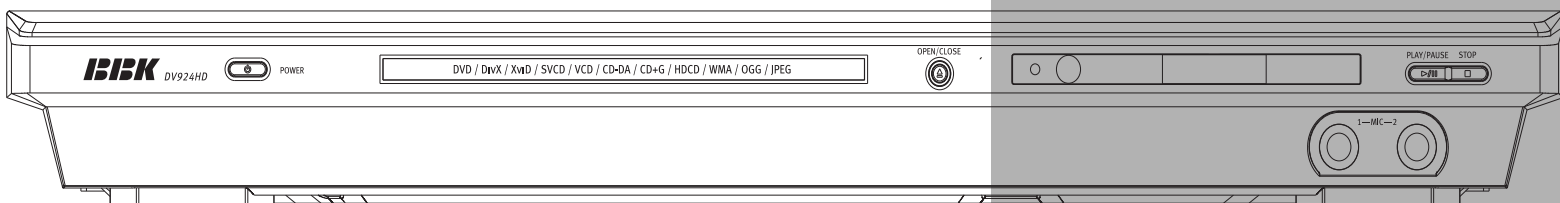


IBBK

DV924HD (RU)

Service Manual



Model version:SI2.00

Catalog

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Caution :

This Service Manual is applicable to DV911HD(RU)SI2.00.

Chapter One About Maintenance

1.1 Safety precautions

1.1.1 Power supply

When maintenance personnel are repairing DVD players, he should pay special attention to the power board with 220V 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 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.

1.1.4 About placement position

1. Never place DVD player 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 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.

1.2.2 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.

1.2.3 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.

1.2.4 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.

1.2.5 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 Element substitution method

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

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

- ◆ Digital oscillograph ($\geq 100\text{MHz}$)
- ◆ TV set
- ◆ SMD rework station
- ◆ Multimeter
- ◆ Soldering iron
- ◆ Pointed-nose pincers
- ◆ Cutting nippers
- ◆ Forceps
- ◆ Electric screw driver
- ◆ Terminal connecting cord
- ◆ Headphone
- ◆ Microphone

Chapter Two

Functions and Operation Instructions

2.1 Features

Compatible Disc Types:

- #Digital video playback: DVD-Video, Super VCD, VCD compatibility
- #MPEG-4 standard support: compatibility with DivX3.11, DivX4, DivX5, DivXPro, XviD compressed video files
- #Digital audio playback: DVD-Audio, Super Audio CD, CD-DA and HDCD compatibility
- #Fully compatible with compressed audio files such as Mp3, WMA and OGG Vorbis formats
- #Playback of DVD, VCD, CD+G karaoke discs
- #Digital graphic albums playback: Kodak Picture CD, JPEG compatibility

Audio:

- #192 KHz/24 bit Audio Digital/Analog converter
- #Coaxial and optical outputs for Dolby Digital/DTS/LPCM digital audio
- #Mixed audio output for amplifier or TV connection
- #Digital multi-channel decoders, providing Dolby Digital/DTS audio stream playing
- #Built-in Dolby Pro Logic II decoder makes available to convert stereo signal into multi-channel
- #MIC input for karaoke function
- #Headphones output

Video:

- #108 MHz/12 bit Video Digital/Analog converter
- #HDMI interface provides high-definition image(720p/1080) and digital audio
- #Progressive Scan Output(Y Pb Pr) producing flicker-free and stable images
- #Composite, component(Y Cb Cr), S-Video and RGB/SCART outputs for various types of connections
- #Capable of playing NTSC/PAL discs
- #Multiple dubbings, angles, subtitles support
- #Sharpness, gamma, brightness, contrast, hue, saturation adjustment

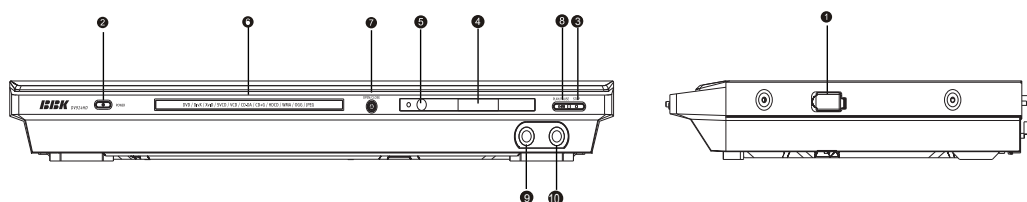
Others:

- #Compatible disc types: CD-R/CD-RW, DVD-R/DVD-RW, DVD+R/DVD+RW
- #USB interface to connect Mp3 player, flash card or digital camera
- #KARAOKE+ system, expanding karaoke function
- #Russia, CIS and Baltic States adaptation interface and filenames, ID3-tags and CD-Text support simplifies device operation
- #"Memory" function enables to save the last point after stop playback
- #"Q-Play" function provides direct playback and allows to skip commercial that is not possible to rewind
- #"Virtual Keyboard" function provides more convenient DVD playback control
- #"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 (~110-250V, 50/60Hz), automatic short circuit protection

2.2 Controls and functions

2.2.1 Front and side panels control

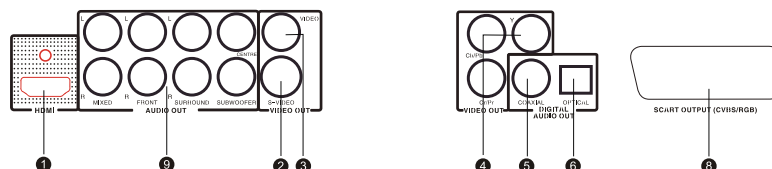
DV924HD



- | | |
|----------------------------|---------------------|
| ① USB indicator | ⑥ Disc tray |
| ② POWER button | ⑦ OPEN/CLOSE button |
| ③ STOP button | ⑧ PLAY/PAUSE button |
| ④ LED display | ⑨ Microphone input |
| ⑤ Sensor of infrared beams | ⑩ phone put |

2.2.2 Rear panel general view

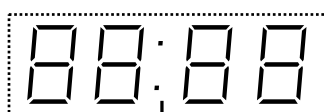
DV924HD



- | | |
|-------------------------------------|----------------------------------|
| ① HDMI Out jack | ⑥ Digital Audio Optical Out jack |
| ② S-VIDEO Out jack | ⑦ SCART Out jack |
| ③ VIDEO Out jac | ⑧ 5.1CH Audio Out jack |
| ④ Video Component/Y Pb Pr out jacks | ⑨ Stereophonic audio output |
| ⑤ Digital Audio Coaxial Out jack | |

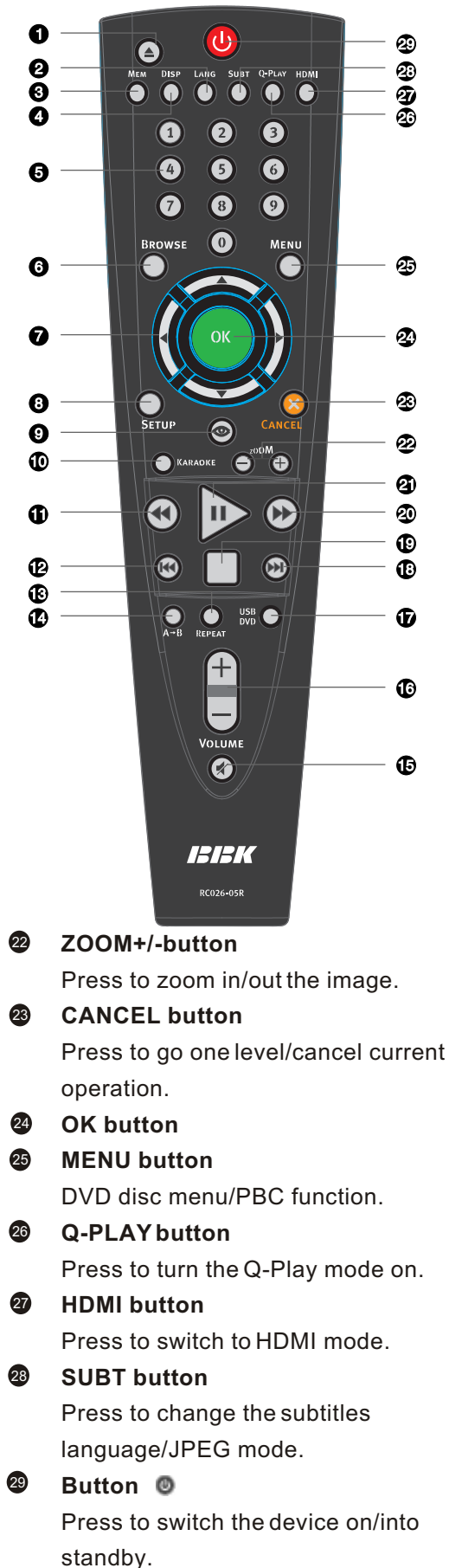
2.2.3 LED display general view

DV911HD,DV915HD



Playback mode

2.2.4 Remote control general view



- 1 Button**
- Press to open/close the disc tray.
- 2 LANG button**
Press to change the language.
- 3 MEM button**
Press to memorize the point where playback was stopped/playback from the previously memorized point.
- 4 DISP button**
Press to display the disc information.
- 5 Numeric buttons**
- 6 BROWSE button**
Press to turn on/off the browser function.
- 7 Sense buttons**
- 8 SETUP button**
Press to switch to setup mode.
- 9 Button**
- Press to turn on/off the "Virtual Keyboard" function.
- 10 KARAOKE button**
Press to set karaoke function.
- 11 Button**
- Press to reverse scanning.
- 12 Button**
- Press to playback from the previously point.
- 13 REPEAT button**
Press to repeat playback.
- 14 A-B buttons**
Press to repeat the selected portion.
- 15 Button**
- Press to turn on/off the sound.
- 16 VOLUME+/-button**
Press to adjust the volume.
- 17 USB/DVD button**
Press to switch USB/DVD modes.
- 18 Button**
- Press to playback from the following point.
- 19 Button**
- Press to stop playback.
- 20 Button**
- Press to forward scanning.
- 21 Button**
- Press to play/pause the playback.

2.3 Set list

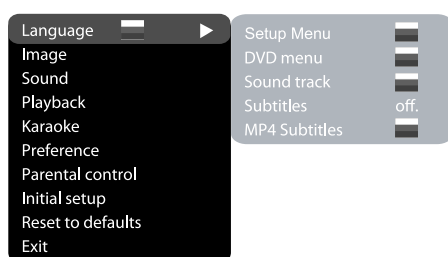
DVD player	1PCS
Audio cord 2xRCA-2xRCA	1PCS
Video cord RCA-RCA	1PCS
Remote control	1PCS
Battery AAA	2PCS
Warranty card	1PCS
User's manual	1PCS
Karaoke disc	1PCS

2.4 FUNCTION SETTINGS

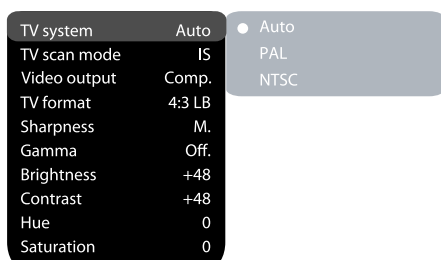
2.4.1 Function selection and change

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

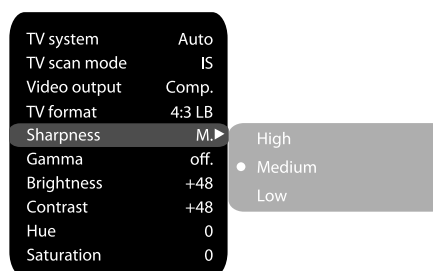
Select the desired menu item using the UP and DOWN buttons; press OK for confirmation.



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



- Using the UP and Down buttons, select the desired item and press OK
For example, select the Sharpness item. Settings will appear on the screen. Then select the desired sharpness level and press OK for confirmation.
- Press LEFT key of the UP and DOWN buttons for exit to previous menu level.
- Press SETUP to exit setup menu.

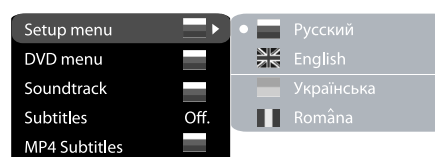


2.4.2 Language settings

1. Menu: interface language setup

#Options: Russian, English, Ukrainian, Romanian.

#Default option: Russian.



2. DVD menu :selection of disc menu language

3. Soundtrack: selection of translation language

#Options: Russian, English, Estonian, Latvian, Kazakh, Romanian, Belarusian, Ukrainian, Chinese.

#Default: English.

#Selection of other languages: select the OTHERS item using the UP and DOWN buttons 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.

4.5. DVD/MP4 Subtitles: selection of subtitles language

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

#Default option: Off.

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

#If the language you selected is not recorded on the DVD/MP4 disc, another available language will be displayed.

2.4.3 Image settings menu

1. TV system: TV system selection

#Options: Auto, PAL, NTSC.

#Default option: PAL

2. TV scan mode: scan mode selection

#Options: progressive, interlaced.

#Default option: interlaced.

#Progressive scan is transferred only via a component video output.

#Before switching to progressive scan, make sure that your TV set supports this operation mode.

3.Video output: selection of video signal

#Options: S-Video,Comp, SCART.

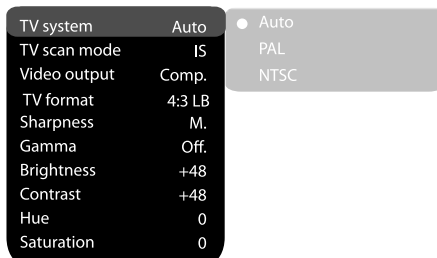
#Default option: Comp.

4. TV Format: image ratio settings

#Options: 4:3 pan&scan, 4:3 letterbox, 16:9 TV, Wide/SQZ.

