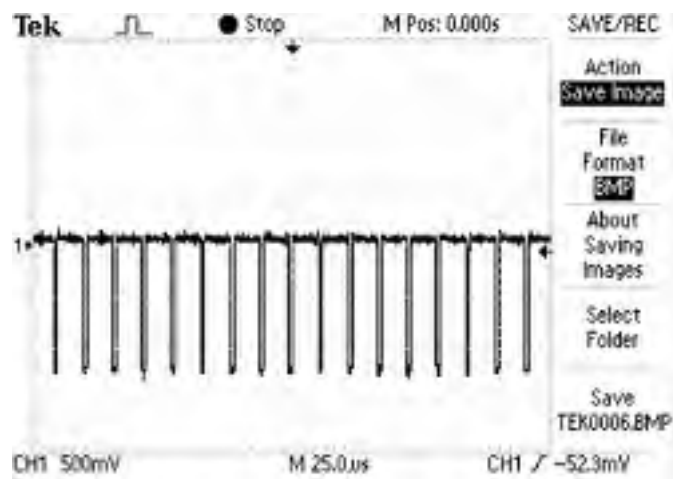
(2). Asignal waveform diagram of pin 9 of CN101(B, C, D, E, F)



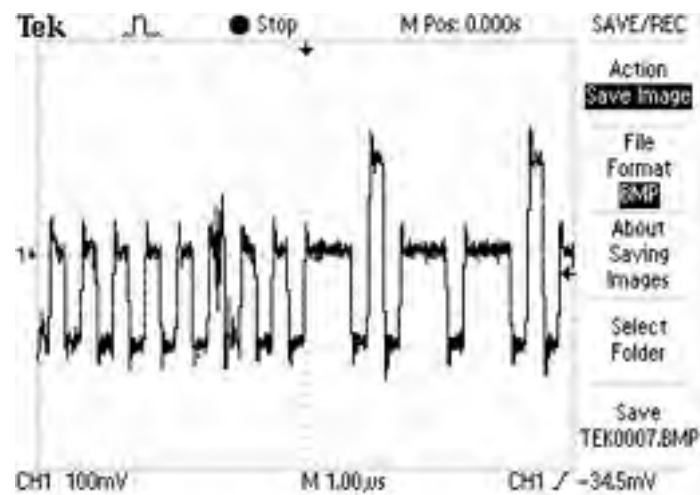
3. DMO signal (when there is main axis rotation) waveform diagram of pin 37 of U115 (MT1389)



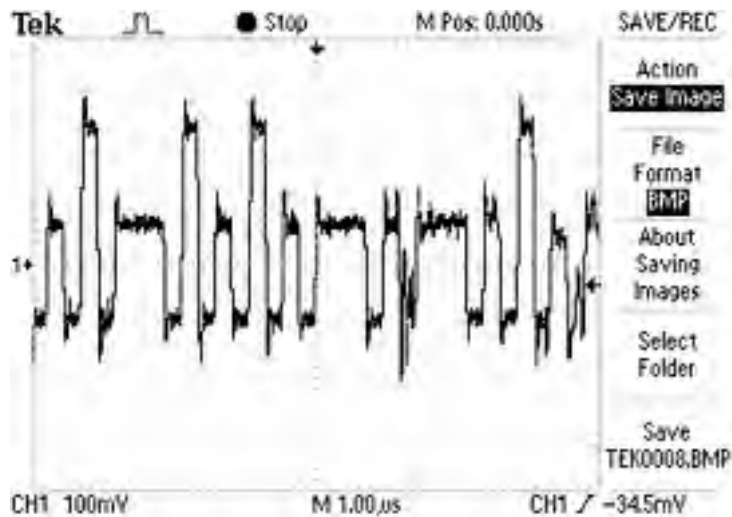
4. FMO signal (when there is feed) waveform diagram of pin 38 of U115 (MT1389)



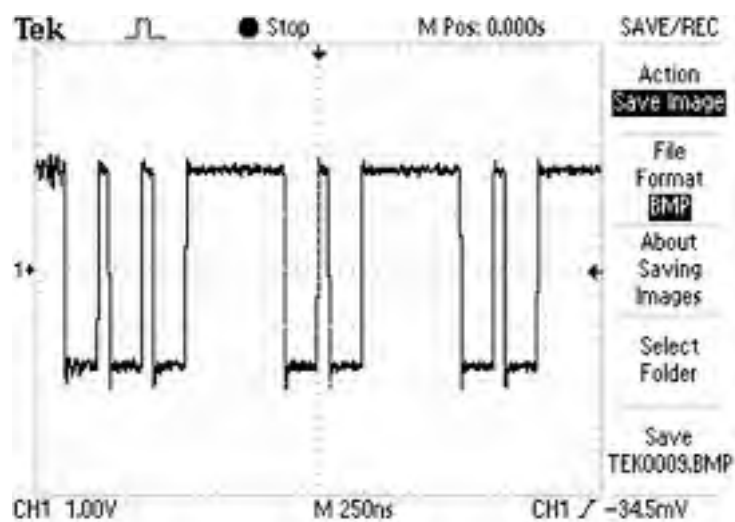
5 .TRO signal (when there is trace) waveform diagram of pin 41 of U115 (MT1389)



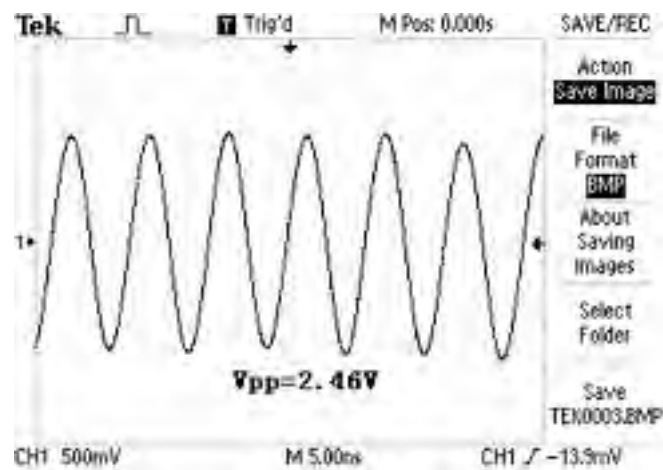
6. FOO signal (when there is focus) waveform diagram of pin 42 of U115 (MT1389)



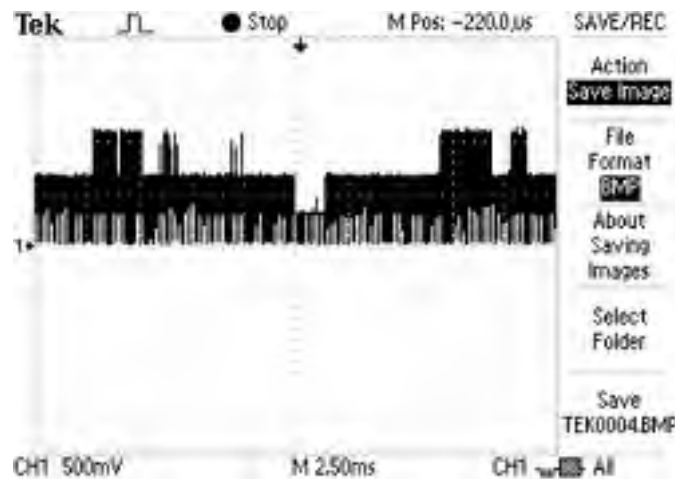
7. Waveform diagram of pin 29 (when no disc in) of U214 (FLASH)



8. Waveform diagram of pin 38 of U211 (SDRAM)

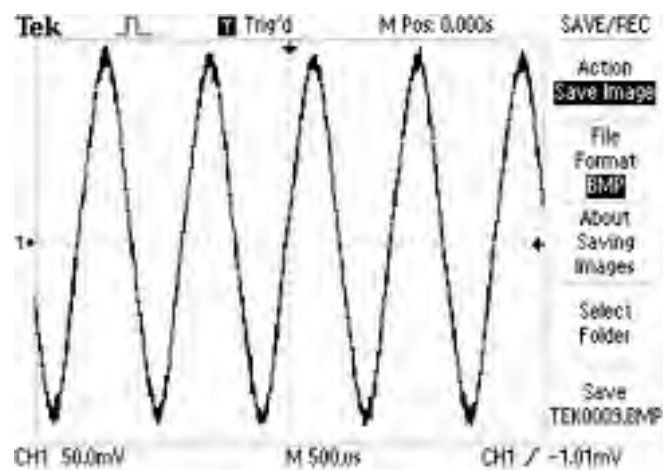


9. Video signal waveform diagram of L229

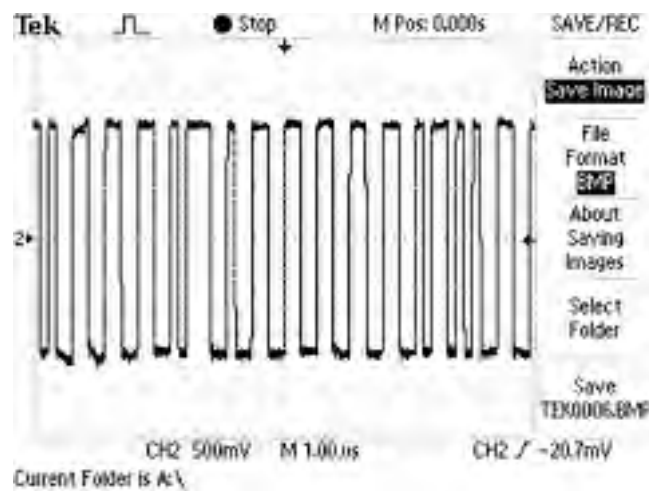


10. Waveform diagram for audio signal

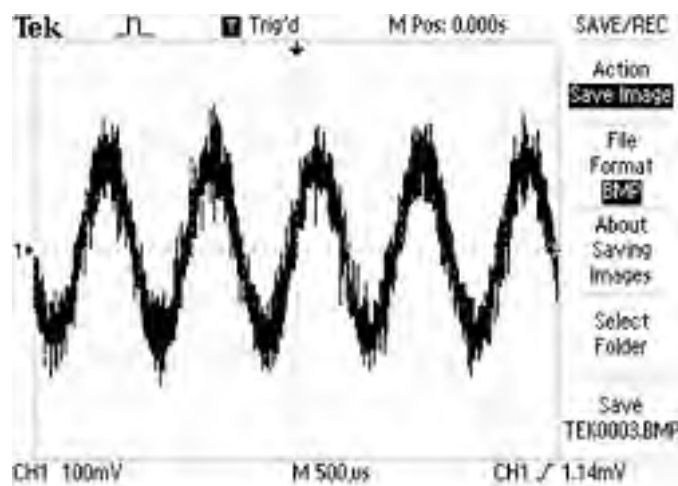
(1). 1KHZ analog audio signal waveform diagram (you are recommended to use test disc, if not, the tested waveform will change at any time to affect judgment), waveform of other channels is the same except subwoofer.



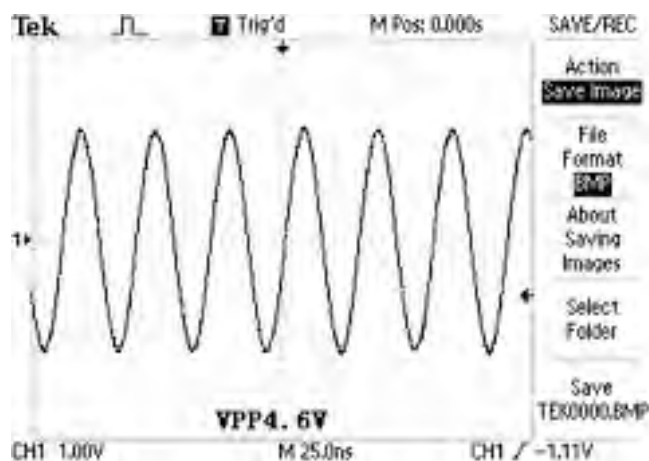
(2). SPDIF: waveform diagram for optical/coaxial digital audio signal



11. Waveform diagram of audio signals not being filtered and amplified (test point: audio signal amplifying input end Tc241)



12. 27M clock signal waveform diagram.



Chapter Four

Disassembly and Assembly Process

Flow chart of LD1906X disassembly is same with that of LD2006X, LD1906X .
Please refer to flow chart of LD2006X disassembly for that of LD1906X.