#Default option: 16:9

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



5.Sharpness: image sharpness adjustment

#Options: High, Medium, Low.

#Default option: Medium.

6.Gamma: adjustment of image color temperature

#Options: High, Medium, Low, Off.

#Default option: Off.

7.Brightness: adjustment of image brightness.

8.Contrast: adjustment of image contrast

9. Hues: adjustment of image hues.

10.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 and Down buttons. Press OK or RIGHT key to start adjusting the relevant option.

#Change the option value using the Up and Down buttons.

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

2.4.4 Sound settings menu

1. Mixer

A) Configuration: setting of the mode for conversion of the 5-channel signal to stereo signal

#Options: Stereo, 5.1

#Default option: Stereo.

#5.1 mode must be supported by the disc
Number of music accompaniment channels depends on the specific disc.

#Adjustment of the central speaker and surround speakers is available only if the Configuration option is set to 5.1 position.



B). Stereo mix: playback set-up while playing the disc with two independent audio channels.
(DV911HD only has this function.)

#Options: L+R, L, R.

#Default option: L+R.

C) Surr. Mix: set-up of surround options while playing the stereo disc.(DV911HD only has this function.)

#Options: Off, sum, Virt. Surr.

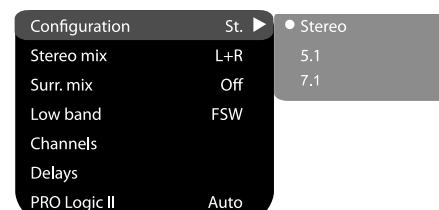
#Default options: Off.

D). Low band: distribution of low frequencies through channels.

#Options: Front F, Center C, Surround Sr, Subwoofer SW.

#Default options: Front F, Subwoofer SW,

#If you want the low-frequency component of the sound signal enter only the subwoofer channel, select and confirm the parameter Subwoofer SW.



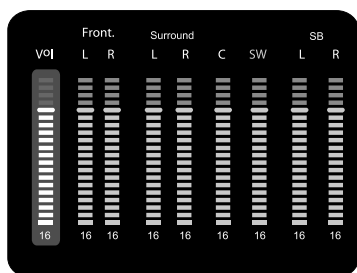
E). Channel settings: separate adjusting of volume by channels.

#Select the channel you want.

#Adjust the sound volume of each channel using the UP and DOWN buttons.

#Press the OK or Cancel to return to sound settings menu.

#No SB L/R selection for DV915HD in right menu.



F) Delay of the channel: set-up of signal delay in speaker channels(central, rear and subwoofer).

#Using the Up and Down buttons, select the channel, for which you want to set up the delay, and press OK for confirmation.

#Using the Up and Down buttons set up the desired distance from the listener to each speaker(detailed description of this operation see on page30)

#Press LEFT key of the cursor to return to speaker configuration menu.

#No LSA/RSB selection for DV915HD in right menu.

G). PRO Logic II: function of stereo sound conversion to 5-channels sound.

#Options: On, Off, Auto.

#Default option:Off.

#In Auto position, the DVD player determines itself, when to use the PRO Logic II decoder. Some discs do not support this function.

2.Digital audio output

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

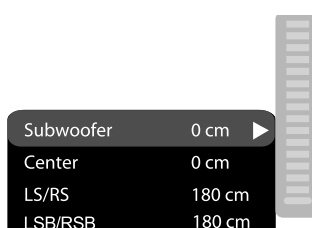
#Options: RAW, PCM.

#Default option: RAW.

#When you select the RAW option, the not decoded signal is transferred to the DVD player's digital outputs, the decoded signal is transferred to analog outputs. Decoding is performed by the built-in decoder of the DVD player.

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 DVD player's digital outputs.



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

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

#Default option: 48 kHz 16 bit.

3.HDMI audio: transfer digital sound by HDMI interface.

#Options: Spdif, Multi-channel, Off

#Default option: Multi-channel

4.Sound correction

A)Max volume: max volume limiting

#Using the Up and Down buttons, adjust the max volume level.

#Press the LEFT key of the Up and Down buttons to return to sound correction setup menu.

B)Equalizer: equalizer modes

#Options: Rock, Pop, Live, Dance, Techno, Classic, Soft.

#Default option: Off.

C)Echo:echo effects

#Options: Off, Concert, Living room, Hall, Bathroom, Cave, Arena, Church.

#Default option: Off.

D)Tone balance: adjustment of tone balance level.

#Adjust the tone balance level using the Up and Down buttons.

#Press the LEFT key of the Up and Down buttons to return to sound correction setup menu.

2.4.5 Playback settings

1.DVD

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

#Options: Yes, No

DeFAULT option: No



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 on the disc.

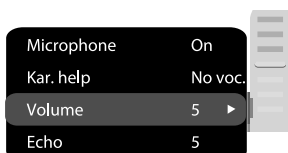
3. Files: selection of reproduced files on the disc.
 #Options: Audio, Pictures, Video.
 #Default option: A.P.V
- 4.Repeat: file repeat mode
 #Options: Off, Single, All.
 #Default option: Off.
- 5.Shuffle: shuffle files from the playlist
 #Options: Off, On.
 #Default option: Off.
- 6.Laad effect: Loading mode for JPEG or Paeture col.
 #Options: Off, from top, from bottom.
 #Default option: Off.

2.4.6 Karaoke settings menu

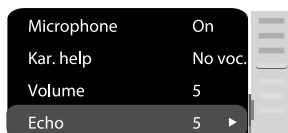
- 1.Microphone: microphone on/off
 #Options: Off, On.
 #Default option: Off.
- 2.Kar. Help :karaoke disc playback mode
 #Options:L Channel, R Channel, No ast, No voc.
 #Default option: No vocal mode.



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.



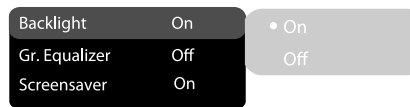
4. Echo: echo level while playing the karaoke-disc
 #Adjust the echo level Using the UP/DOWN buttons.
 #Press LEFT key of the UP/DOWN buttons to return to karaoke settings menu.



2.4.7 Preference settings

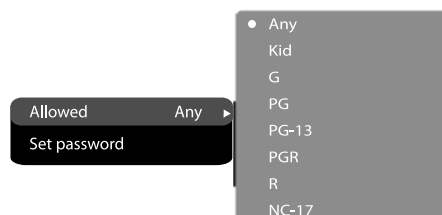
1. Gr.Equalizer: spectrum analyzer
 #Options: On, Off.
 #Default option: Off.

- 2.Screensaver: screen saver on/off
 #Options: On, Off.
 #Default option: On.

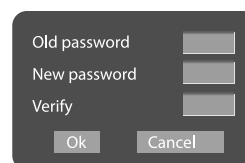


2.4.8 Parental Control

- 1.Allowed: setup of age restrictions to prevent children from seeing undesirable discs.
 #Options: Any, Kid, G, PG, PG-13, PGR, R, NC-17.
 #Default option: Any.

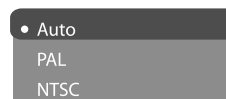


2. Set password: setup of a four-digit password to change the level of age restrictions.
 #Default option: 7890.



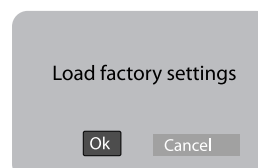
2.4.9 Initial setup menu

- #Press the RIGHT key of the UP/DOWN buttons to enter the initial setup menu, then select the desired item using the buttons Up and Down and press OK key for confirmation.
 #While being in this menu section, you cannot return to the previous level by pressing the LEFT key of the UP/DOWN buttons.



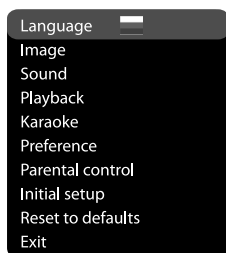
2.4.10 Reset to defaults

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



2.4.11 Exit settings menu

#Select the exit item using the Up and Down buttons and press the OK to exit the menu.



2.4.12 Channel delay set-up

Set-up of time delay in the surround channel

Usually, time delay in the Dolby Digital decoding system is preset to ensure best effect while installing the Home Theater. However, in case you wish to adjust your system more precisely, please consult instructions given in this manual. Set up of time delay for this device is possible in both Dolby Digital and Dolby Pro Logic modes.

To set the desired delay you have to know the distance from the place where you are, to the front speakers and Surround speakers as shown in Fig.1. Consult Fig.2(Dolby Pro Logic mode) and 3 (Dolby Digital mode) in order to determine the distance to Surround speakers(axis Y in the figure) and the distance to the front speakers(axis X in the figure). Crossing point of those two lines on the chart will give the recommended delay value.

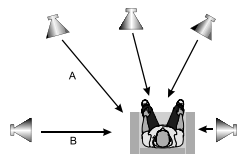


Fig.1. Take into account the A-B distance; use both figures for setting the desired time delay.

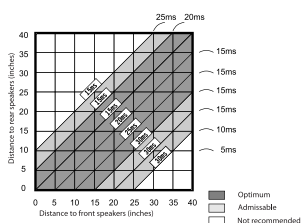


Fig.2. Determine delay value as to Dolby ProLogic mode.

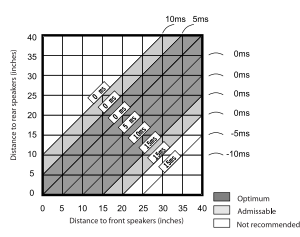


Fig.3. Determine delay value as to Dolby Digital mode.

Set-up of time delay in the central channel
Sometimes several people are listening to the music, and the space is limited. In this case, you can install three speakers(two front ones and a central one) as shown in Fig.1.

With the distance to the listener being approximately the same. The central channel delay is to be set at "0".

Should the central speaker be in close proximity to left and right front speakers as shown in Fig.2, or the central speaker be nearer to listeners when compared with front speaker's location, or the central speaker be nearer to the listener by 1 foot, in all these cases you may set the delay value for the central channel at 1 ms.

For instance, as shown in Fig.2, if the line C is by 1 foot shorter than the lines R and L, the Delay value is to be set at 1 ms, If your sofa is broad enough, and there are several listeners sitting on it, it makes sense to locate the speakers in one line, as shown in Fig.3 with the delay value of the central channel to be set at "0".

Finally, if it will be necessary to install the central speaker behind the left and right front speakers, the delay value shall be set at "0".

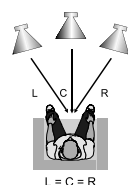


Fig.1. Delay of central channel=0
 $L=R=C$

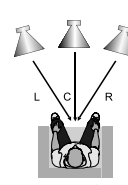


Fig.2. Small area
Delay of central channel
 $=L=(or)R-C$

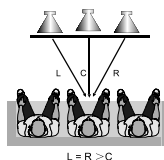
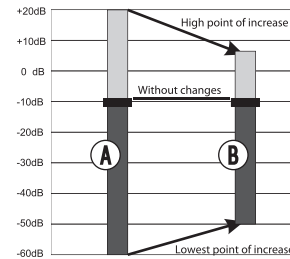


Fig.3. Small area
Delay of central channel=0
 $L=R>C$

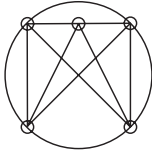
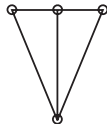
"Night" mode

The Dolby Digital system provides an extremely broad dynamic range of playback sound-from gentle to roaring. It creates the presence effect, especially while seeing motion pictures. However, at night a powerful sound with a broad dynamic range may give pleasure to you, but disturb and annoy your family and neighbors, if you just decrease the volume, you will immediately notice that you ceased to hear, e.g., dialogues as clear as you do at normal volume, and such sound effects as rustle, whisper etc. Have merely disappeared. To avoid this, you just have to decrease the volume of "loud" sounds by simultaneously increasing the volume of "soft" sounds with the volume of "average" sounds left unchanged, i.e. Just decrease the dynamic range of sound accompaniment.

Only Dolby Digital system provides for such a method of sound control. It uses the principle of compressing the acoustic signal's dynamic range while recording; therefore, while playing and inverse transformation (volume expansion) takes place. This is called "night" mode. The regulation limits are restricted, however, to avoid distortions of resultant signal. This is called "night" mode. The regulation limits are restricted, however, to avoid distortions of resultant signal.



Principle of compressing the acoustic signal's dynamic range.

	Dolby Digital	Dolby Pro Logic surround
Rear channel	Stereo 20 Hz-20 kHz	Mono channel with limited frequency range(100Hz-7 kHz)
Low-frequency channel(subwoofer)	Available,20-120 Hz	N/a
Sound field distribution	Multivariate 	From left to right, from right to left, from front to rear, from rear to front 
Channels	6 independent channels, each reproducing its own signal at a time	4 segmented channels. Only one channel is decoded at a time.
	Creates an optimum sound field with illusion of an equal distance from listener to each speaker.	The most cost-efficient way to ensure high-quality surround effect.
	Allows adjusting the decompression degree of sound information("night" mode).	Surround sound may be received from any signal source.
Miscellaneous	Possibility of programmable control of the decoder to transfer basses into low-frequency channel in systems equipped with broad-band speakers and a subwoofer.	Compatible with existing and future two-channel(stereo) formats.
	Undoubted progress in sound recording technology, especially important for program directors, film directors, sound engineers and actors.	Big progress in comparison with conventional stereo, the world's most popular surround format.

2.5 MISCELLANEOUS

2.5.1 Useful notes

- #To extend the service life of your DVD player make pauses of not less than 30 seconds between switching off and repeatedly switching on the DVD player.
- #Disconnect the DVD player from the wall outlet after shutdown.
- #Some DVD player's functions may not be applied to some discs.
- #Use supply sources of rated voltage, otherwise the DVD player may not function or be damaged.
- #In case of the DVD player's occasional stops, please switch the power supply off and then on again.