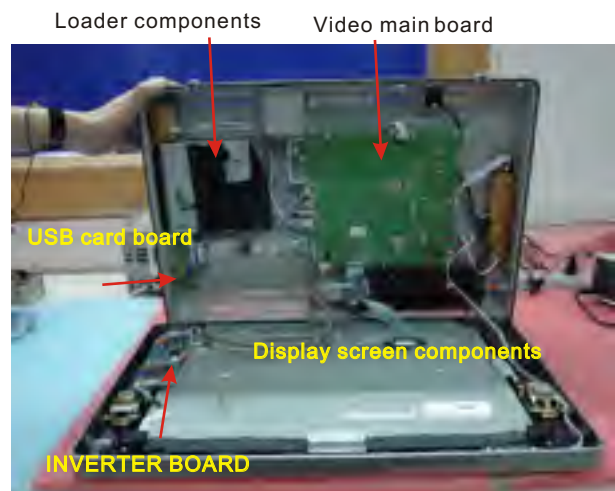
1. Place the machine on table board flatly.
Pay attention to underlay a soft sponge spacer in display screen position to avoid scratching screen.



2. Use electric screwdriver to take down the screw fixed between rear casing and panel of machine and do not scratch the rear casing.



3. Place the machine on table board flatly and then use hand to separate the bottom right corner of machine.



4. Separate the front casing from rear casing of machine and the internal structure is shown in the picture.



7. Remove video main board: unplug flat cable on video main board firstly.



8. When removing flat cable cord, red glue on socket should be removed. After removing flat cable, remove the screw that fixes video main board.



9. Remove the two screws fixed in rear casing.



10. Take out video main board. Please note that tuner of the video main board still locks on rear casing, so take out according to arrow direction.



11. Take out video main board.



12. Take out the screw that fixes loader components and then take out loader components.



13. Take out the screw that fixes power board and take out powerboard.



14. Take out the screw that fixes inverter components.



15. Unplug flat cable on inverter components and pay attention not to damage flat cable.



16. Take out the 4 fixing bracket and 4 fixing clasps that fix display screen components and the display screen components may be taken out. Now disassembly of machine is completed.

4.2 Assembly process for the player

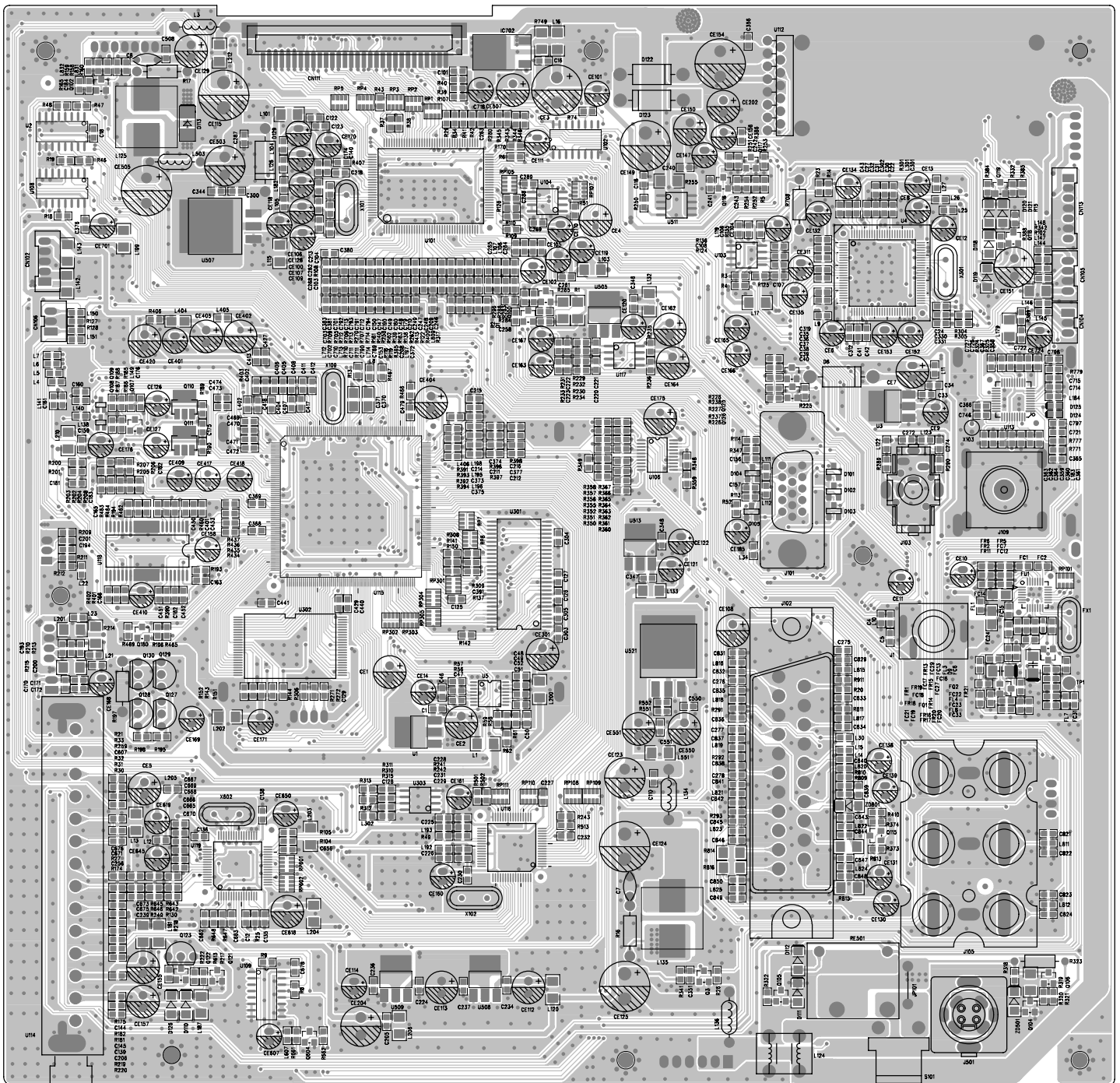
Assembly process of the player is similar to the disassembly process, only the sequence is reverse.

Chapter Cinque

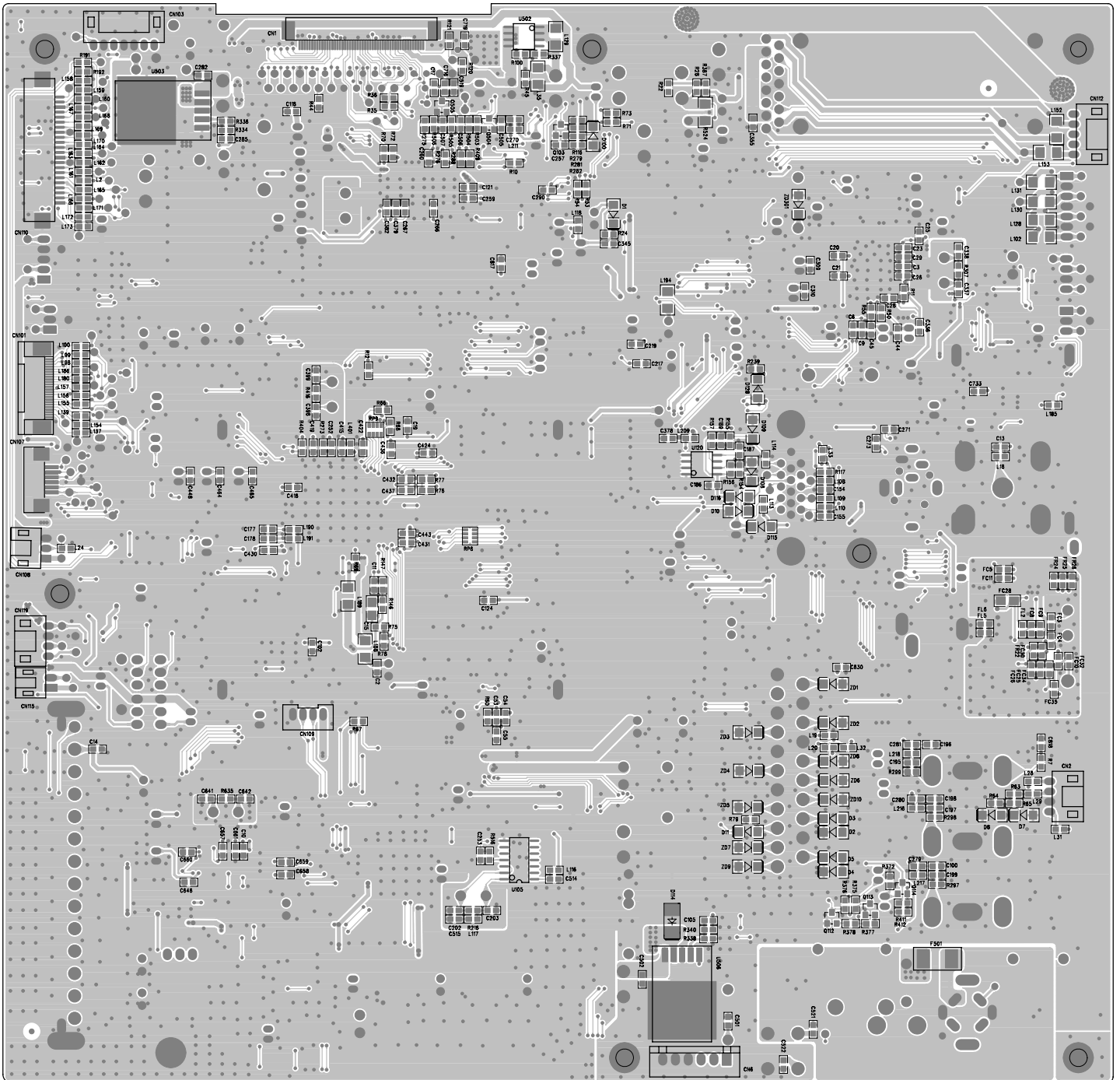
PCB Board&Circuit Diagram

Section One PCB Board

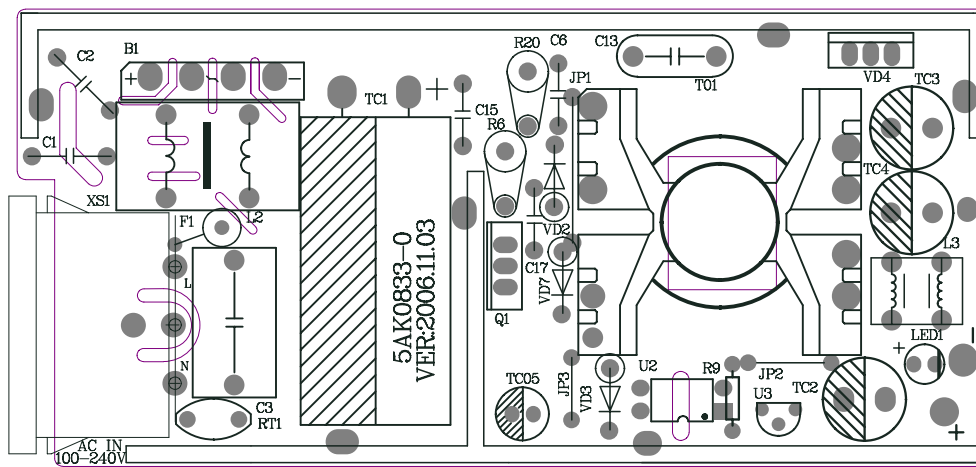
5.1.1 TOP layer of Main Board(21901-2)4941207



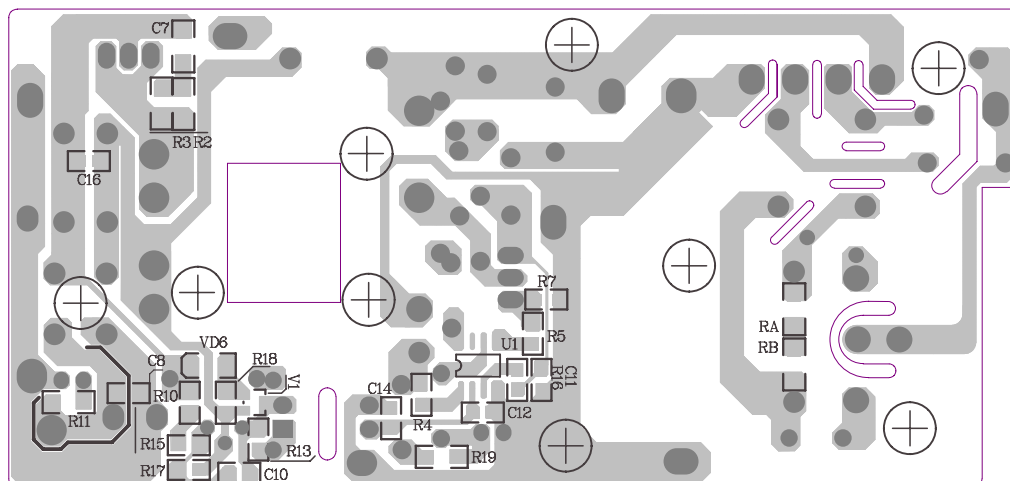
5.1.2 Bottom layer of Main Board(21901-2)4941207



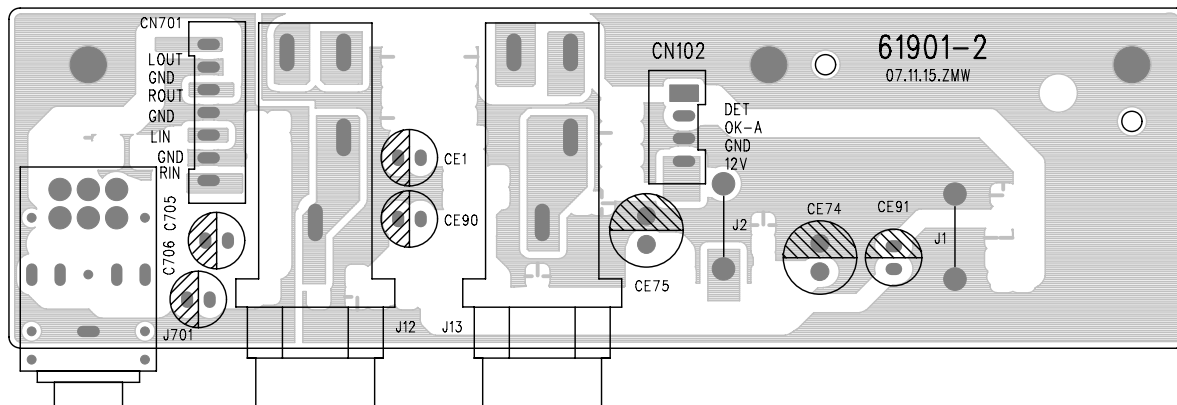
5.1.3 TOP layer of Power Board(@5AK0833-0) 5449803



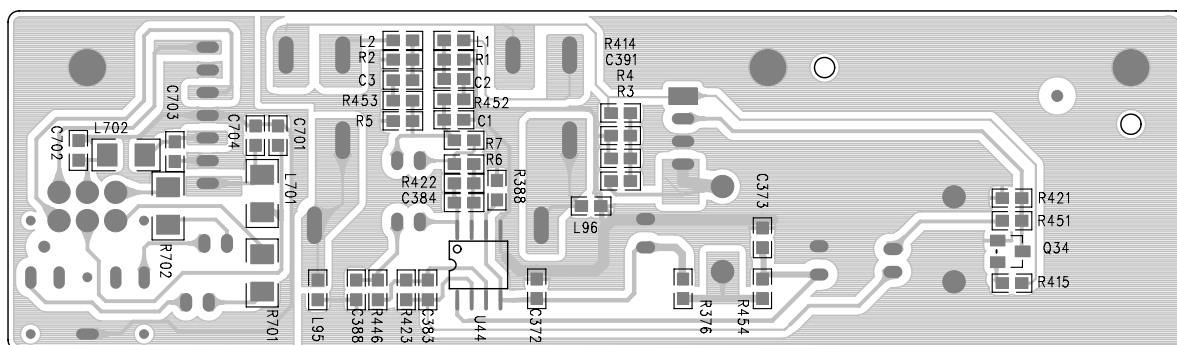
5.1.4 Bottom layer of Power Board(@5AK0833-0)5449803



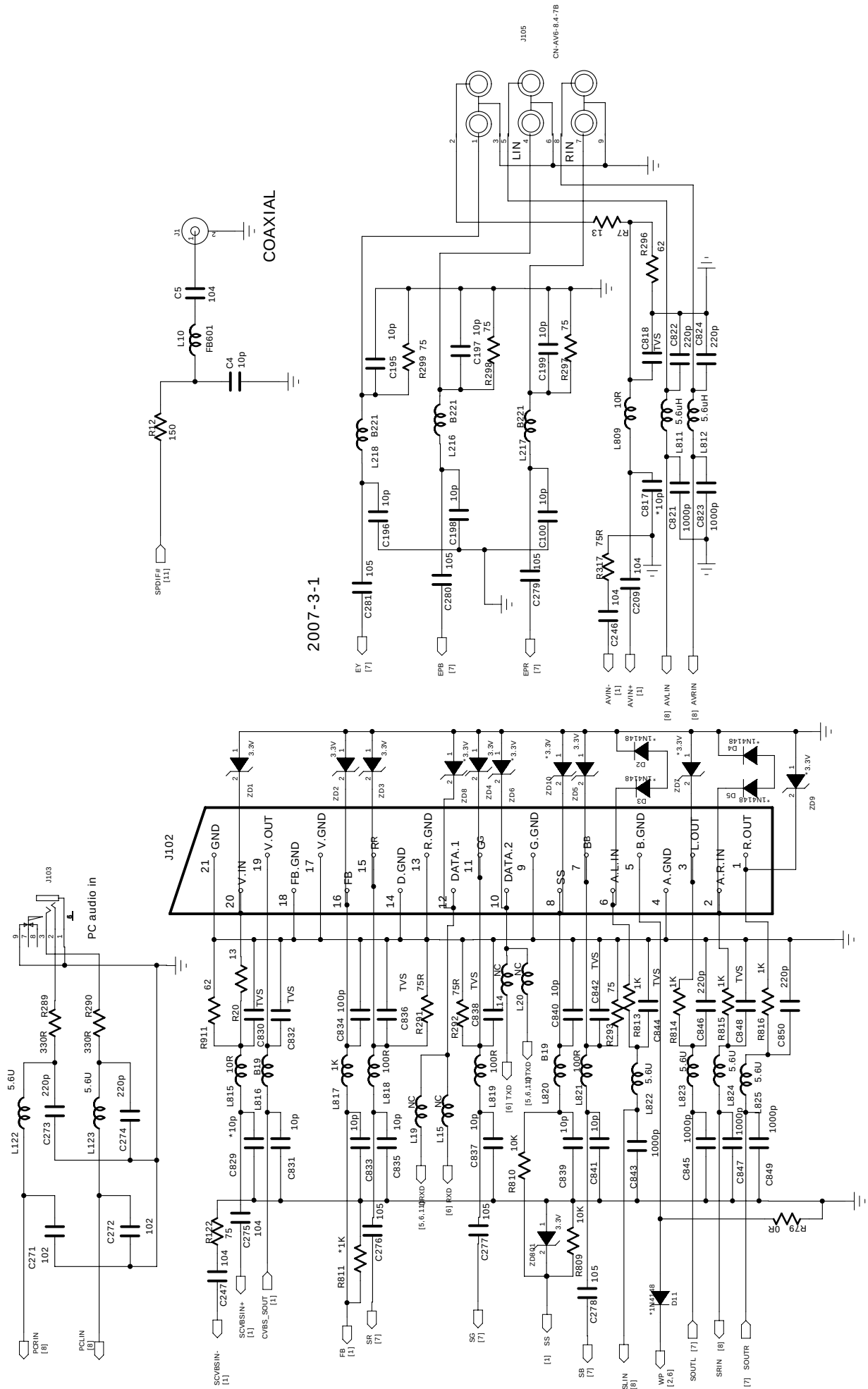
5.1.5 Top layer of Earphone&MICPhone Board(61901-2)4941233