2.5.2 Trouble shooting

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

Sign of trouble	Cause of trouble	Actions to eliminate 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 DVD player's 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 DVD players in the interlaced scan mode through the DVD-receiver'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 players's laser head.	1. Insert the disc. 2. Install the disc with the label side facing up. 3. Switch the DVD players 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 DVD players's screen. 2. Distance to the DVD players 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 DVD players. 3. Replace both batteries.
Some functions do not work	1. Disc is recorded incorrectly. 2. Incorrect key sequence. 3. Static voltage on the DVD players's housing.	1. Wait 5-10 seconds and the DVD players will automatically return to normal state. 2. Repeat the operation one more time. 3. Switch the DVD players off for 1-2 minutes and then switch it on again.
Unstable image	1. Incorrect TV set settings.	1. Correct the TV set settings.
Headphones do not operate	1. Headphones are not connected. 2. Low level of sound volume.	1. Connect the headphones. 2. Adjust the level of sound volume.
Not signal or incorrect signal from HDMI socket	1. Poor HDMI cable connection. 2. Display device don't support HDMI output mode. 3. Conditions of protection from copy not observed.	1. Make proper connection. 2. Select another HDMI output mode supported by display device . 3. Satisfy some details about conditions of signal recept to HDMI input in user manual.
Flutter echo during connection by HDMI socket	1. Result of incorrect frequency transformation posteriority frame from 50 Hz to 60 Hz.	1. Examine propriety of settings of DVD player and display device.

2.5.3 Specifications

Supported formats	DVD-Video,Super VCD,VCD,MPEG-4,DVD-Audio, CD-DA, CD+G,HDCD,MP3,WMA,Kodak Picture CD,JPEG	
Data medium	CD-R, CD-RW, DVD-R, DVD+R, DVD-RW, DVD+RW	
Inputs	Microphone input USB port	
Outputs	Audio Outputs	Analog outputs: Stereophonic output, 5.1CH output. 2.1CH output Digital outputs: Coaxial audio output, Optical output.
	Video Outputs	S-Video output, composite output, component Y CbCr output, progressive scanning Y PbPr output, RGB/SCART output.
Video characteristics	Signal swing of composite video output: Signal swing fo S-Video output: Signal swing of component video output:	1.0Vp-p(75 Ω) 1.0Vp-p(75 Ω) C:0.286Vp-p(75 Ω) 1.0Vp-p(75 Ω) Cb/Cr:0.7Vp-p(75 Ω)
Audio characteristics	Frequency : Signal-to-noise ratio Common distortion harmonic:	20-20000Hz(± 1 dB) >100(dB) <0.01%
Voltage range	~110-250V,50/60Hz	
Temperature requirement	5-35 $^{\circ}$ C	
Moisture requirement	15-75%(not condensate)	

Model	Dimensions(mm)	Weight(kg)
DV924HD	430X 195 X41	2.18

Model	Power consumption(watt)
DV924HD	14

#We improve quality of our production permanently, that's why specification can change without notification.

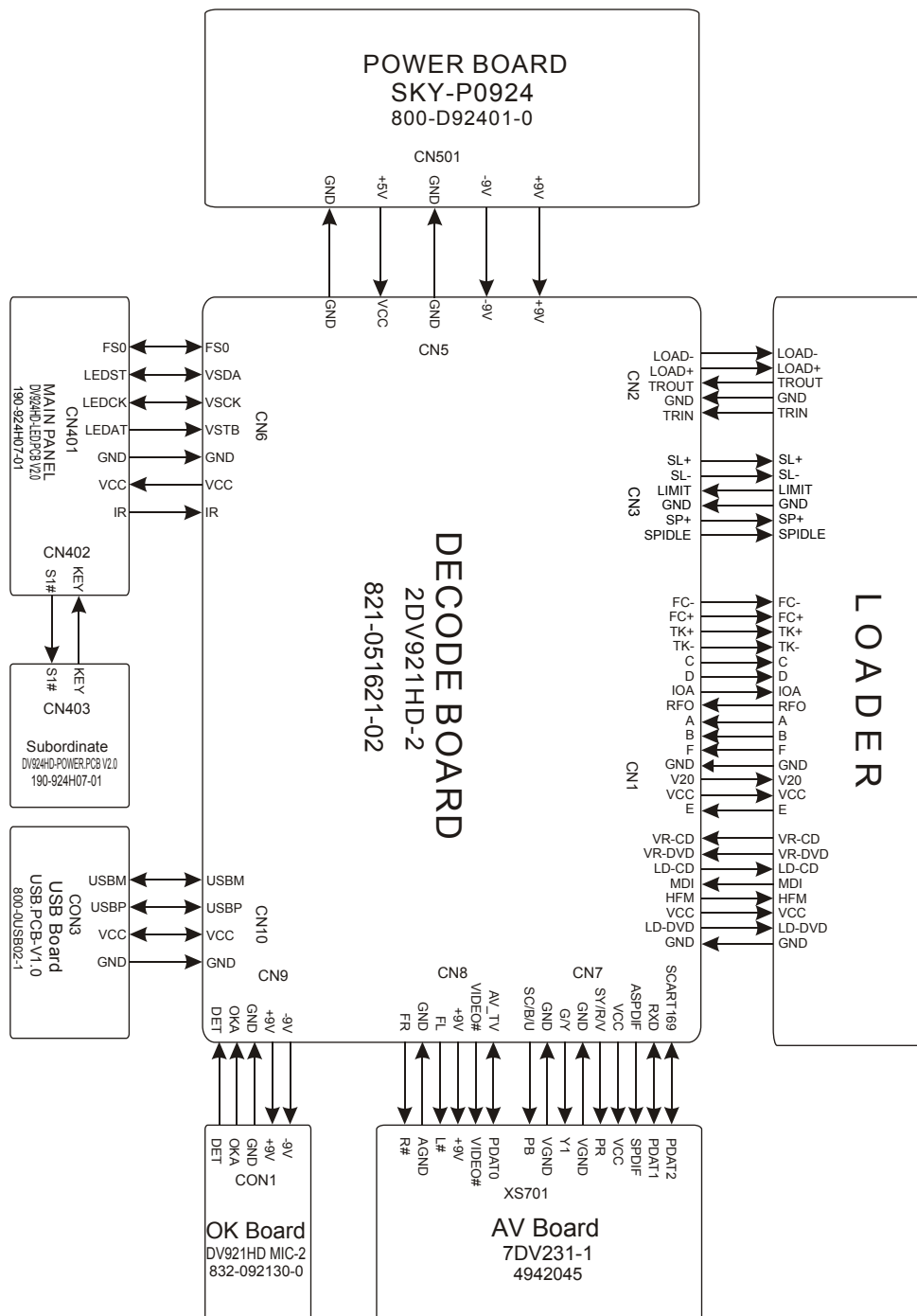
#Some disks,was recording in different formats on different data mediums, can't playback or can playback incorrect over peculiarity of their record.

Chapter Three Block Diagram

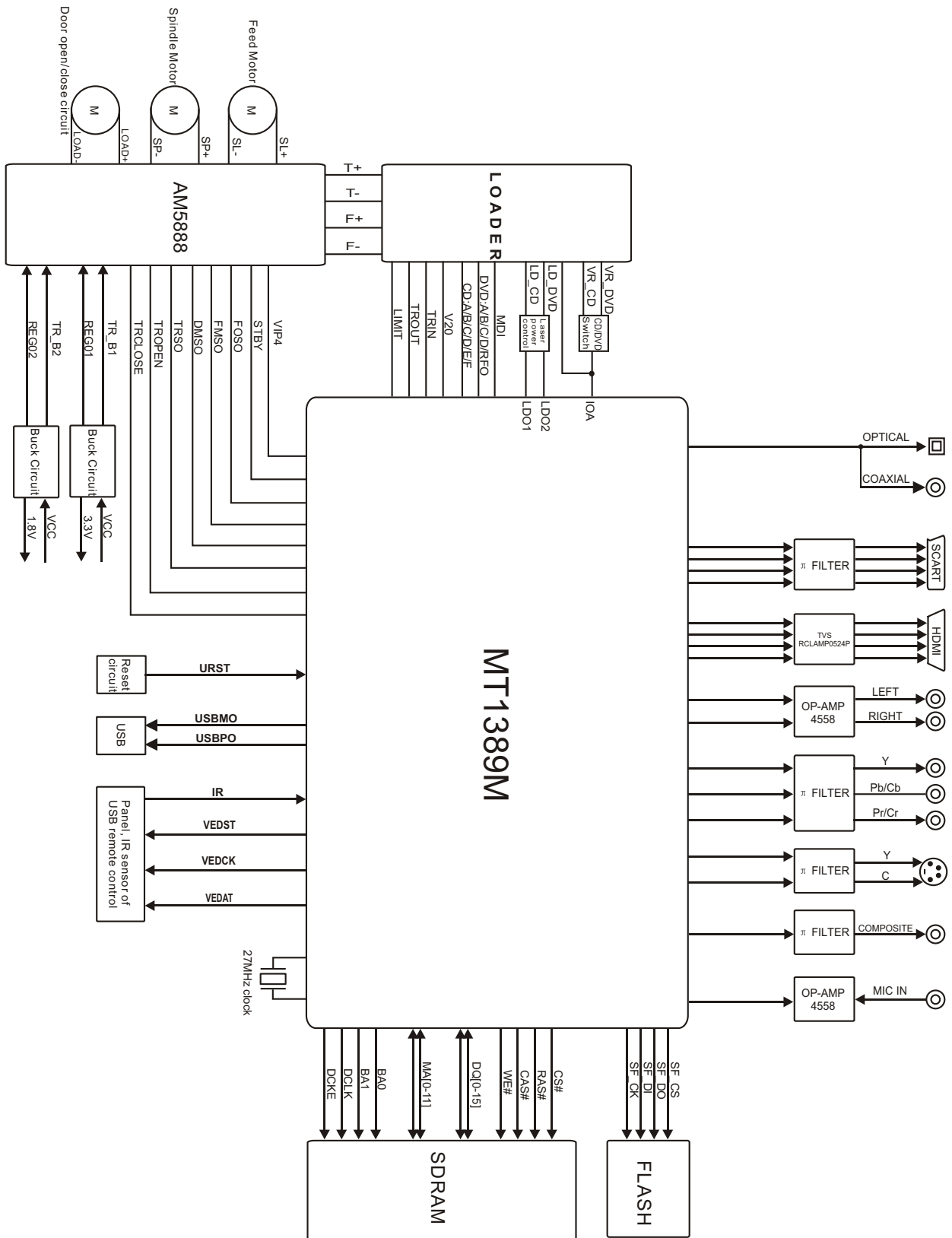
Section One PCB

diagram and block diagram of player

3.1.1 Overall wiring diagram for player .



3.1.2 Block diagram for player.



Section Two Unit circuit principle

3.2.1 Servo circuit.

Servo circuit of this circuit adopts SONY chip and MTK decoding programme, and it is mainly composed of front-end signal processing, digital servo processing, digital signal processing chip MT1389M and driving circuit chip AM5888. Of which MT1389M is also main composition of decoding circuit. Block diagram of servo circuit is shown in figure 3.2.1.1:

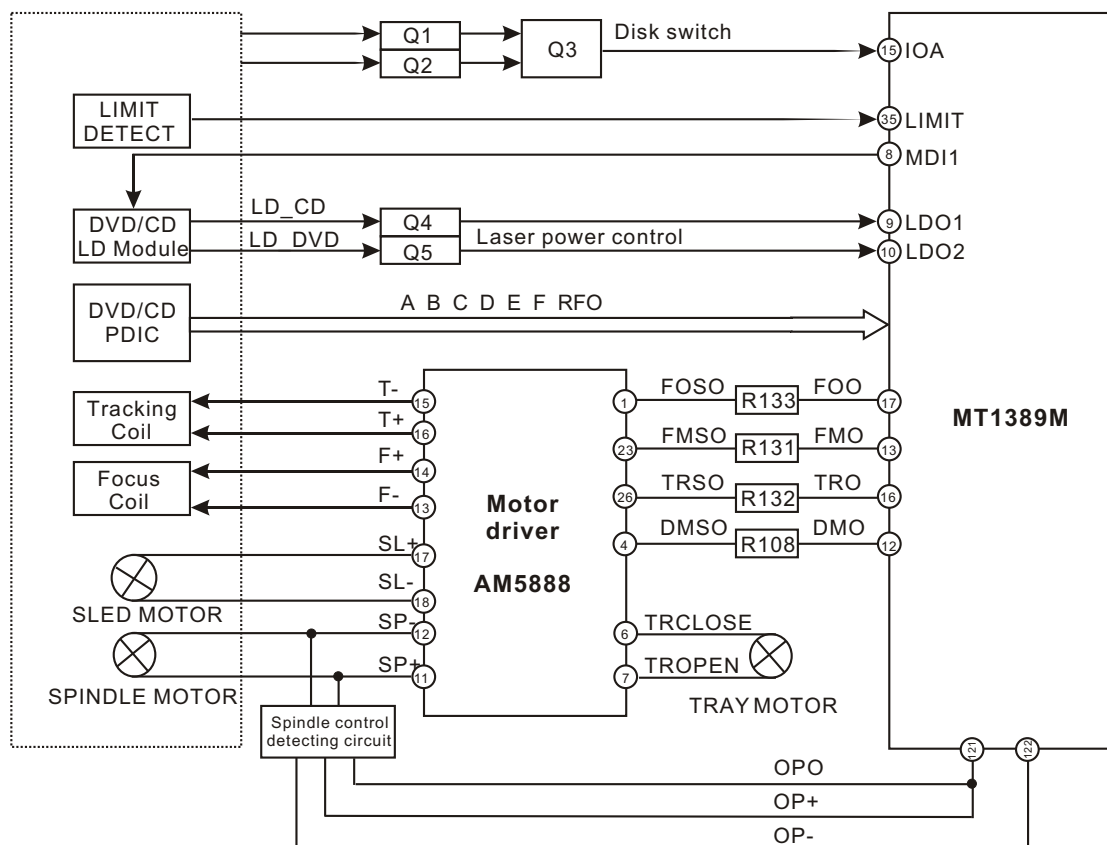


Figure 3.2.1.1 Block diagram of servo circuit

3.2.2 Decoding circuit.

Decoding circuit is mainly composed by MT1389M, SDRAM and FLASH, block diagram of circuit is shown in figure 3.2.2.1:

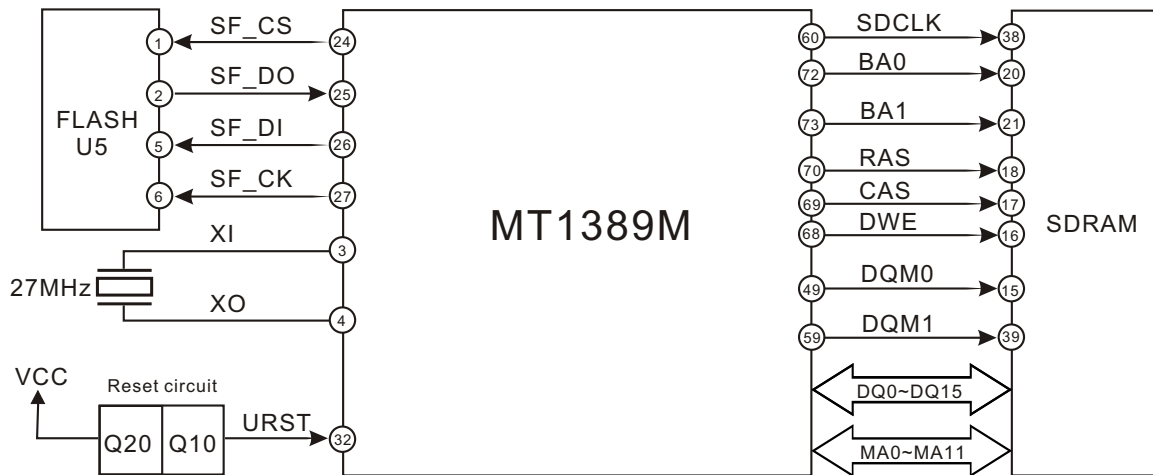


Figure 3.2.2.1 Block diagram of decoding circuit

3.2.3 Audio Circuit.

Block diagram for audio circuit is shown in figure 3.2.3.1.

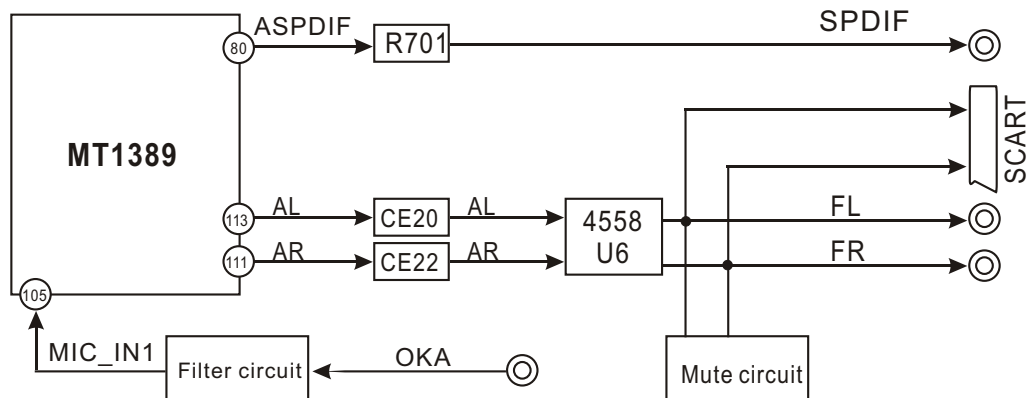


Figure 3.2.3.1 Block diagram of audio circuit

3.2.4 Video circuit .

MT1389M has built-in video D/A conversion circuit. Video output has R/B/G, Y/Pb/Pr, Y/Cb/Cr, CVBS and Y/C modes. However, R/B/G, Y/Pb/Pr, Y/Cb/Cr and Y/C can not output simultaneously, they need software to switch. CVBS is a individual output mode. And four channel video signal outputted by MT1389M outputs to corresponding terminals after video filtering and clamping. Block diagram of video signal is shown in figure 3.2.4.1:

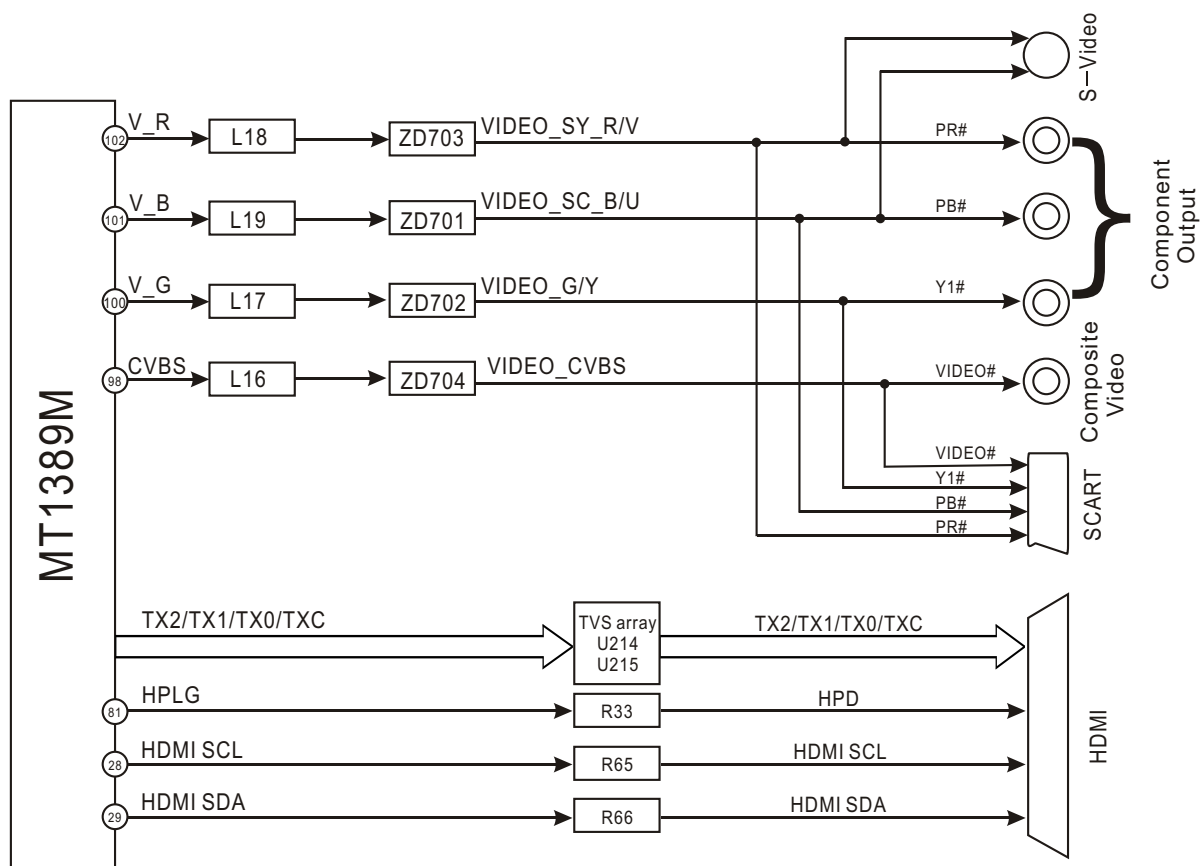


Figure 3.2.4.1 Block diagram of video signal route

3.2.5 Power Circuit.

Block diagram of power circuit is shown in figure 3.2.5.1:

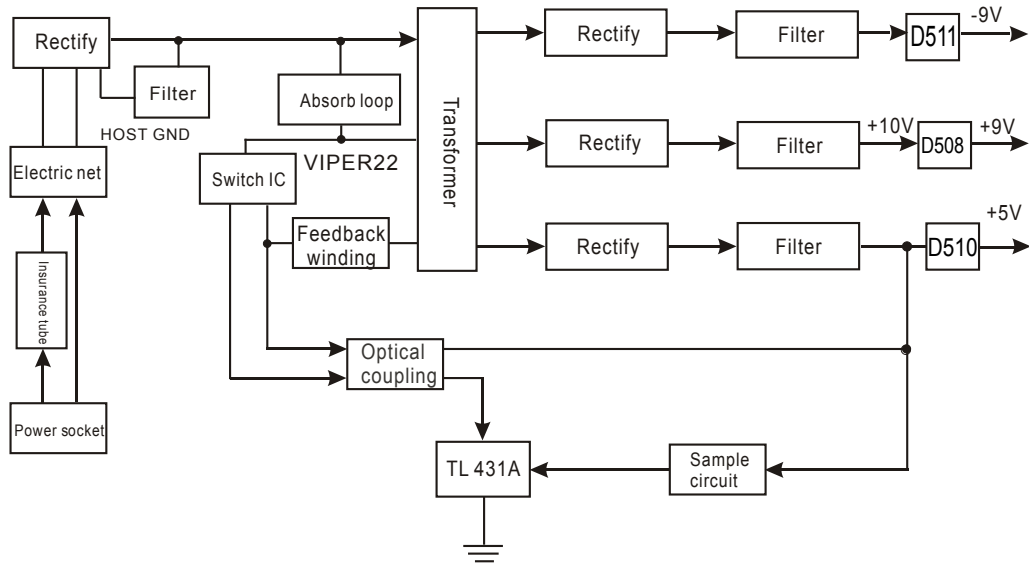
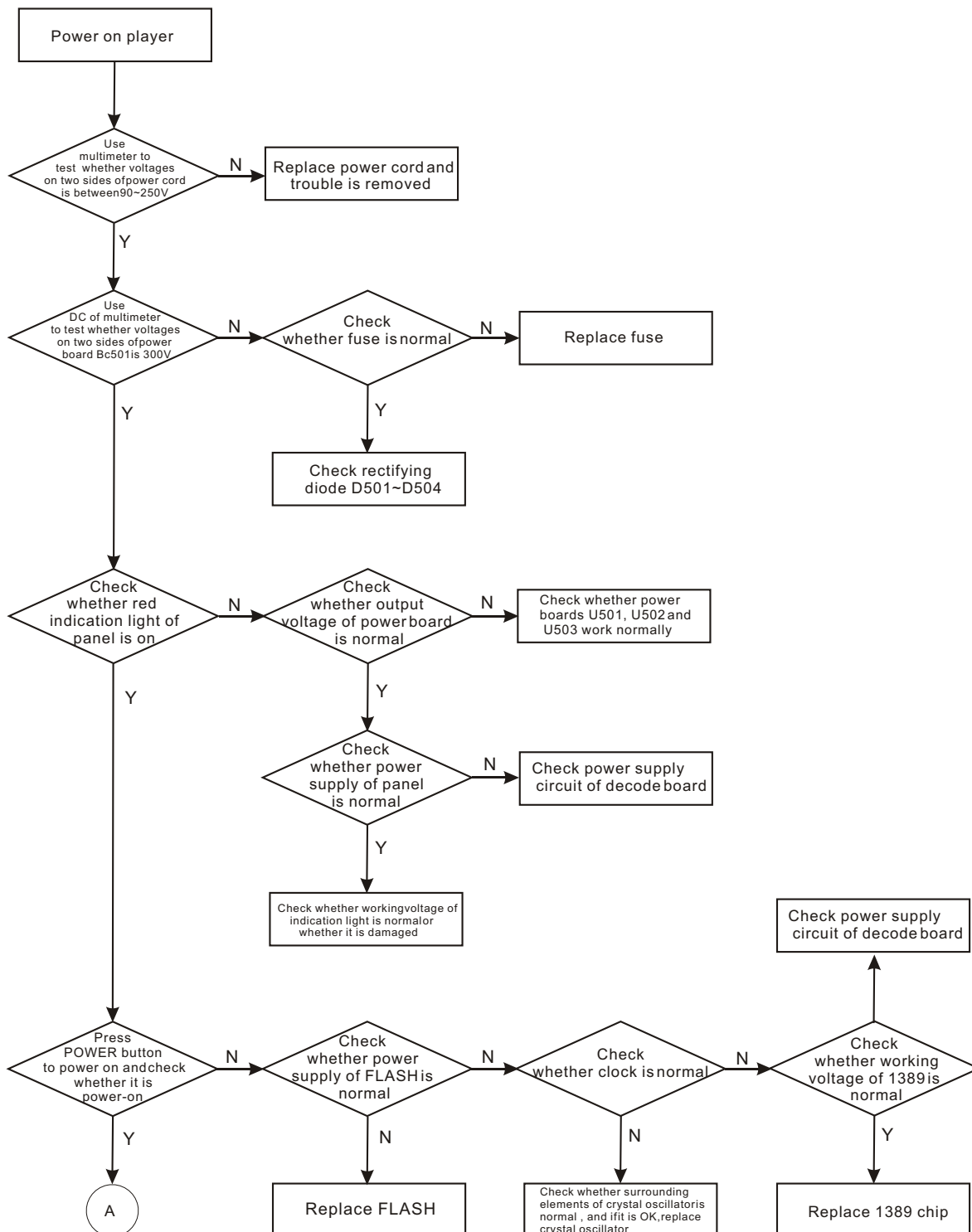
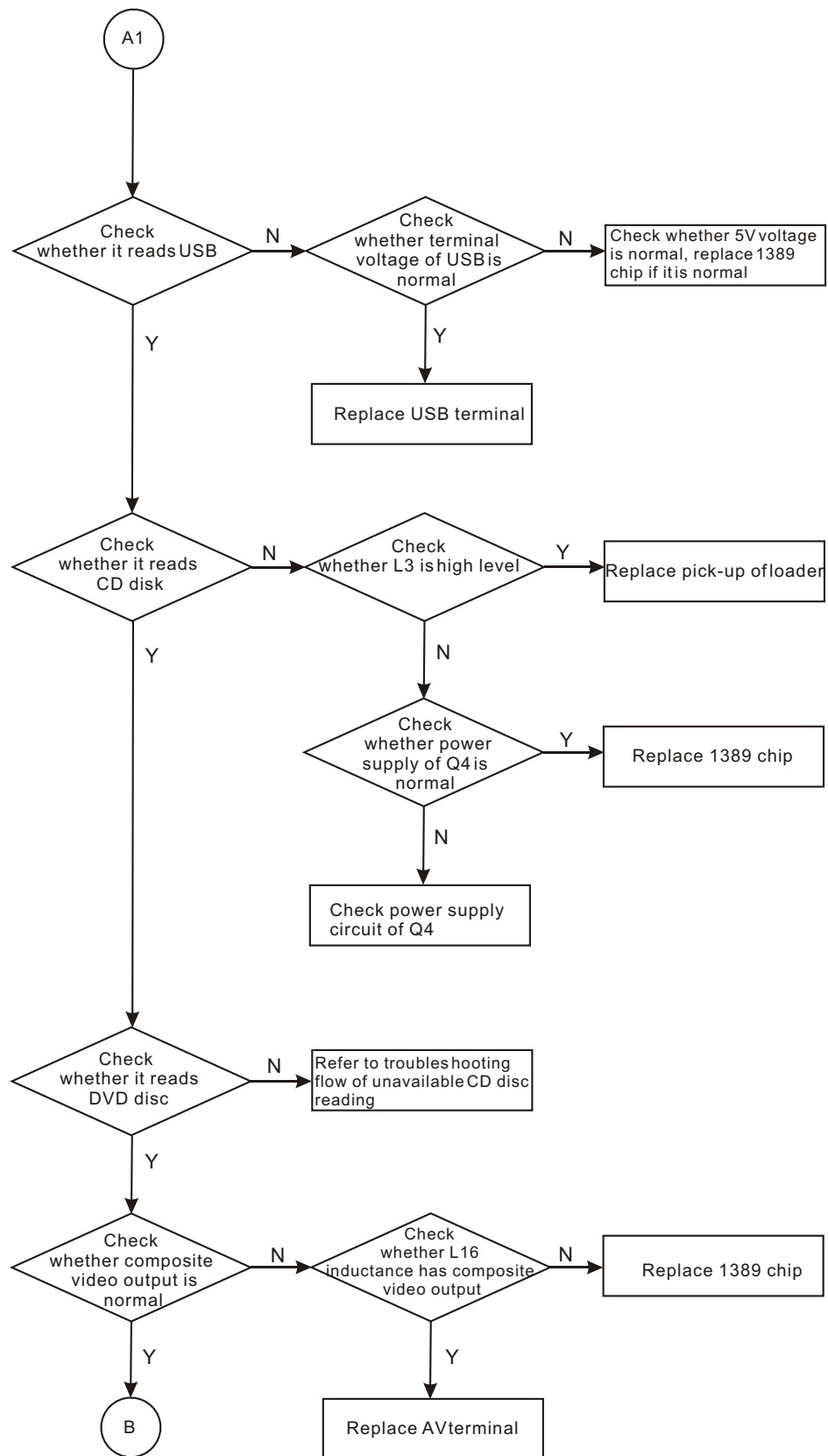
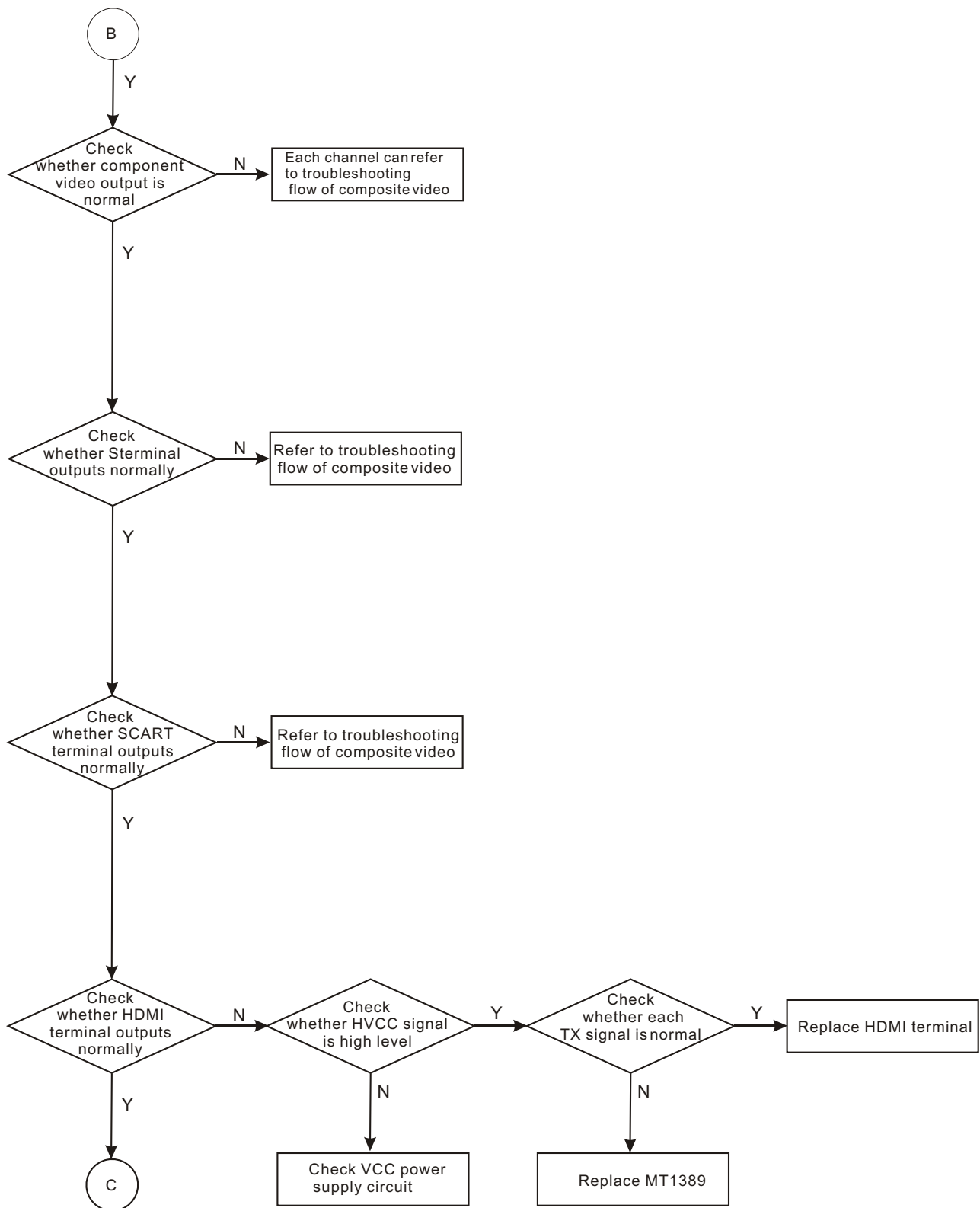


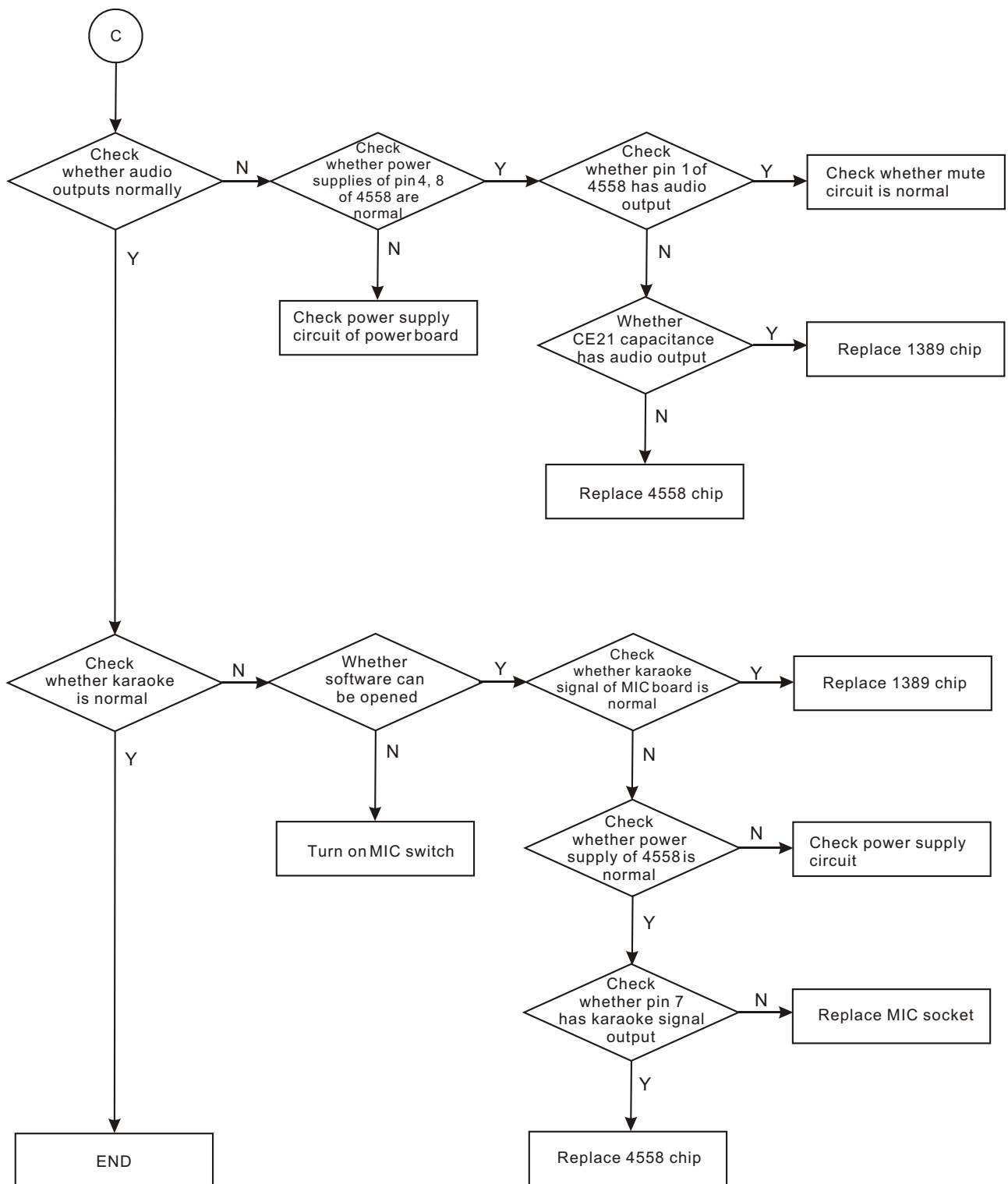
Figure 3.2.5.1 Block diagram of power circuit

Section Three Troubleshooting flow chart





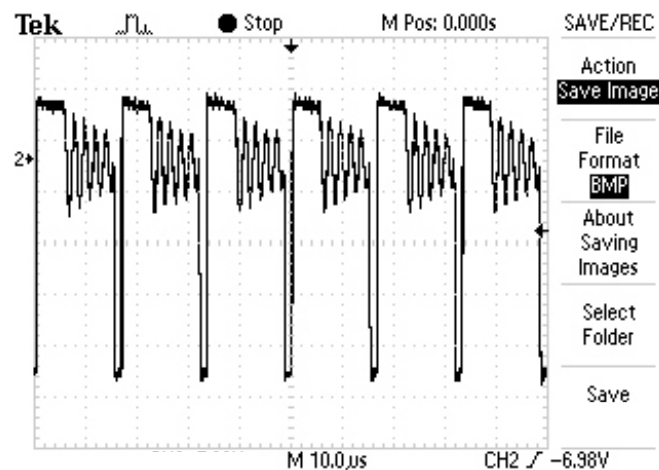




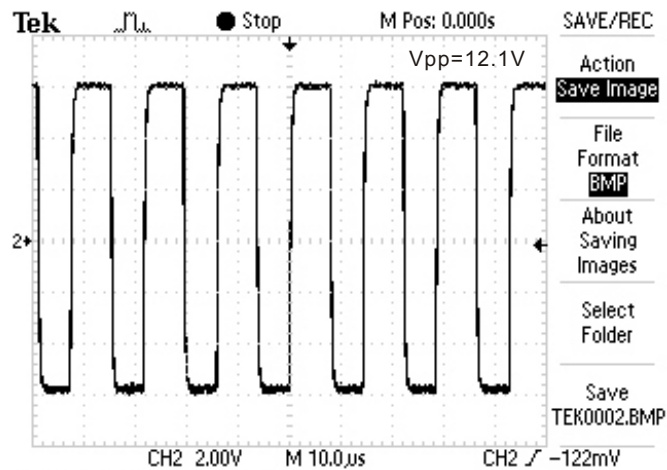
Section Four Waveform Diagram

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.

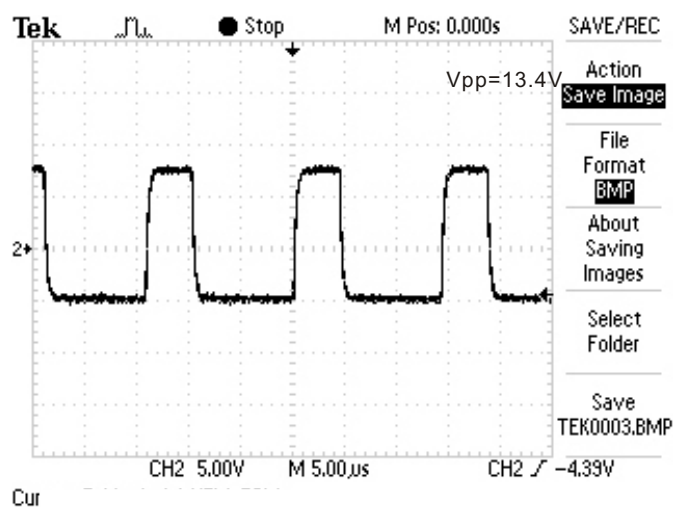
1. Waveform diagram for pulse DC of power board D510 anode.