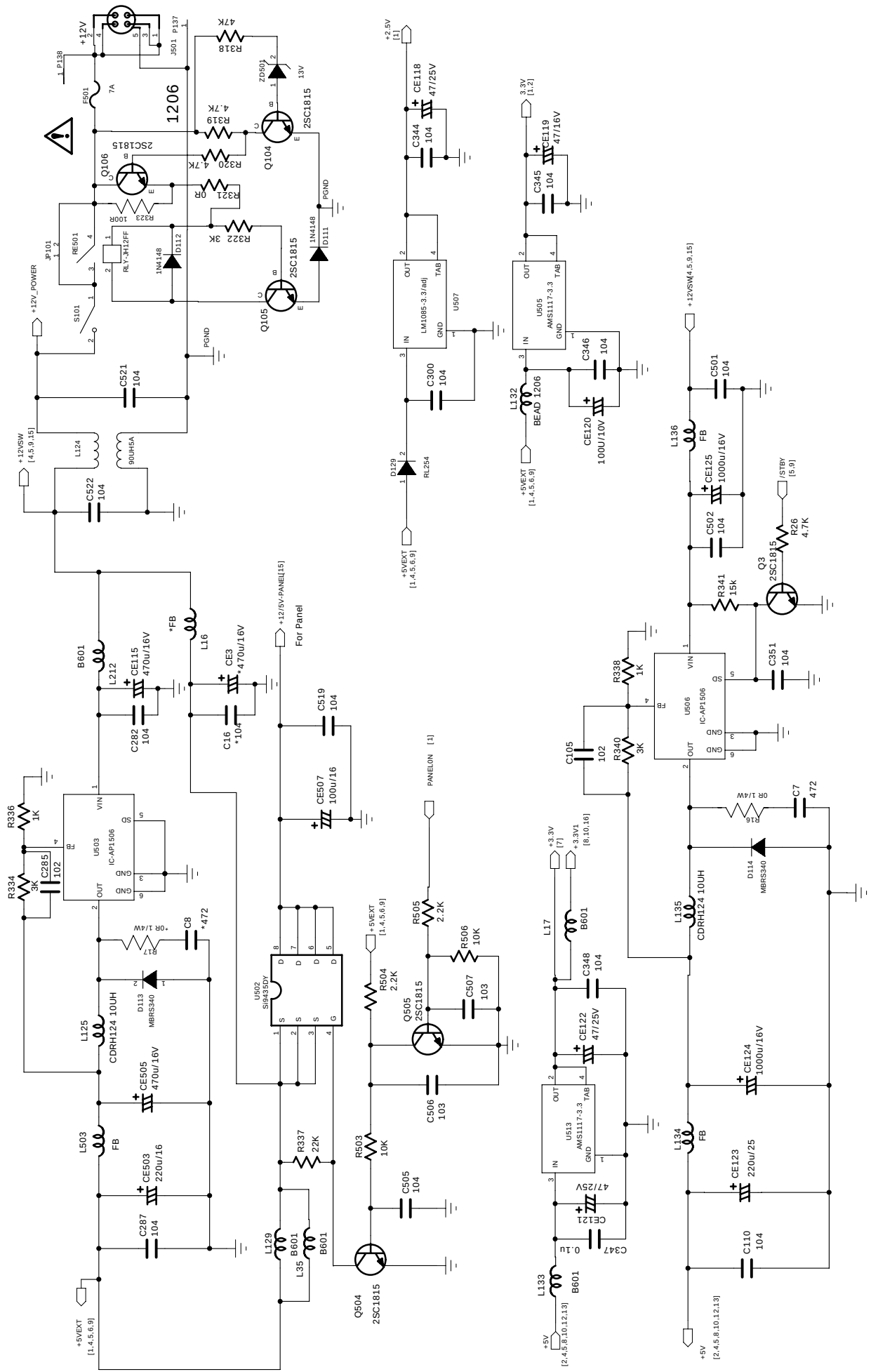


5.1.6 Bottom layer of Earphone&MICPhone Board(61901-2)4941233



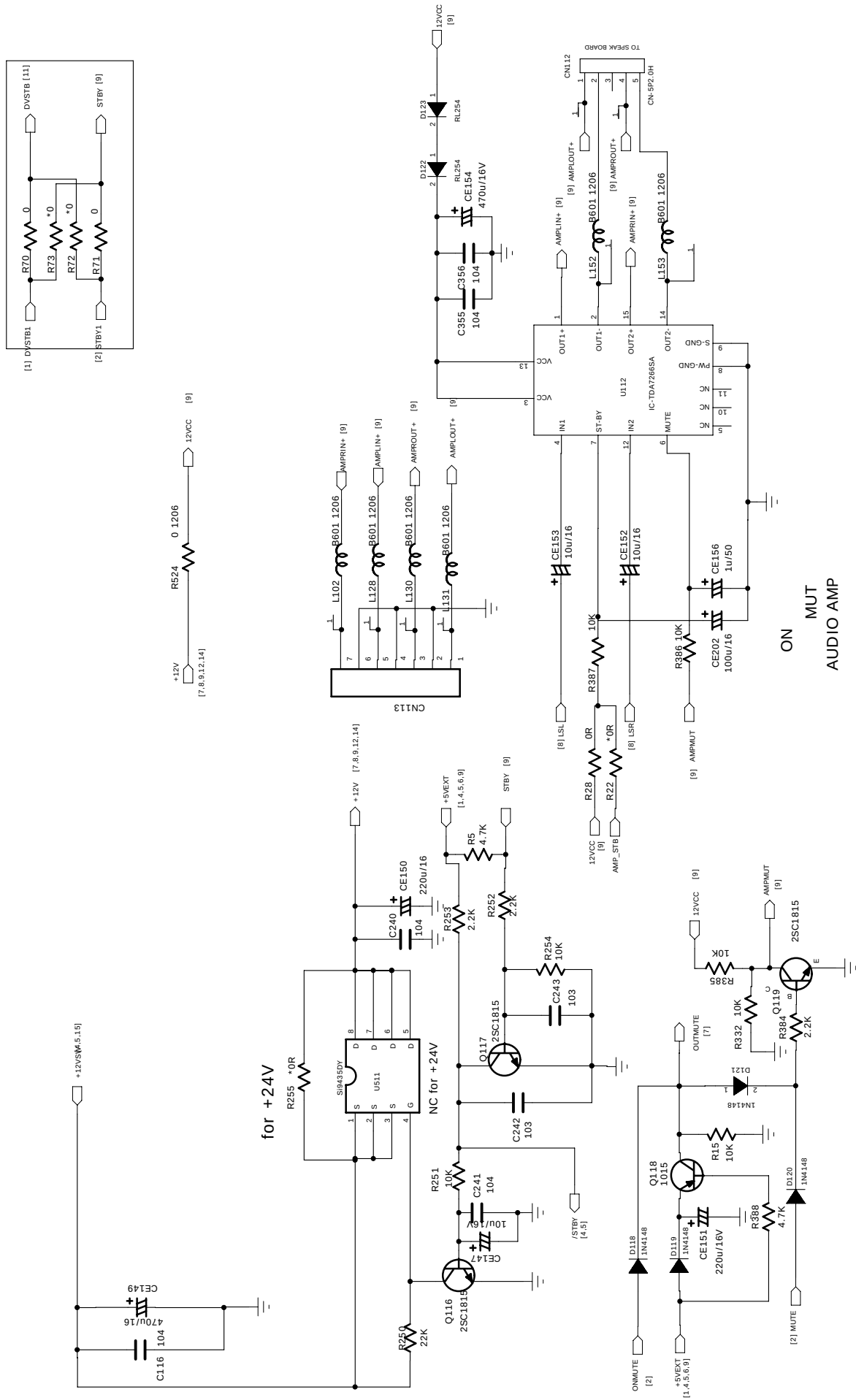


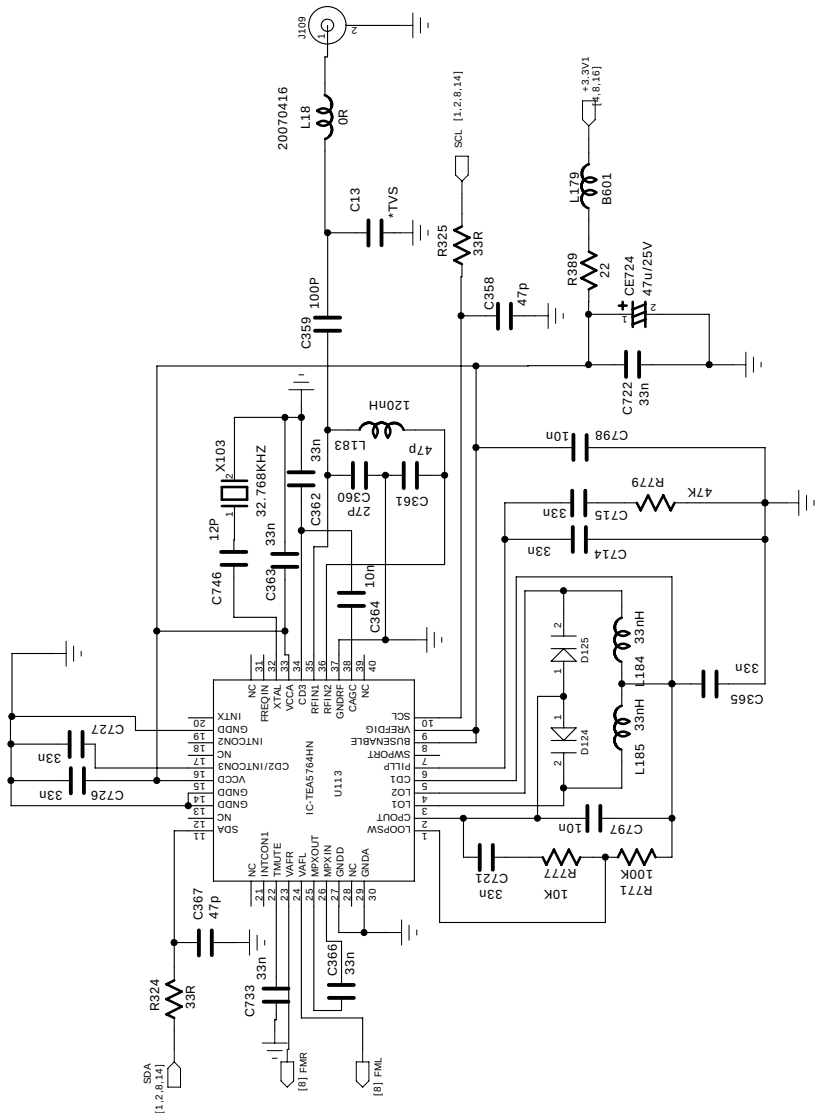
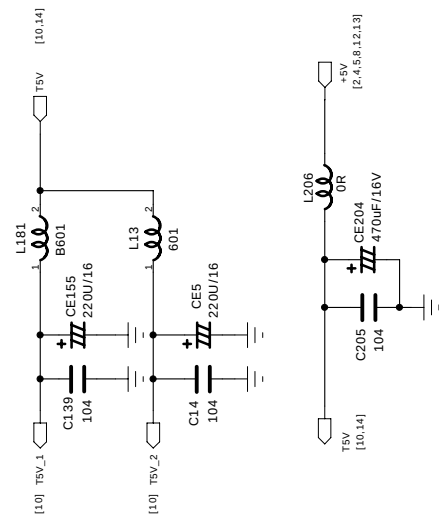










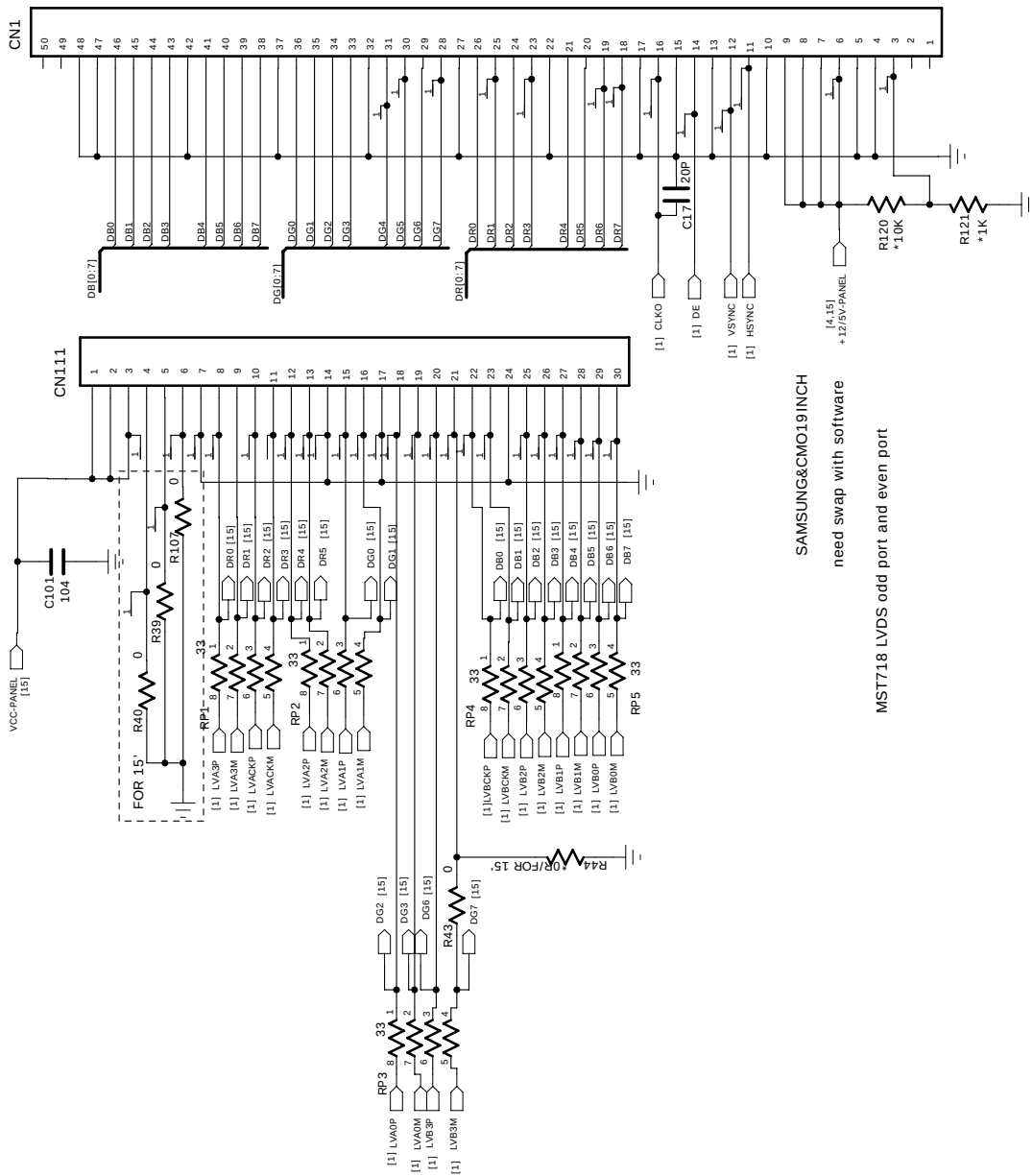








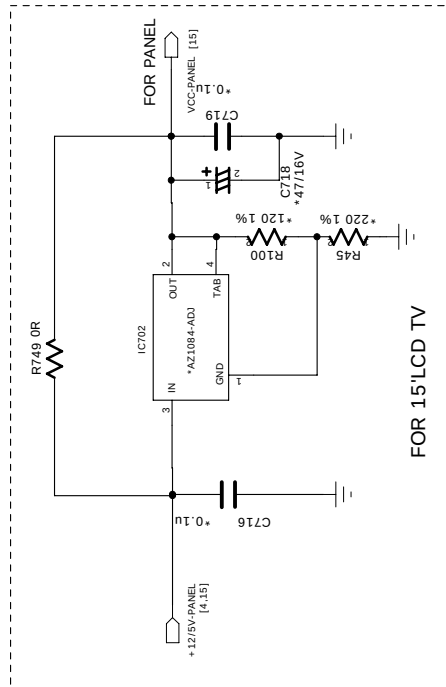
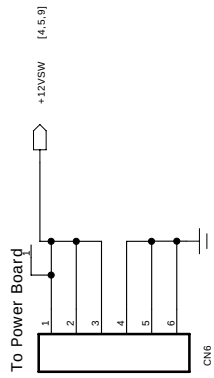
TO DISPLAY PANEL



SAMSUNG&CMO19INCH

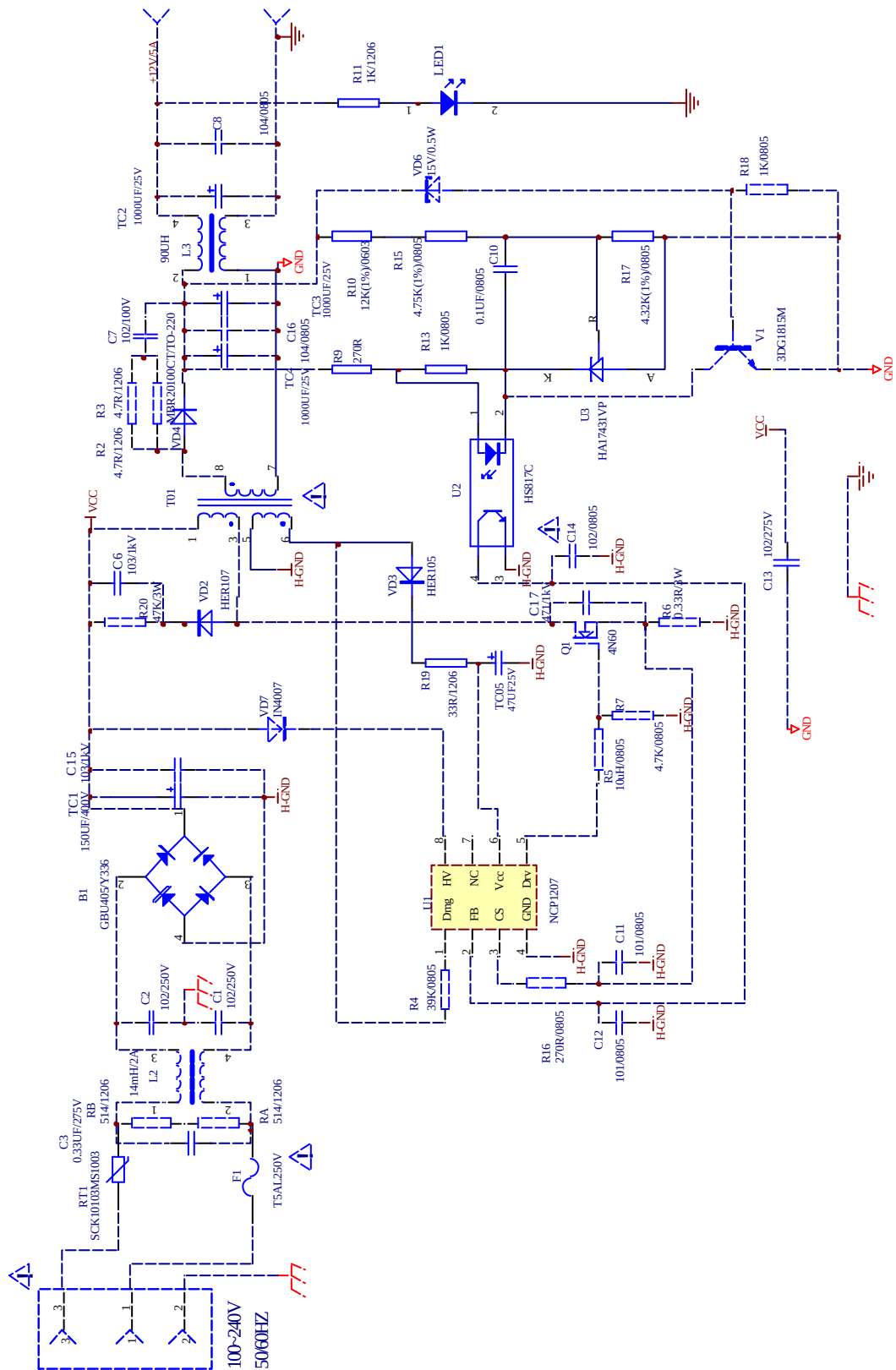
need swap with software

MST718 LVDS odd port and even port

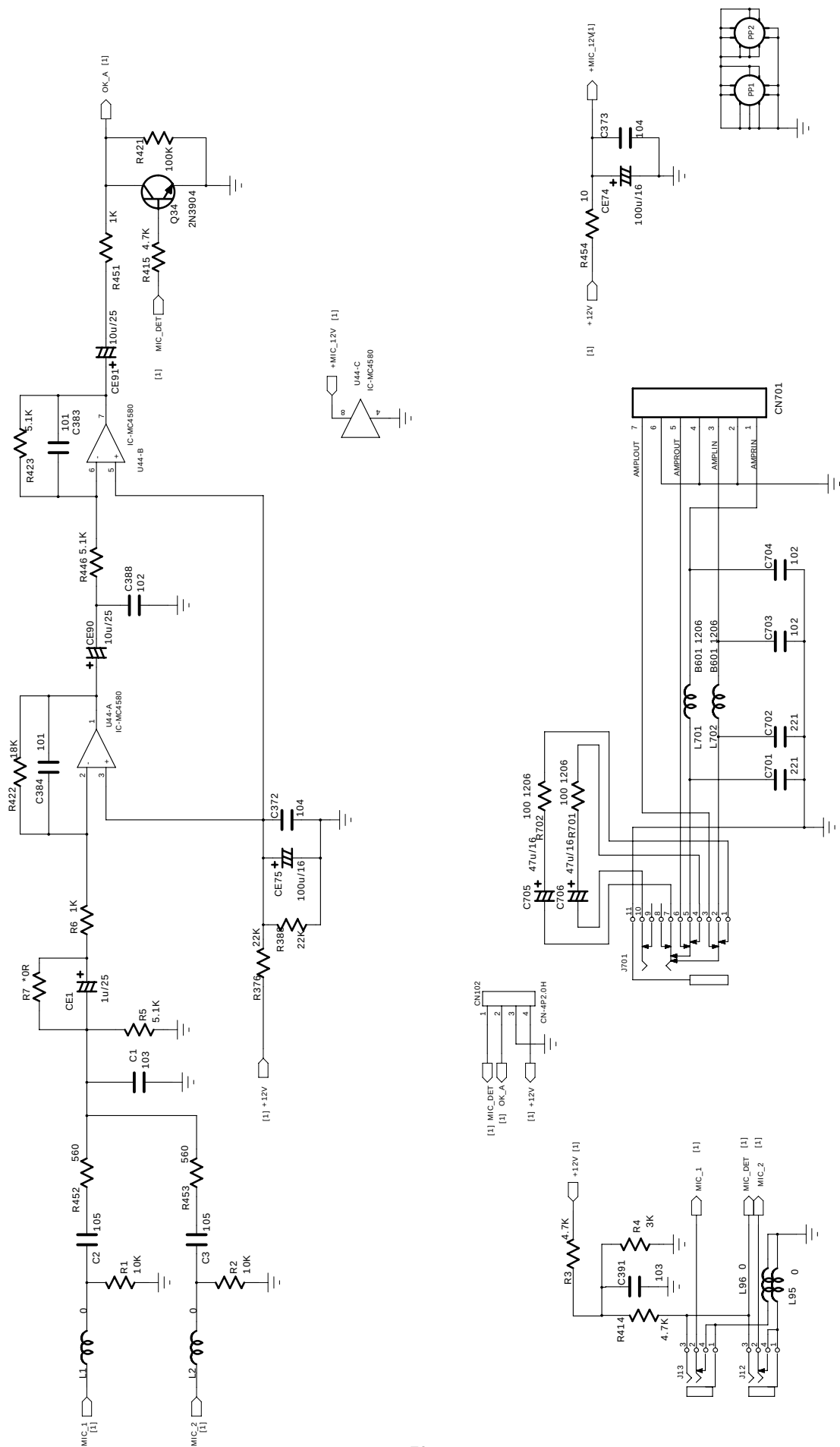




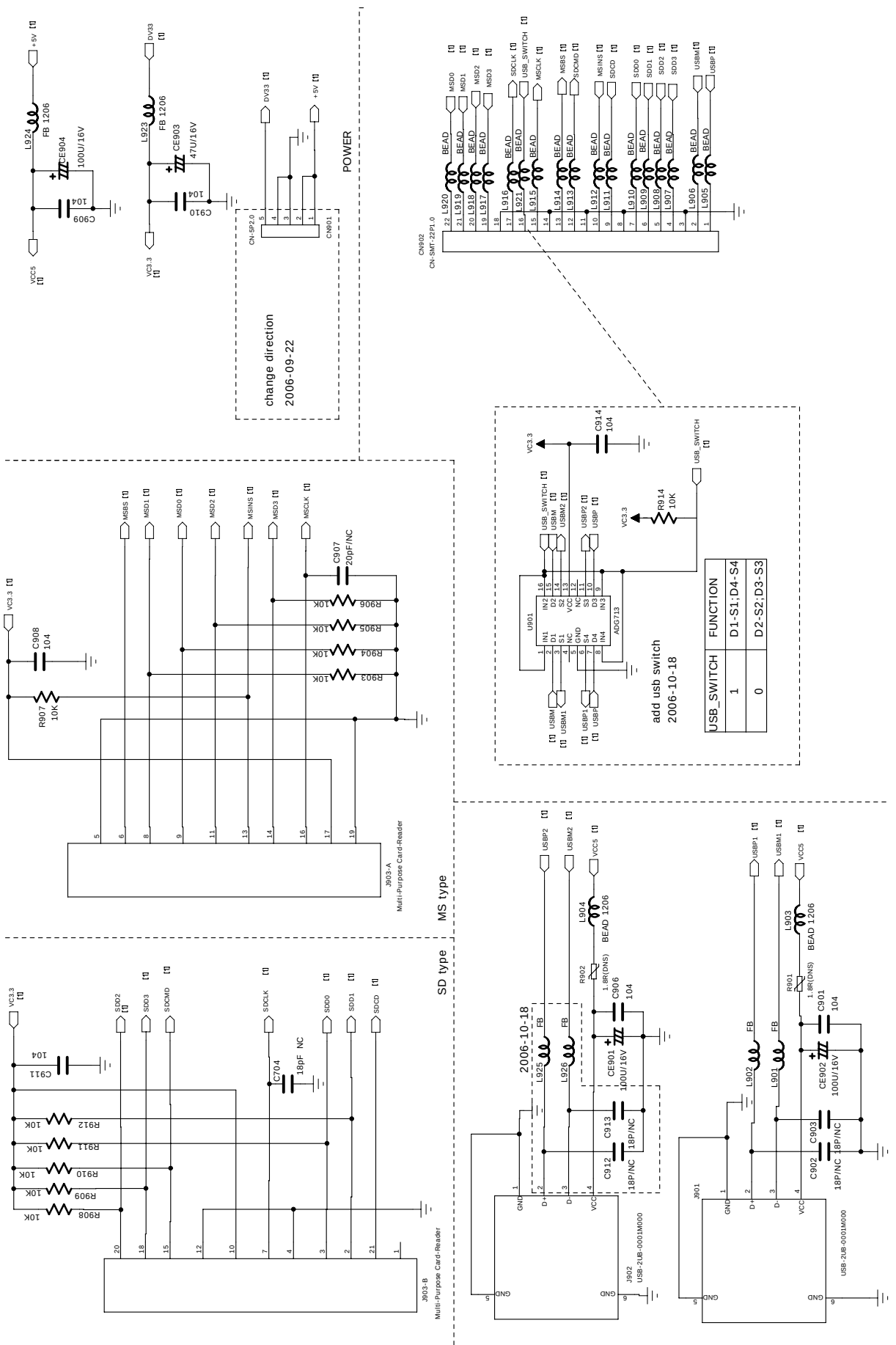
5.2.2 Power Board.



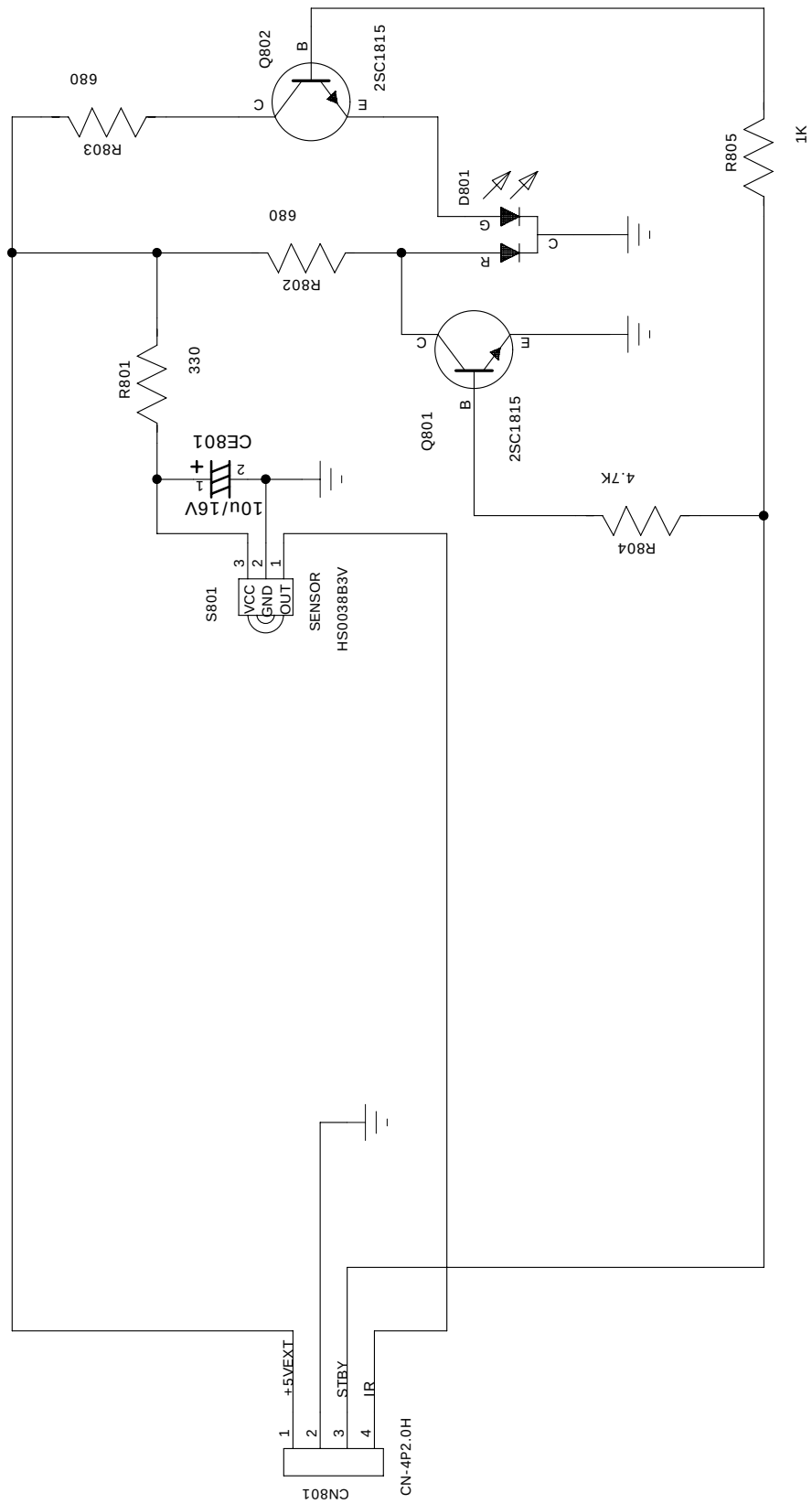
5.2.3 Earphone&MICPhone Board.