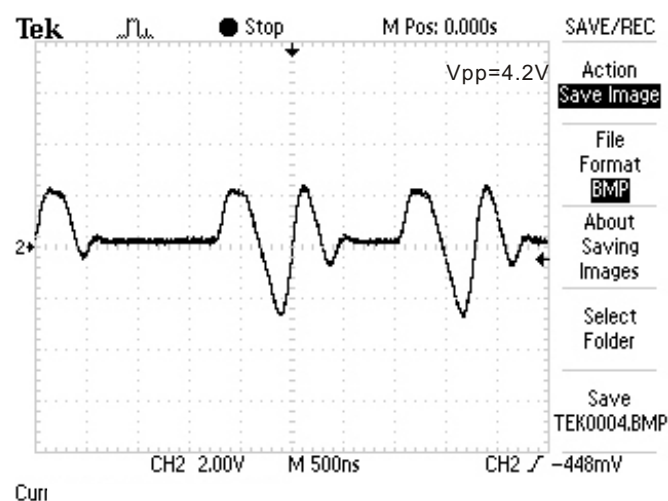
2. DMO waveform diagram (when there is DMSO motion)



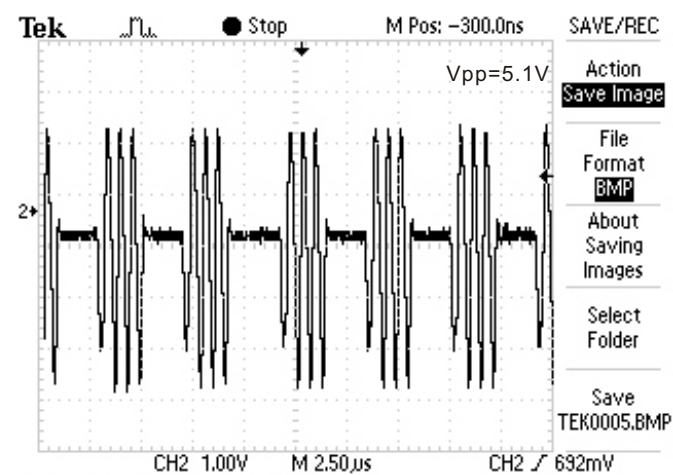
3. FMO waveform diagram (when pick-up has FMSO motion).



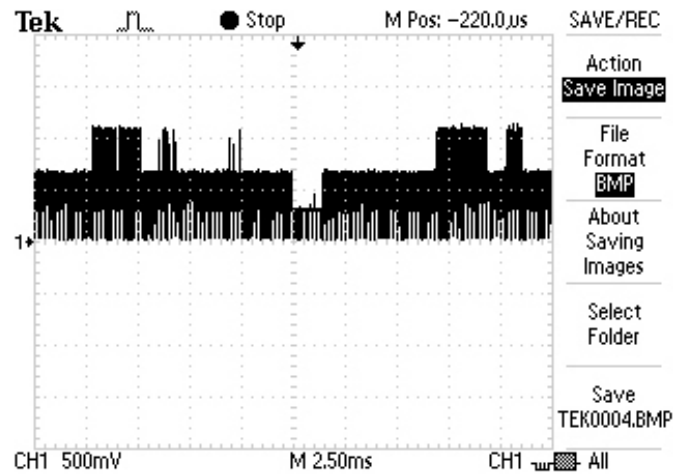
4. TRO waveform diagram (when pick-up has TRSO motion)



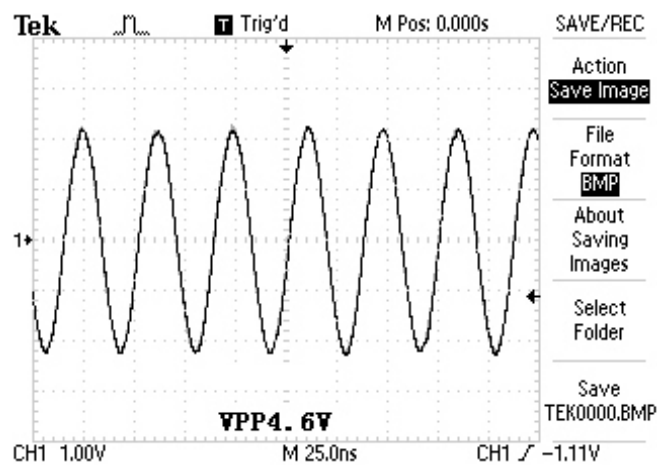
5. FOO waveform diagram (when pick-up has FOSO motion) .



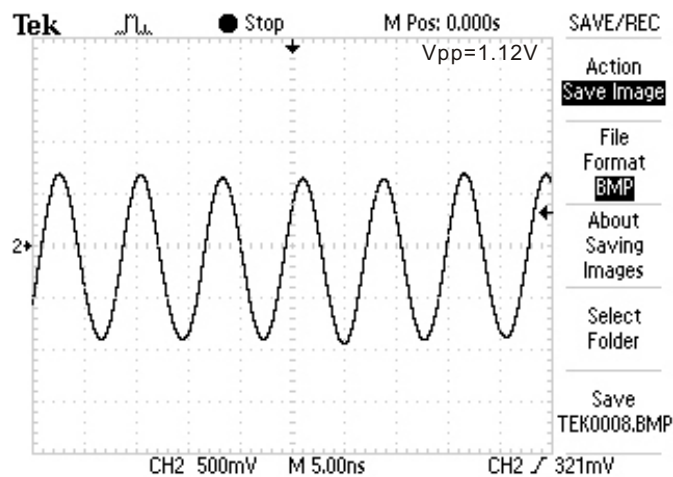
6. Video signal waveform diagram.



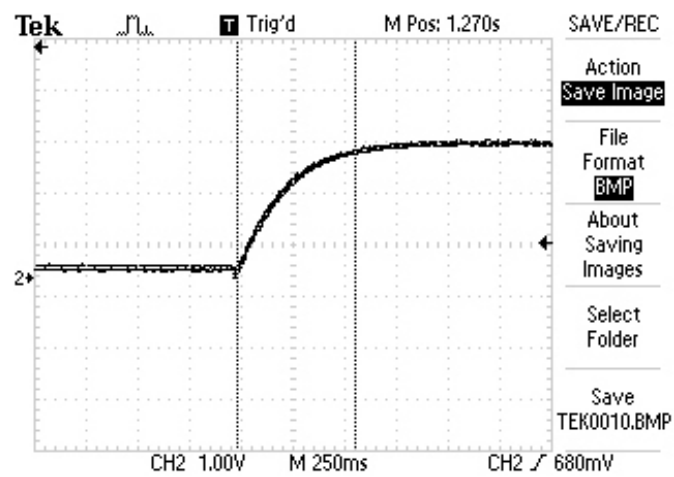
7. 1KHZ audio signal output waveform diagram(it is suggested to use test disc,if not,waveform tested will change at any time,which will affect your judgment).



8. Waveform diagram of 27MHz(X1) clock.



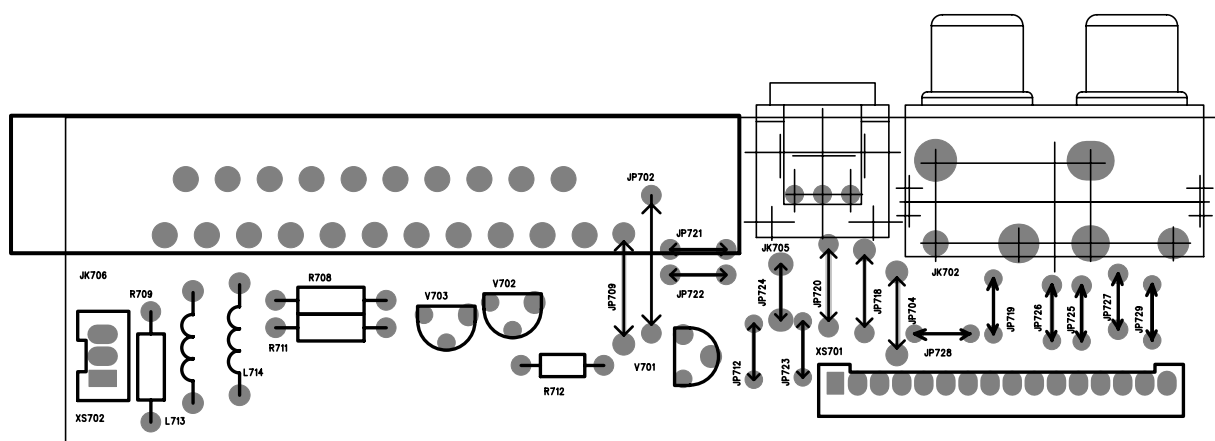
9. URST waveform diagram.



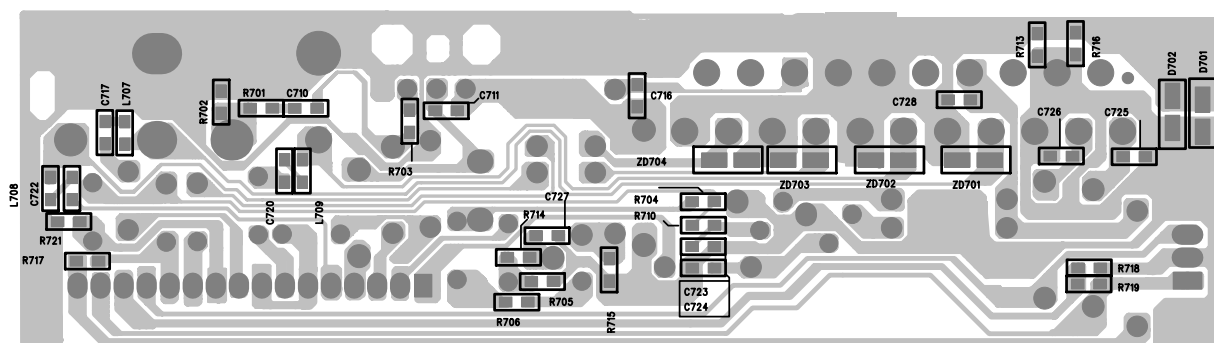
5.1.1 Surface layer of Decode Board(2DV921HD-1)4942097.



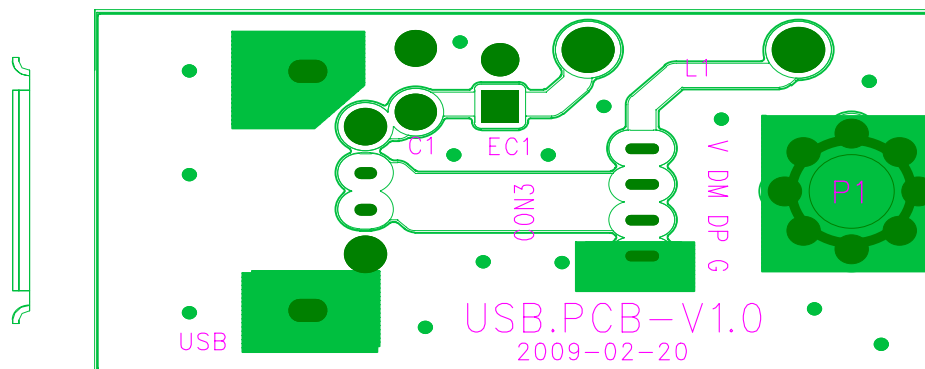
5.1.5 Surface layer of Output Board (7DV231-1)4942045.



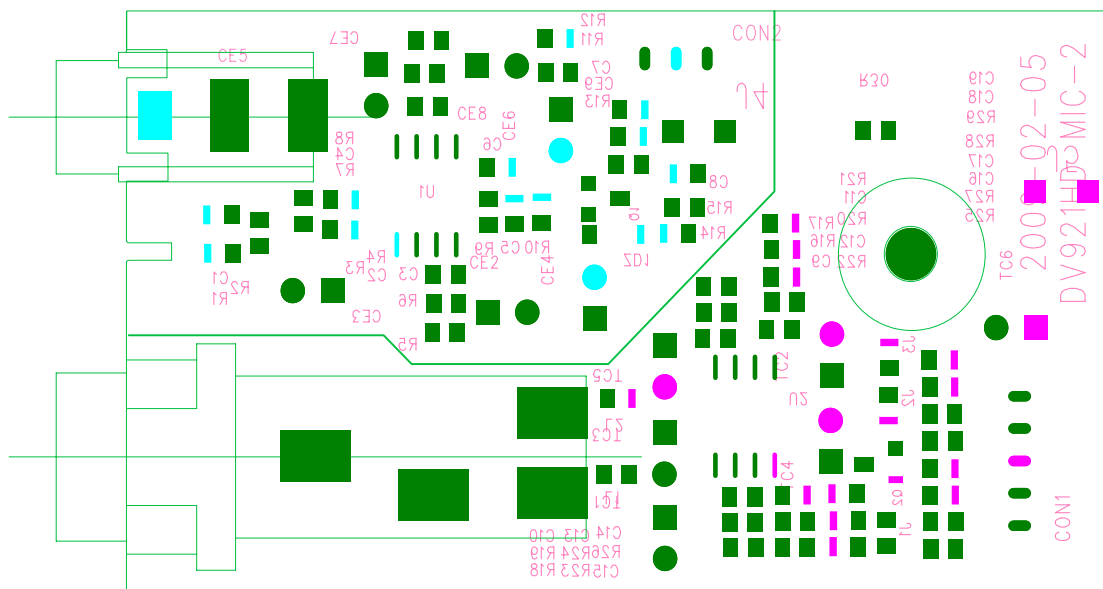
5.1.6 Bottom layer of Output Board (7DV231-1)4942045.