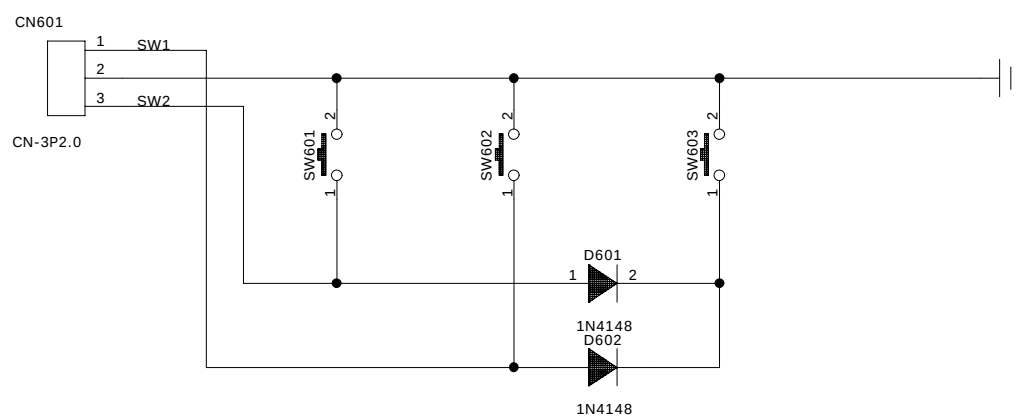
5.2.4 CRAD&USB Board.



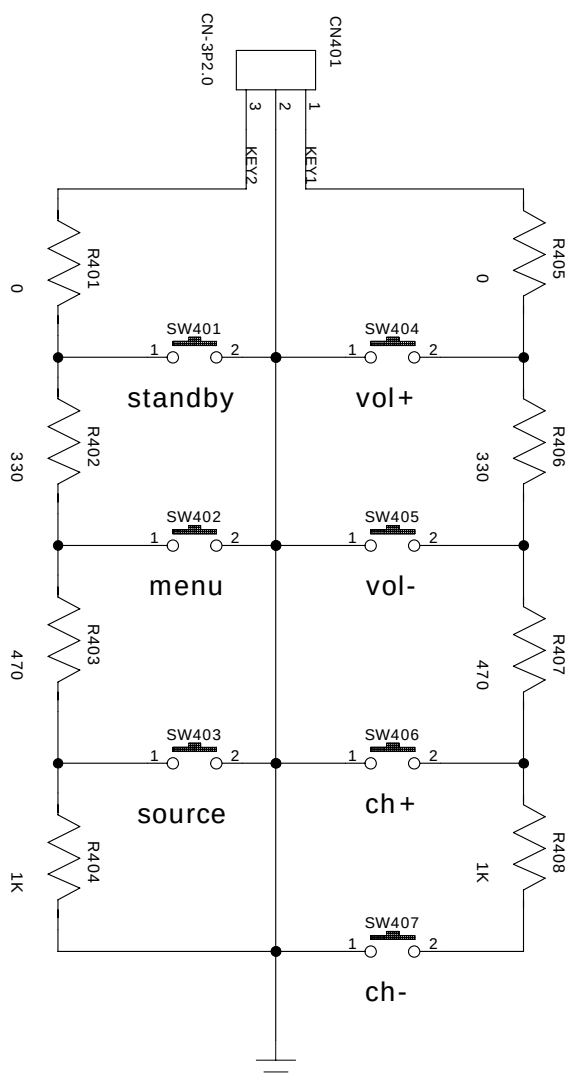
5.2.5 REMOTE Board.



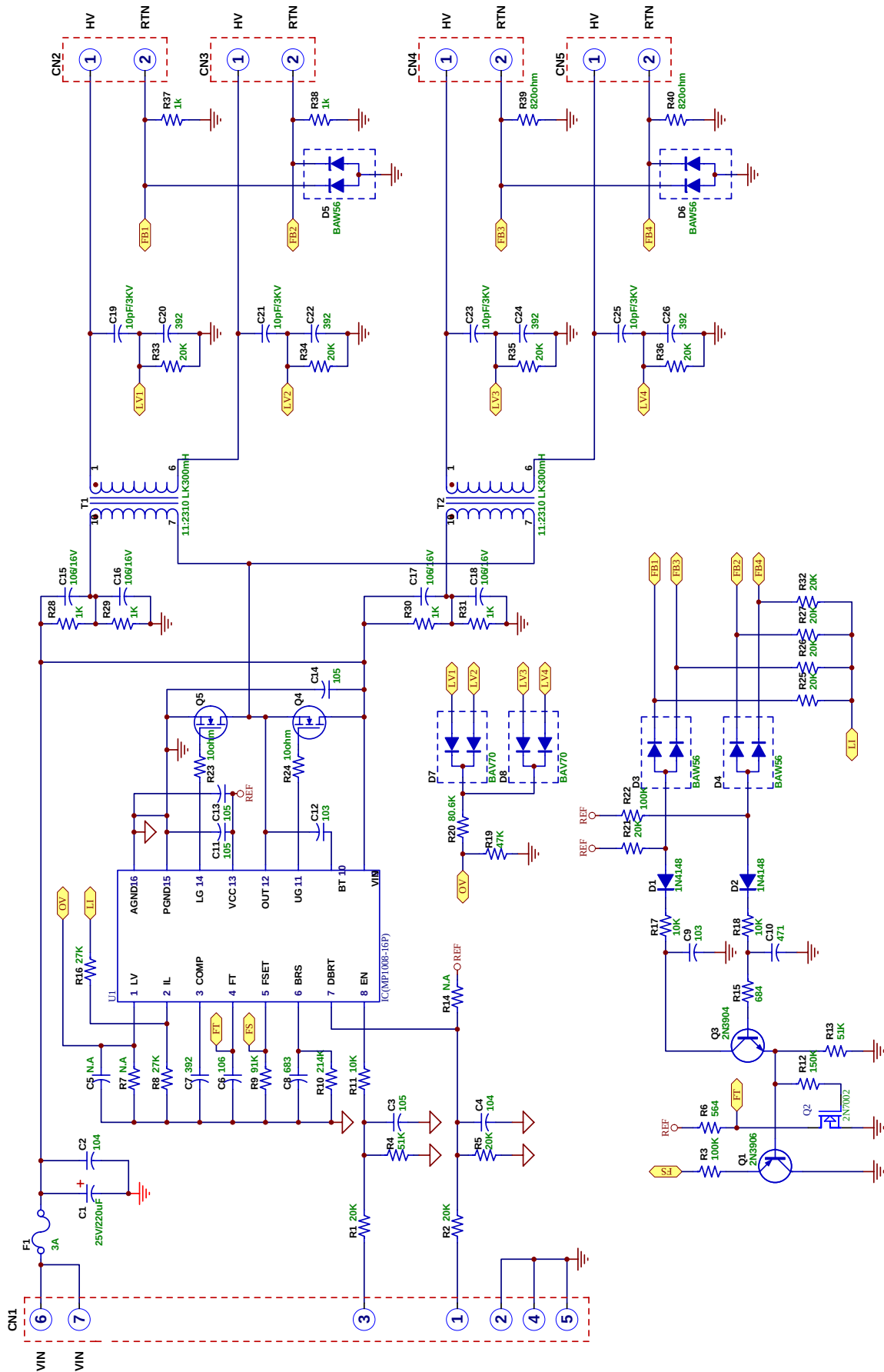
5.2.6 DVD-KEY Board.



5.2.7TV-KEY Board.



5.2.8 INVERTER 5INV403-2 UL



Chapter Six BOM List

LD1906X(RU) NAVY-BLUE

DVD KEY-PRESS BOARD: J1903-0 5449477			
MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
1940026	SOCKET	3P 2.0mm	CN601
1340064	LIGHT TOUCH RESTORE SWITCH	KFC-06-2WB L3.8	SW601~SW603
0570006	DIODE	1N4148	D601,D602
1564582	PCB	J1903-0	

LD1906X(RU) NAVY-BLUE

INVERTER @5INV403-2 UL 5462457			
MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0090255	SMD RESISTOR	1/16W 24K±5% 0603	R8
0090028	SMD RESISTOR	1/16W 33K±5% 0603	R16
0090003	SMD RESISTOR	1/16W 10 Ω ±5% 0603	R41
0090258	SMD RESISTOR	1/16W 560K±5% 0603	R6
0090023	SMD RESISTOR	1/16W 10K±5% 0603	R11,R17,R18,R14
0090025	SMD RESISTOR	1/16W 20K±5% 0603	R1,R2,R25,R26,R27,R32,R33,R34,R35,R36
0090014	SMD RESISTOR	1/16W 1K±5% 0603	R37,R38,R39,R40,R28,R29,R30,R31
0090029	SMD RESISTOR	1/16W 47K±5% 0603	R19
0090033	SMD RESISTOR	1/16W 91K±5% 0603	R9
0090034	SMD RESISTOR	1/16W 100K±5% 0603	R21,R22
0090201	SMD RESISTOR	1/16W 220K±5% 0603	R10
0090204	SMD RESISTOR	1/16W 300K±5% 0603	R3
0090193	SMD RESISTOR	1/16W 82K±5% 0603	R20
0090197	SMD RESISTOR	1/16W 150K±5% 0603	R12
0090192	SMD RESISTOR	1/16W 51K±5% 0603	R13,R4
0090211	SMD RESISTOR	1/16W 680K±5% 0603	R15
0310066	SMD CAPACITOR	50V 102±10% 7R 0603	C28
0310778	SMD CERAMIC CAPACITOR	3000V 10P±5% NPO 1808	C19,C21,C23,C25

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0310072	SMD CAPACITOR	50V 103±10% 7R 0603	C9,C12
0310207	SMD CAPACITOR	50V 104 ±20% 7R 0603	C4
0310483	SMD CAPACITOR	10V 105±10% 5R 0603	C3
0310658	SMD CAPACITOR	25V 105±10% 7R 0805	C11,C13,C6
0310847	SMD CAPACITOR	25V 105 ±10% 7R 1206	C14
0310323	SMD CAPACITOR	50V 392±10% 7R 0603	C7,C20,C22,C24,C26
0310839	SMD CAPACITOR	16V 106±10% 5R 1206	C15,C16,C17,C18
0310196	SMD CAPACITOR	50V 471±10% 0603	C10
0310256	SMD CAPACITOR	50V 683±20% 7R 0603	C8
0390235	SMD INDUCTOR	8.2uH±10% 1608	R23,R24
0260776	CD	CD288Z 25V470U±20%10×12 5	C1
0790107	SMD FIELD EFFECT TRANSISTOR	AOD408 TO-252	Q4,Q5
0700154	SMD TRIODE	14148WS SO323	D1,D2
0780040	SMD TRIODE	3904(100-300) SO23	Q3,Q2
0780041	SMD TRIODE	3906(100-300) SO23	Q1
0700168	SMD DUAL DIODE	B70 SO23	D7,D8
0700167	SMD DUAL DIODE	B56 SO23	D3,D4,D5,D6
2300070	SMD FUSE	@5A 32V 1206 UL	F1
0460631	INVERSION TRANSFORMER	@EEL19-203 SJ	T1,T2
0883192	IC	1008 TSSOP	U1
1940364	SOCKET	2P 3.5mm SMD	CN2,CN3,CN5,CN4
1940209	SOCKET	7P 2.0mm RIGHANGLE	CN1
5120635	WHITE GLUE	607	AT OUTPUT HIGH VOLTAGE TERMINAL CN2, CN3, CN4, CN5 AND PCB, OUTPUT HIGH VOLTAGE CAPACITANCE C19, C21, C23, C25,OUTPUT TERMINAL OF INVERTER TRANSFORMER
1634144	PCB	@5 403-2 FR4 D1.6 PX @UL	

LD1906X(RU) NAVY-BLUE

MAINBOARD 21901-1 1.2/Ver3.00

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
2100003	CONNETION CORDS	Φ0.6 SHAPED 7.5mm	JP101
0000375	CARBON FILM RESISTOR	1/4W2.2 Ω ±5%	R197
0000276	CARBON FILM RESISTOR	1/4W100 Ω ±5% SHAPED 10	R708
0090001	SMD RESISTOR	1/16W 0 Ω ±5% 0603	L8,R8,R9,R70,R71,R207,R315,R347,R551,R135,R43,R28,R308,R52
0090114	SMD RESISTOR	1/8W 0 Ω ±5% 1206	R524,L206,R749
0090272	SMD RESISTOR	1/16W 1 Ω ±5% 0603	R202,R401,R402,R463,R464
0090106	SMD RESISTOR	1/16W 4.7 Ω ±5% 0603	R189,R190,R406
0090003	SMD RESISTOR	1/16W 10 Ω ±5% 0603	L815,L809,R259
0090297	SMD RESISTOR	1/16W 12 Ω ±5% 0603	R7,R20,R21
0090005	SMD RESISTOR	1/16W 33 Ω ±5% 0603	R66,R68,R137,R141,R142,R150,R191,R192,R280,R309~R311
0090230	SMD RESISTOR	1/16W 47 Ω ±5% 0603	R2
0090286	SMD RESISTOR	1/16W 62 Ω ±5% 0603	R296,R911,R33
0090006	SMD RESISTOR	1/16W 75 Ω ±5% 0603	R117~R119,R122,R291~R293,R297~R299,R317,R391~R398,R400
0090181	SMD RESISTOR	1/16W 100 Ω ±5% 0603	L818,L819,L821,R50,R55,R113,R114,R124,R125,R138~R140,R154,R155,R161~R163,R181,R182,R258,R262,R270,R304,R305,R413,R465,R469,R705~R707,R712~R714
0090589	SMD RESISTOR	1/4W 100 Ω ±5% 1206	R214,R215
0090221	SMD RESISTOR	1/16W 120 Ω ±5% 0603	R284
0090538	SMD RESISTOR	1/4W 120 Ω ±5% 1206	R285
0090745	PRECISION SMD RESISTOR	1/16W 220 Ω ±1% 0603	R10
0090628	SMD RESISTOR	1/8W 220 Ω ±5% 1206	R1
0090008	SMD RESISTOR	1/16W 220 Ω ±5% 0603	R195,R198,R342,R345,R346,R51
0090009	SMD RESISTOR	1/16W 330 Ω ±5% 0603	R201,R212,R213,R279,R289,R290
0090011	SMD RESISTOR	1/16W 470 Ω ±5% 0603	R375,R376
0090012	SMD RESISTOR	1/16W 560 Ω ±5% 0603	R466,R301
0090235	SMD RESISTOR	1/16W 820 Ω ±5% 0603	R407
0090014	SMD RESISTOR	1/16W 1K±5% 0603	R65,L817,R226,R227,R237,R238,R288,R336,R338,R467

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0090232	SMD RESISTOR	1/16W 150 Ω $\pm$ 5% 0603	R12,R62
0090171	SMD RESISTOR	1/8W 1K $\pm$ 5% 1206	R813~R816
0090223	SMD RESISTOR	1/16W 2K $\pm$ 5%	R109,R110
0090017	SMD RESISTOR	1/16W 2.2K $\pm$ 5% 0603	R147,R252,R253,R281,R372,R373,R377, R378,R384,R504,R505
0090183	SMD RESISTOR	1/16W 3K $\pm$ 5% 0603	R334,R340
0090019	SMD RESISTOR	1/16W 4.7K $\pm$ 5% 0603	R3,R4,R5,R6,R11,R26,R102,R156,R157, R170,R174,R232,R234,R275,R282,R312, R313,R343,R344,R388,R409,R136,R276, R513
0090020	SMD RESISTOR	1/16W 5.1K $\pm$ 5% 0603	R143,R144,R151,R152,R306
0090023	SMD RESISTOR	1/16W 10K $\pm$ 5% 0603	R14,R15,R23,R24,R56,R63,R64,R127,R1 28,R158,R160,R165,R185,R186,R193,R1 94,R196,R200,R209~R211,R231,R233,R2 39,R251,R254,R283,R286,R332,R385~R3 87,R437,R503,R506,R809,R810,R146
0090024	SMD RESISTOR	1/16W 15K $\pm$ 5% 0603	R341,R403,R436
0090188	SMD RESISTOR	1/16W 18K $\pm$ 5% 0603	R435
0090025	SMD RESISTOR	1/16W 20K $\pm$ 5% 0603	R390,R434,R460,R462
0090026	SMD RESISTOR	1/16W 22K $\pm$ 5% 0603	R235,R236,R250,R337,R410,R412
0090189	SMD RESISTOR	1/16W 30K $\pm$ 5% 0603	R229,R230
0090028	SMD RESISTOR	1/16W 33K $\pm$ 5% 0603	R374,R411
0090034	SMD RESISTOR	1/16W 100K $\pm$ 5% 0603	R58~R61,R187,R188,R225,R228,R404,R 416
0090197	SMD RESISTOR	1/16W 150K $\pm$ 5% 0603	R204,R205
0090201	SMD RESISTOR	1/16W 220K $\pm$ 5% 0603	R348~R352,R355~R367
0090211	SMD RESISTOR	1/16W 680K $\pm$ 5% 0603	R206,R208
0090319	PRECISION SMD RESISTOR	1/16W 750K $\pm$ 1% 0603	R273
0090109	SMD RESISTOR	1/16W 1M Ω $\pm$ 5% 0603	R108,R307
0100019	SMD RESISTOR NETWORKS	1/16W 33 Ω $\pm$ 5% 8P	RP1~RP5,RP301~RP305,RP6~RP9
0100020	SMD RESISTOR NETWORK	1/16W 100 Ω $\pm$ 5% 8P	RP105
0100005	SMD RESISTANCE NETWORK	4.7K $\pm$ 5% 8P	RP107
1030036	SMD PRESS SENSITIVITY RESISTOR	S1608E180C600NPT 0603	C836,C838,C842,C830,C832,C844,C848, C818
0310188	SMD CAPACITOR	50V 10P $\pm$ 5% NPO 0603	C4,C100,C153~C157,C195~C199,C831,C 833,C835,C837,C839,C840,C841

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0310085	SMD CAPACITOR	50V 20P±5% NPO 0603	C103,C104,C330,C331,C337,C338,C408
0310190	SMD CAPACITOR	50V 27P±5% NPO 0603	C398,C399
0310047	SMD CAPACITOR	50V 101±5% NPO 0603	C187,C189,C220,C221,C301,C834
0310326	SMD CAPACITOR	50V 121±5% NPO 0603	C208,C211,C214,C215,C372~C375
0310048	SMD CAPACITOR	50V 151±5% NPO 0603	C162,C401
0310049	SMD CAPACITOR	50V 221±5% NPO 0603	C273,C274,C822,C824,C846,C850
0310051	SMD CAPACITOR	50V 331±5% NPO 0603	C452,C453
0310052	SMD CAPACITOR	50V 391±5% NPO 0603	C252
0310066	SMD CAPACITOR	50V 102±10% 7R 0603	C55,C105,C181,C222,C223,C271,C272,C285,C407,C791,C821,C823,C843,C845,C847,C849
0310068	SMD CAPACITOR	50V 222±10% 7R 0603	C182,C183,C418
0310072	SMD CAPACITOR	50V 103±10% 7R 0603	C242,C243,C302,C506,C507
0310201	SMD CAPACITOR	50V 153±10% 7R 0603	C193,C194,C417,C450
0310055	SMD CAPACITOR	16V 333±10% 7R 0603	C6,C9,C44,C45,C406
0310056	SMD CAPACITOR	16V 473±10% 7R 0603	C147~C150,C179,C180,C190,C411,C412,C701,C712,C713,C792~C794
0310594	SMD CAPACITOR	25V 104±10% 0603	C1,C2,C3,C5,C14,C20~C26,C28~C30,C32~C34,C46~C48,C50~C52,C101,C102,C106,C110,C116,C118,C121~C129,C139,C140,C159~C161,C163,C165,C166,C170~C172,C174~C176,C177,C178,C184,C186,C200,C201,C205,C209,C213,C217~C219,C240,C241,C246,C247,C248,C257~C262,C264~C270,C275,C282,C287,C300,C303~C305,C309,C310,C312,C319,C336,C344~C348,C355,C356,C368,C369,C378~C383,C402,C404,C405,C415,C419,C422,C424,C427,C429~C432,C436,C437,C440,C441,C443,C448,C451,C464,C465,C479,C501,C502,C505,C508,C519,C521,C522,C550~C551,C607
0310723	SMD CAPACITOR	16V 224±10% 7R 0603	C31
0310362	SMD CAPACITOR	16V474 +80%-20% Y5V 0603	C413 ①
0310581	SMD CAPACITOR	25V 474±10% 5R 0603	C413 ①
0310230	SMD CAPACITOR	50V 474 +80%-20% 0603	C413 ①
0310234	SMD CAPACITOR	16V 105 +80%-20% Y5V 0603	C35~C42,C49,C53,C54,C210,C212,C216,C249,C263,C276~C281,C377,C416,C469~C473 ②

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0310643	SMD CAPACITOR	16V 105±20% Y5V 0603	C35~C42,C49,C53,C54,C210,C212,C216,C249,C263,C276~C281,C377,C416,C469~C473 ②
0310389	SMD CAPACITOR	10V 106 +80%-20% Y5V 0805	C370,C371,C15 ③
0310701	SMD CAPACITOR	10V 106±20% Y5V 0805	C370,C371,C15 ③
0260667	CD	CD11K 50V1U±20% 5×11 2	CE100,CE106,CE107,CE134
0260515	CD	CD11K 16V10U±20%5×11 2	CE8,CE101,CE109,CE128,CE130,CE131,CE135,CE138,CE139,CE152,CE153,CE156,CE163,CE165~CE167,CE170,CE311,CE401
0260578	CD	CD11T 50V22U±20%5×11 2	CE147
0260754	CD	CD11K 25V47U±20%5×11 2	CE6,CE9,CE12,CE13,CE102,CE104,CE105,CE110,CE111,CE118,CE119,CE121,CE122,CE126,CE127,CE132,CE158,CE168,CE169,CE171,CE409,CE410,CE417,CE418
0260517	CD	CD11K 10V100U±20%5×11 2	CE120,CE176,CE185
0260774	CD	CD11K 16V100U±20%6.3×11 2.5	CE1,CE2,CE4,CE162,CE164,CE175,CE202,CE301,CE402,CE404,CE405,CE420,CE507,CE113
0260664	CD	CD11K 16V220U±20% 6.3×11 2.5	CE5,CE108,CE129,CE150,CE151,CE155,CE550,CE551,CE7
0260740	CD	CD288Z 16V220U±20%8×12	CE123,CE503
0260653	CD	CD11K 16V470U±20%8×14 3.5	CE204
0260656	CD	CD288H 16V470U±20% 10×12 5	CE115,CE124,CE125,CE149,CE154,CE505
0390052	MAGNETIC BEADS INDUCTOR	FB	L3,L134,L136,L503
0390287	SMD MAGNETIC BEADS	19 Ω /100mHZ±25% 1608	L108~L110,L712~L714,L816,L820
0390095	SMD MAGNETIC BEADS	FC160822105	L2,L9,L11,L25~L27,L104~L107,L118,L119,L126,L138,L140,L141,L145~L148,L150,L151,L158,L159,L182,L190,L209,L211,L216~L218,L302,L401,L402,L406,L831,L832,L193
0390300	SMD MAGNETIC BEADS	600 Ω /100MHZ±25% 1608	L4~L7,L10,L21~L24,L28,L29,L31,L98,L99,L100,L111~L114,L154~L157,L180,L186,L191,L149
0390301	SMD MAGNETIC BEADS	600 Ω /100MHZ±25% 3216	L1,L101,L103,L115,L132,L133,L144,L188,L189,L194,L200,L201,L202,L210,L17,L120
0390446	SMD MAGNETIC BEADS	600 Ω /100MHZ±25% 1A 3216	L13,L129,L551,L181,L142,L143,L102,L128,L130,L131,L152,L153,L212
0390096	SMD INDUCTOR	1.8UH±10% 1608	L195~L198