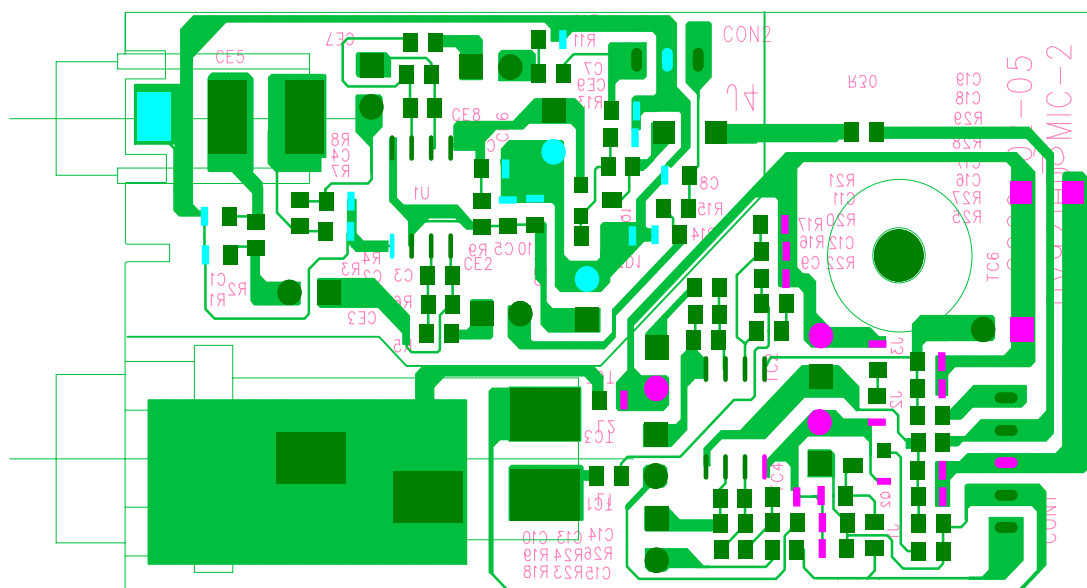
5.1.7 USB Board (USB.PCB-V1.0) 800-0USB02-1



5.1.8 Surface layer of OK Board(DV921HD MIC-2) 832-092130-0

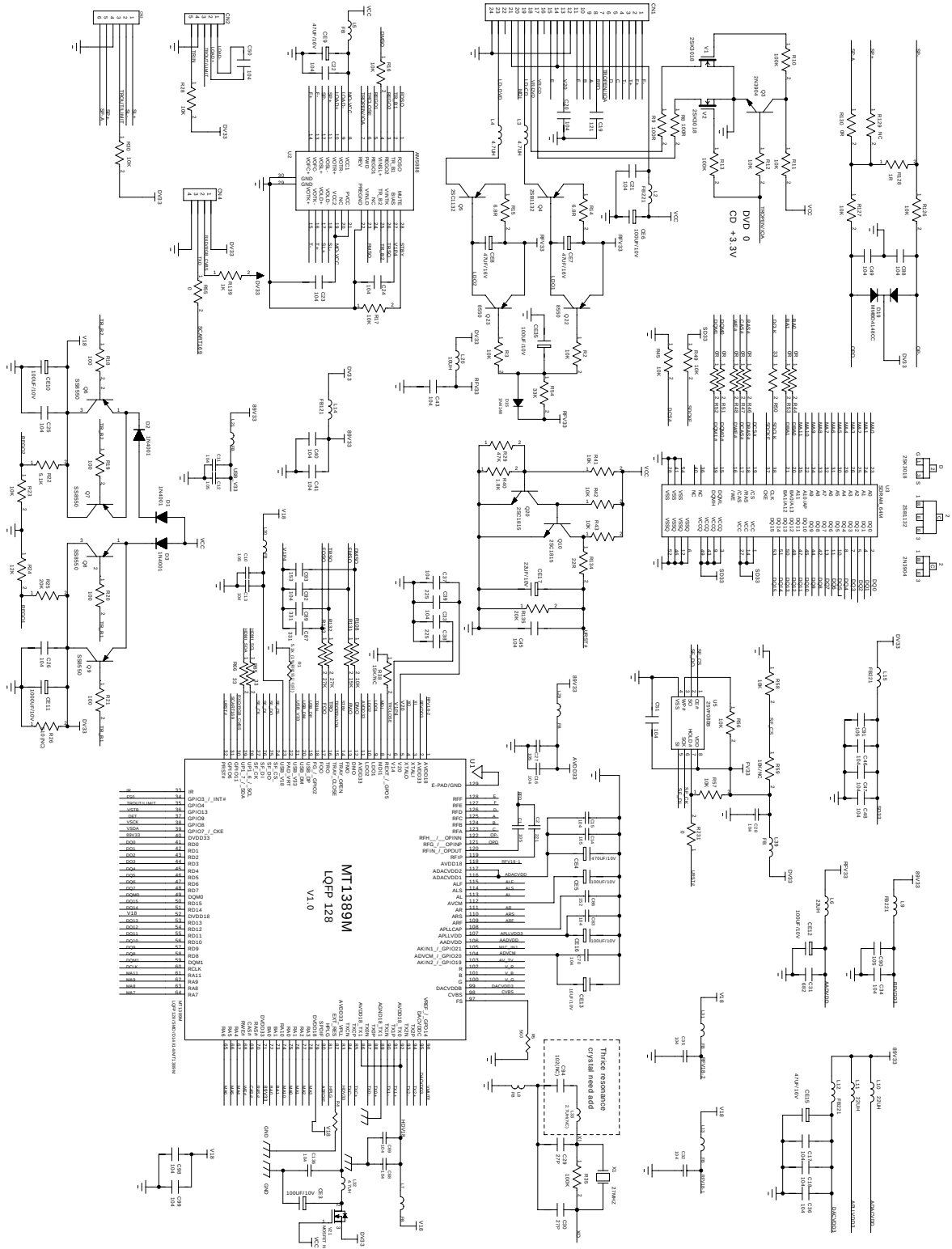


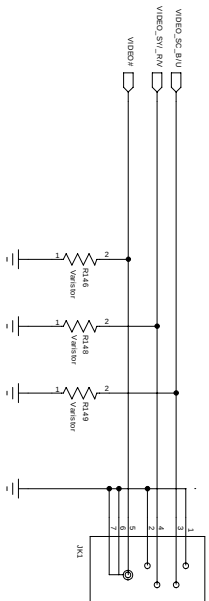
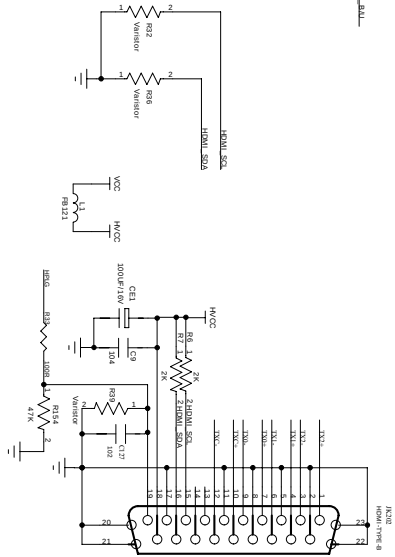
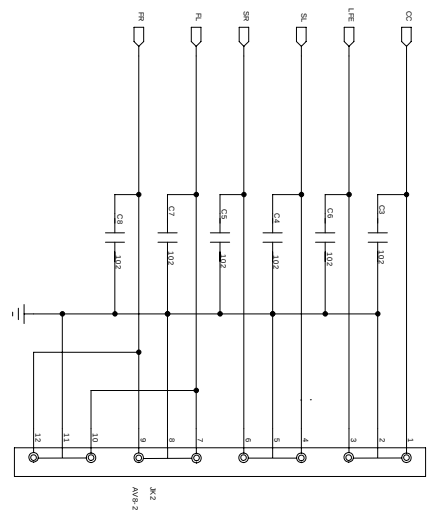
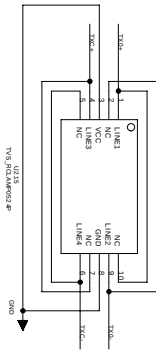
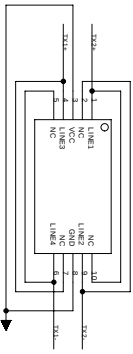
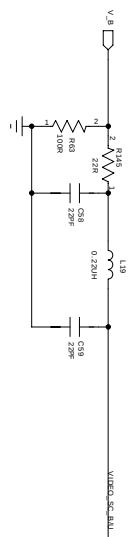
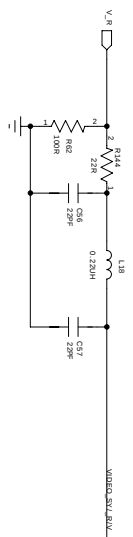
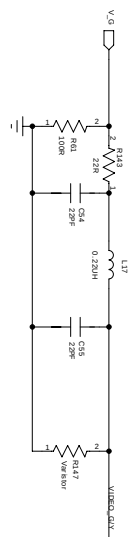
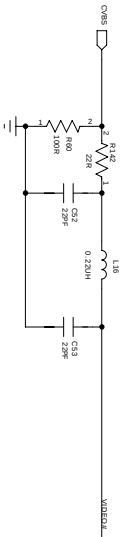
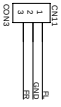
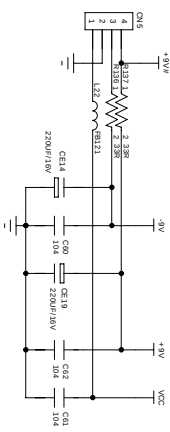
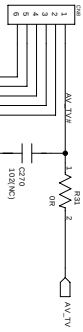
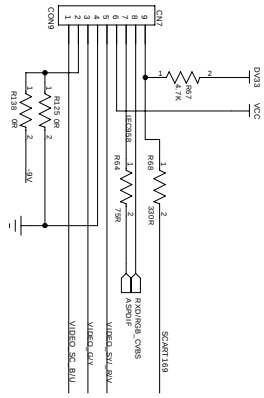
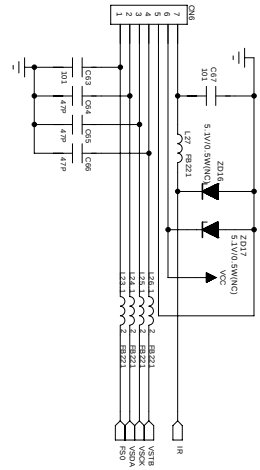
5.1.9 Surface layer of OK Board(DV921HD MIC-2) 832-092130-0

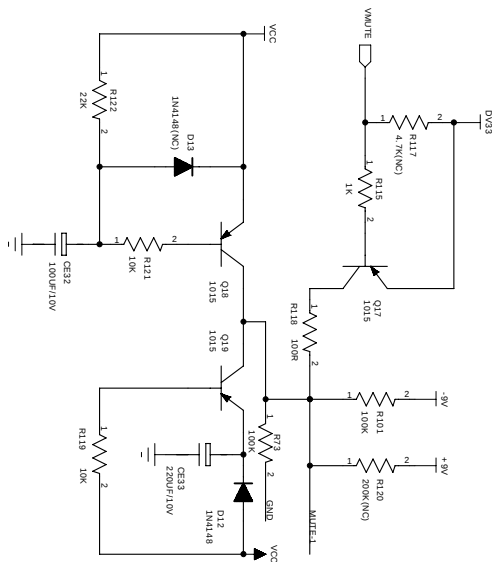
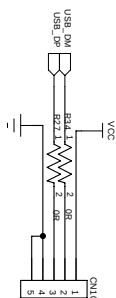
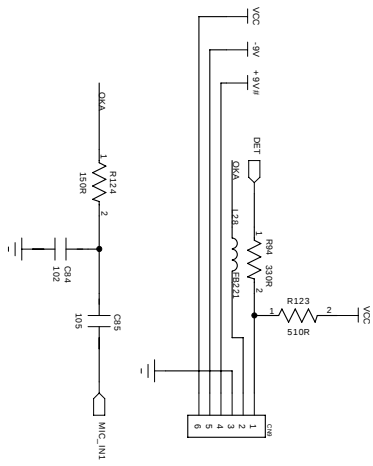