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0390355	SMD INDUCTOR	4.7UH±10% 1608	L137,L139,L405
0390286	SMD INDUCTOR	5.6uH±10% 1608	L122,L123,L811~L812,L822~L825
0390170	SMD INDUCTOR	10UH±10% 1608	L301
0390385	SMD INDUCTOR	22uH±10% 2012	L404
0390529	SMD CORES INDUCTOR	47uH ±20% CDH129	L125,L135
0410160	COMMON MODE CHOKE	VERTICAL 90UH 5A Φ9×Φ5×4	L124
0700148	SMD VOLTAGE REGULATOR DIODE	3.3V±5% 1/2W	ZD1~ZD5,ZD801,D10
0700147	SMD VOLTAGE REGULATOR DIODE	8.2V±5% 1/2W	ZD301
0680028	SMD SCHOTTKY DIODE	MBRS340	D113,D114
0700064	SMD TRIODE	B991 SO23	D101~D105
0700001	SMD DIODE	LS4148	D1,D7,D8,D100,D108,D109,D115,D116,D118~D121,D128
0570019	DIODE	0000254	D6,D122,D123,D129
07800509	TRIODE	S8050D BELT	Q129,Q130
07800499	TRIODE	S8550D BELT	Q127,Q128
0780193	SMD TRIODE	2S3018	Q108,Q109
0780115	SMD TRIODE	2SB1132	Q110,Q111
0780040	SMD TRIODE	3904(100-300) SO23	Q100,Q103,Q114,Q115,Q180,Q107
0780041	SMD TRIODE	3906(100-300) SO23	Q1
0780197	SMD TRIODE	C1815	Q3,Q102,Q112,Q113,Q116,Q117,Q119,Q125,Q126,Q504~Q505
0780198	SMD TRIODE	2S1015	Q118
0790097	FIELD EFFECT TRANSISTOR	AO4419 SO8	U511,U502 ④
0790021	FIELD EFFECT TRANSISTOR	IR7416 SOP	U511,U502 ④
0883191	IC	7266SA ZIP	U112
0882644	IC	MT1389FE/HD(HD EDITION) QFP	U115
0883808	IC	STV8317F TQFP	U4
0882353	IC	C5340 TSSOP	U5
0883529	IC	MST718BU PQFP	U101
0883323	IC	AP1506Adj TO263-5L	U503,U506

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0880768	IC	C4558 SOP	U117
0882559	IC	HY57V641620E7 TSOP	U301
0882472	IC	AZ1084S-3.3 TO-263	U521 ⑤
0882483	IC	AZ1085S-3.3 TO-263	U521 ⑤
0882883	IC	FS433 TSSOP	U106
0881378	IC	B5954FP HSOP	U118 ⑥
0881405	IC	B5954FM HSOP	U118 ⑥
0881388	IC	24C16 SOP	U303 ⑦
0883303	IC	24C16 SOP	U303 ⑦
0880504	IC	24C32N SOP	U103
0882756	IC	HE4094BT SOP	U102
0882485	IC	AZ11173.3 SO223	U505,U513,U508
0883069	IC	AZ11171.8 SO223	U1,U3
0883245	IC	AZ1085S-2.5Z TO-263	U507 ⑧
0883480	IC	AZ1084S-2.5Z TO-263	U507 ⑧
2300031	SMD FUSE	F7A 125V	F501
1020014	TUNER	JS-6B2/121	U114
0960019	CRYSTAL OSCILLATOR	12.00MHz 49-S	X101
0960020	CRYSTAL OSCILLATOR	27.00MHz 49-S	X109,X301
1940170	SOCKET	2P 2.0mm STRAIGHT CURVING	CN115
1940216	SOCKET	3P 2.0mm FLEX INSERT	CN108
1940141	SOCKET	4P 2.0mm STRAIGHT FLEX	CN119,CN2
1940160	SOCKET	5P 2.0mm STRAIGHT FLEX	CN112
1940209	SOCKET	7P 2.0mm RIGHANGLE	CN103
1940210	SOCKET	30P 1.25mm SMD	CN111
1940198	CABLE SOCKET	6P 1.0mm SMD,SUBMIT MEET WITH CLASP	CN107
1940390	CABLE SOCKET	22P 1.0mm SMD NEXT MEET WITH CLASP	CN110
1940094	CABLE SOCKET	24P 0.5mm SMD SUBMIT MEET WITH CLASP	CN101

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
1860054	VGA SOCKER	15P VERTICAL,WITH BOLT	J101
1860060	SCART SOCKET	102 STRAIGHT INSERT	J102
1980114	EARPHONE SOCKET	ST-417NB-060-100STRINGHT INSERT ,WITH CUPRUM COVER	J103
1910277	TERMINAL SOCKET	AV6-8.3-03PB2 STRINGHT INSERT WITH SHIELD	J105
1910163	TERMINAL SOCKET	S TERMINAL D34 STRAIGHT INSERT	J501
1940142	SOCKET	2P 8.0mm STRAIGHT FLEX	S101
1910269	TERMINAL SOCKET	1-8.4-7 BLACK	J1
4210185	MACHINE-TAPPING SCREW	BM 3×8H BLACK	IC7266 PRESSING PLATE SCREW
3871722	IC PRESSING PIECE	168	IC7266 PRESSING PLATE
3580264	HEAT RADIATION PIECE	1903 WHITE	IC7266 HEAT RADIATION PLATE
3580257	HEAT RADIATION PIECE	13×13×10 2#	8216,718 HEAT RADIATION PLATE
5234712	HEAT CONDUCT DOUBLE-FACE GLUE	12.5×12.5×0.25 38810	8216,718 HEAT RADIATION PLATE
2122610	FLAT CABLE	3P70 2.0 2 PIN, WITH L NEEDLE, TOGETHER DIRECTION	DECODE BOARD: CN104, TV BUTTON BOARD: CN401
2122611	FLAT CABLE	3P380 2.0 2 PIN, WITH L NEEDLE, REVERSE	DECODE BOARD: CN106, DVD BUTTON BOARD: CN601
2122615	FLAT CABLE	4P400 2.0 2 PIN, WITH NEEDLE, REVERSE	DECODE BOARD: CN105, REMOTE CONTROL RECEIVING BOARD: CN801
2122616	FLAT CABLE	7P170 2.0 2 PIN, WITH NEEDLE, REVERSE	DECODE BOARD: CN113, HEADPHONE BOARD: CN701
2122617	FLAT CABLE	5P210 2.0 2 PIN, WITH NEEDLE, TOGETHER DIRECTION	DECODE BOARD: CN102, USB BOARD: CN901
1634529	PCB	21901-1 FR4 D1.6 PX	

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MIC BOARD	61901-2	4941233	1.2/Ver2.00
MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
2100003	CONNETION CORDS	Φ0.6 SHAPED 7.5mm	J1,J2
0090003	SMD RESISTOR	1/16W 10 Ω ±5% 0603	R454
0090012	SMD RESISTOR	1/16W 560 Ω ±5% 0603	R452,R453
0090014	SMD RESISTOR	1/16W 1K±5% 0603	R6,R451
0090183	SMD RESISTOR	1/16W 3K±5% 0603	R4
0090020	SMD RESISTOR	1/16W 5.1K±5% 0603	R5,R423,R446

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0090019	SMD RESISTOR	1/16W 4.7K±5% 0603	R3,R414,R415
0090026	SMD RESISTOR	1/16W 22K±5% 0603	R376,R388
0090023	SMD RESISTOR	1/16W 10K±5% 0603	R1,R2
0090029	SMD RESISTOR	1/16W 47K±5% 0603	R422
0090034	SMD RESISTOR	1/16W 100K±5% 0603	R421
0310195	SMD CAPACITOR	50V 221±10% 7R 0603	C701,C702
0310047	SMD CAPACITOR	50V 101±5% NPO 0603	C383,C384
0310072	SMD CAPACITOR	50V 103±10% 7R 0603	C1,C391
0310594	SMD CAPACITOR	25V 104±10% 0603	C372,C373
0310234	SMD CAPACITOR	16V 105 +80%-20% Y5V 0603	C2,C3
0260667	CD	CD11K 50V1U±20% 5×11 2	CE1
0260515	CD	CD11K 16V10U±20%5×11 2	CE90,CE91
0260774	CD	CD11K 16V100U±20%6.3×11 2.5	CE74,CE75
0310066	SMD CAPACITOR	50V 102±10% 7R 0603	C388,C703,C704
0260200	CD	CD11C 16V47U±20%5×7 2	C705,C706
0390095	SMD MAGNETIC BEADS	FC160822105	L1,L2,L95,L96
0780040	SMD TRIODE	3904(100-300) SO23	Q34
0880768	IC	C4558 SOP	U44 ⑨
0880562	IC	4580 SOP	U44 ⑨
0390301	SMD MAGNETIC BEADS	600 Ω /100MHZ±25% 3216	L701,L702
0090135	SMD RESISTOR	1/8W 100 Ω ±5% 1206	R701,R702
1940023	SOCKET	7P 2.0mm	CN701
1940022	SOCKET	4P 2.0mm	CN102
1980061	EARPHONE SOCKET	C3.5-01K	J701
1980018	MICROPHONE SOCKET	C3-6.35-24	J12,J13
1565169	PCB	61901-2 HB D1.6 PX	
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POWER ADAPTER 5AK0833-0 5449803			

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
3031818	UPPER COVER OF POWER ADAPTER	@083 BLACK UL	
3041389	LOWER COVER OF POWER ADAPTER	@ 083 BLACK UL	
5449803	PCB SEMI-FINISHED PRODUCT	5 0833-0 083-3 2#	

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RECEIVING BOARD OF REMOTE CONTROL		B1903-1	5449437
MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
2360002	IR SENSOR	HS0038B	S801
0000013	CARBON FILM RESISTOR	1/6330 Ω $\pm$ 5%	R801
0000192	CARBON FILM RESISTOR	1/4680 Ω $\pm$ 5%	R802,R803
0000034	CARBON FILM RESISTOR	1/64.7K $\pm$ 5%	R804
0000022	CARBON FILM RESISTOR	1/61K $\pm$ 5%	R805
0260515	CD	CD11K 16V10U $\pm$ 20%5 $\times$ 11 2	CE801
07800209	TRIODE	C1815Y BELT	Q801,Q802
0620007	DUAL COLOR RADIATION DIODE	3RG 9HC-A COMMON CATHODE,RED GREEN	D801
1940141	SOCKET	4P 2.0mm STRAIGHT FLEX	CN801
5235882	SOFT SPONGE SPACER	6 $\times$ 6 $\times$ 3.5 SINGLE-FACED SOFT	REMOTE CONTROL RECEIVER SOFT SPONGER SPACER
1564678	PCB	B1903-1	

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TV KEY-PRESS BOARD		41903-0	5449438
MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
1340064	LIGHT TOUCH RESTORE SWITCH	KFC-06-2WB L3.8	SW401~SW407
1940026	SOCKET	3P 2.0mm	CN401
0000160	CARBON FILM RESISTOR	1/40 Ω $\pm$ 5%	R401,R405
0000185	CARBON FILM RESISTOR	1/4330 Ω $\pm$ 5%	R402,R406
0000188	CARBON FILM RESISTOR	1/4470 Ω $\pm$ 5%	R403,R407
0000195	CARBON FILM RESISTOR	1/41K $\pm$ 5%	R408
1564583	PCB	41903-0	

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USB BOARD: D1903-3 5449476			
MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
1050016	HEAT SENSITIVITY RESISTOR	PTC FRU13530V	R901,R902
0090023	SMD RESISTOR	1/16W 10K±5% 0603	R914
0090024	SMD RESISTOR	1/16W 15K±5% 0603	C902,C903,C912,C913
0310207	SMD CAPACITOR	50V 104 ±20% 7R 0603	C901,C906,C909,C910,C914
0260200	CD	CD11C 16V47U±20%5×7 2	CE903
0260206	CD	CD11C 10V100U±20%5×7 2	CE901,CE902,CE904
0390287	SMD MAGNETIC BEADS	19 Ω /100mHZ±25% 1608	L901,L902,L905,L906,L921,L925,L926
0390301	SMD MAGNETIC BEADS	600 Ω /100MHZ±25% 3216	L903,L904,L923,L924
0882425	IC	ADG713 TSSOP	U901
1860074	USB SOCKET	2UB-0001000	J901,J902
1940024	SOCKET	5P 2.0mm	CN901
1940390	CABLE SOCKET	22P 1.0mm SMD NEXT MEET WITH CLASP	CN902
1634191	PCB	D1903-3 FR4 D1.6 PX	

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PROGRAM FLASH ROMLD1906X-0A(16M)0912072			
MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0882923	IC	EN29LV160AB-70TCP TSOP	U302 ⑩
0882665	IC	S29AL016D70TFI02 TSOP	U302 ⑩

SOFTWARE PROGRAM EPROM 2 ROMLD1906XRU-0B(2M) 0900507

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0883190	IC	P25LV020 SOP	U104

SOFTWARE PROGRAM EPROM 3 ROMLD1906SI-0A(1K)0900448

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0882153	IC	LC21A SOIC	U120 ⑪
0882054	IC	24C21-10SI-2.5 SOIC	U120 ⑪