Section Two circuit diagram

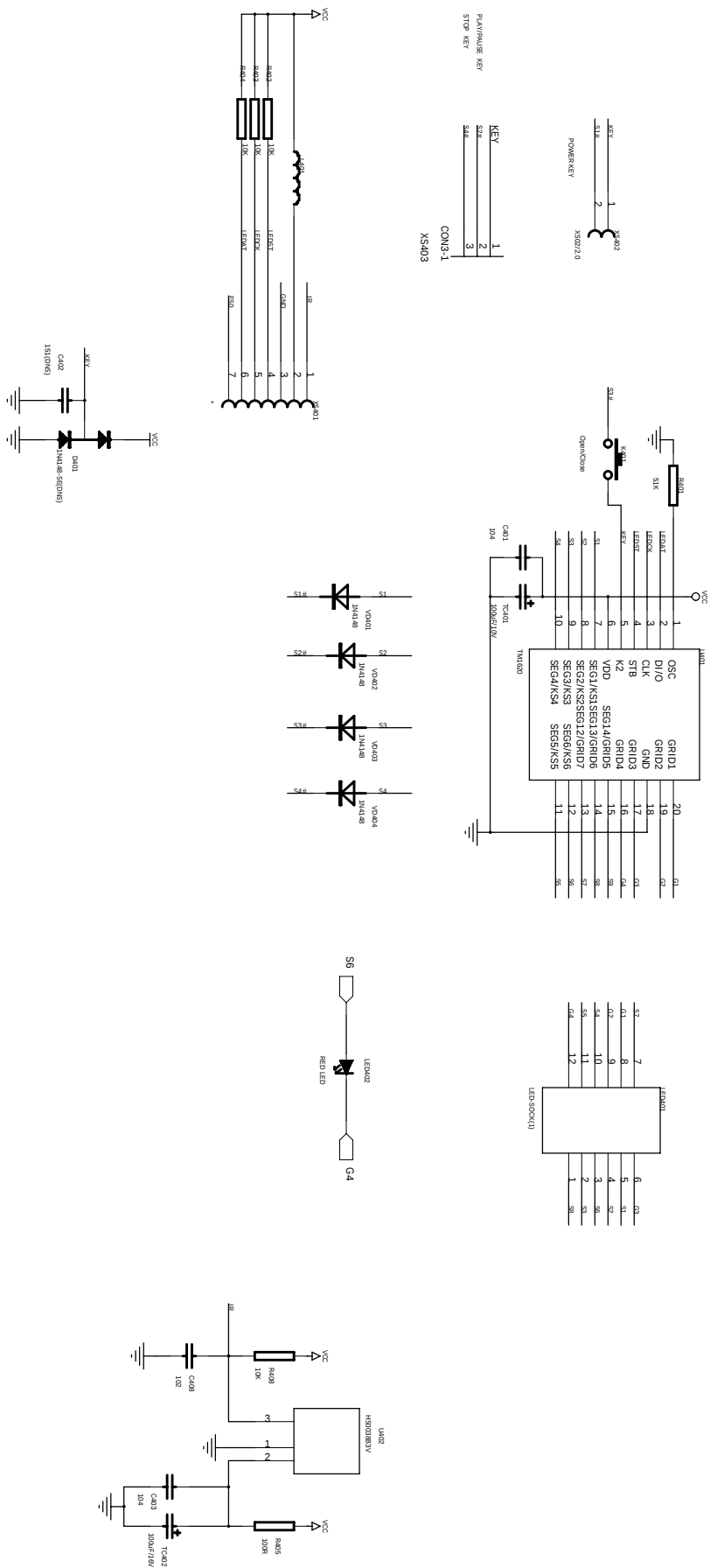
5.2.1 Decode Board.



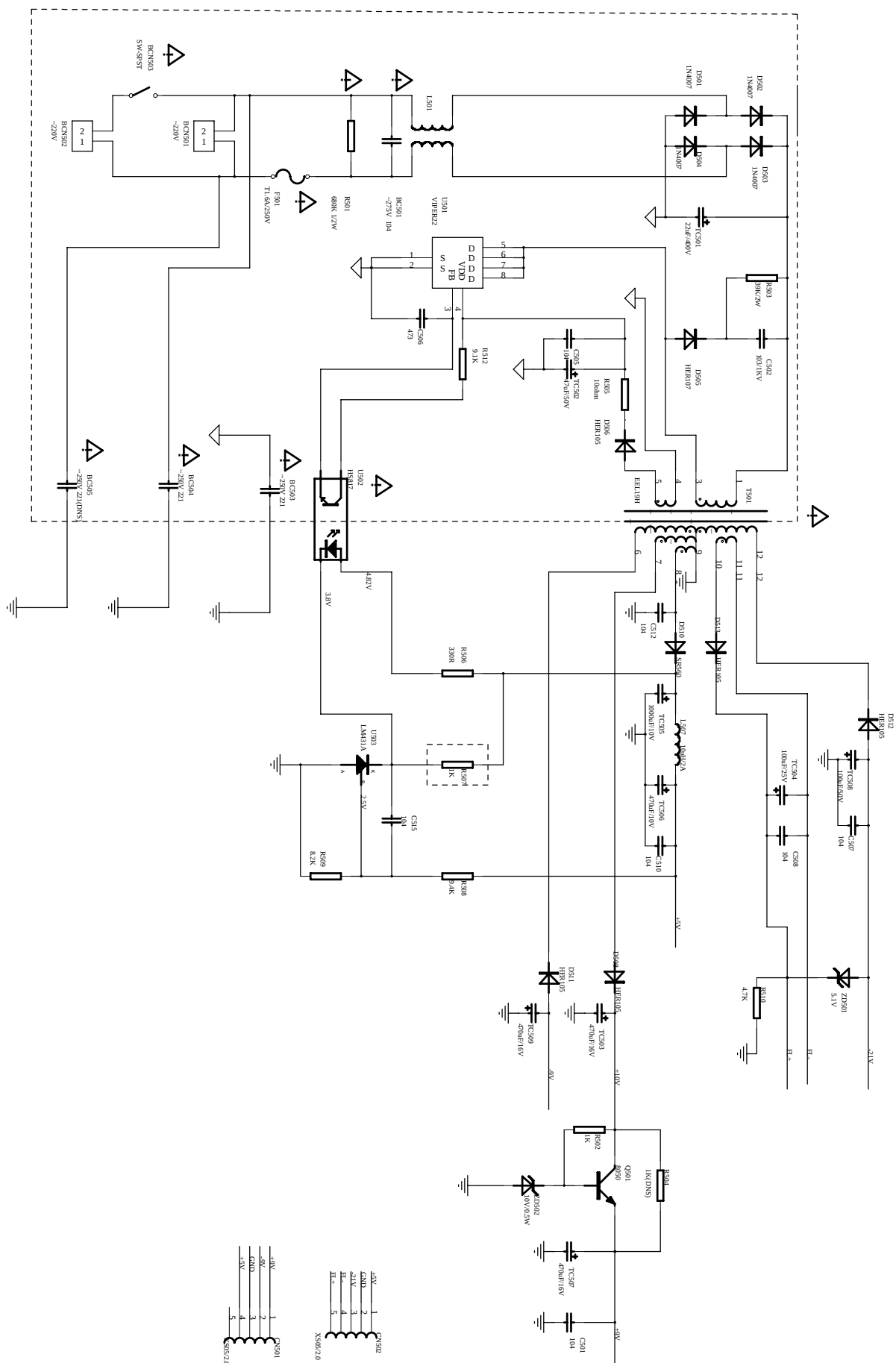




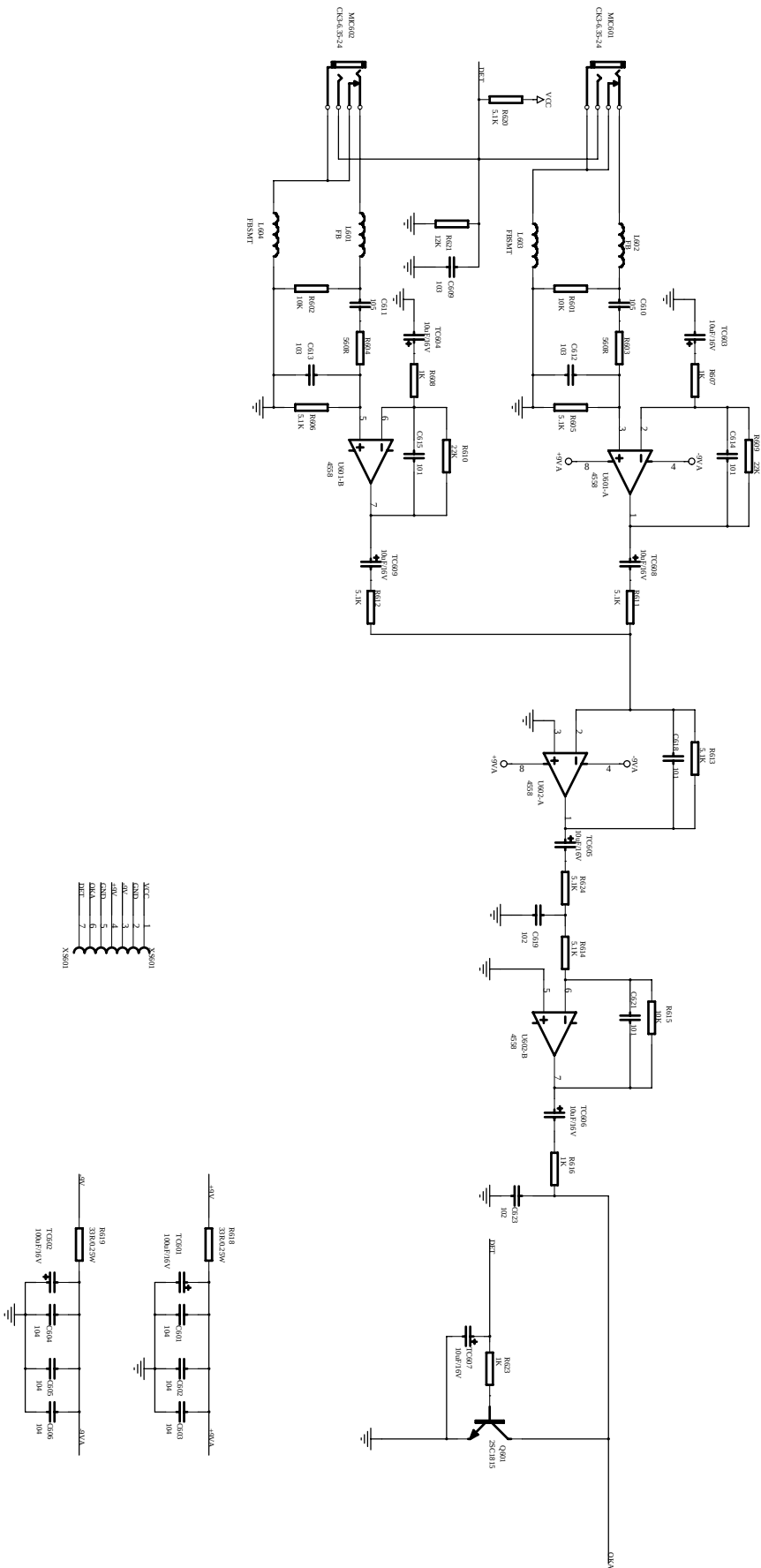
5.2.2 Main Panel.



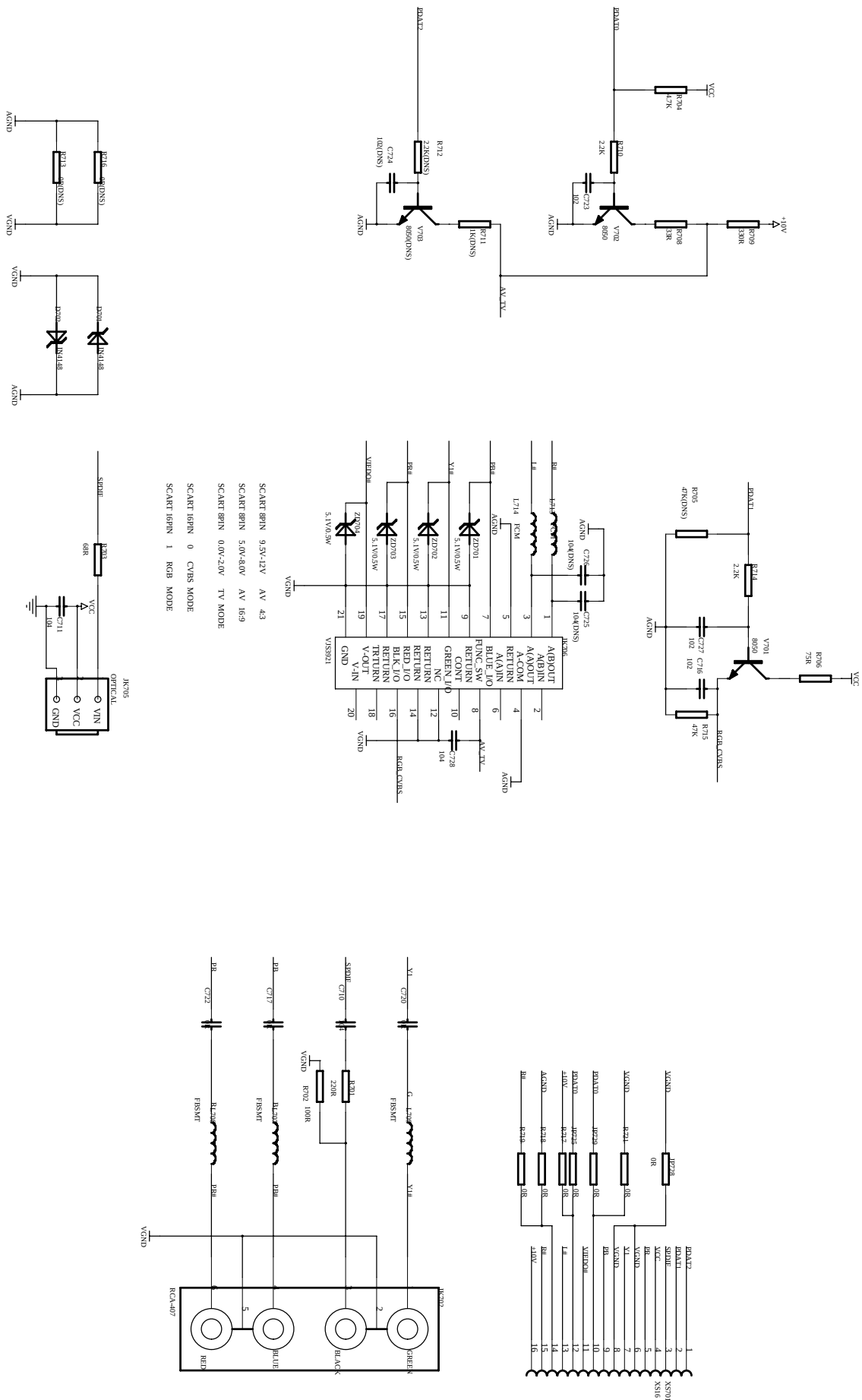
5.2.3 Power Board.



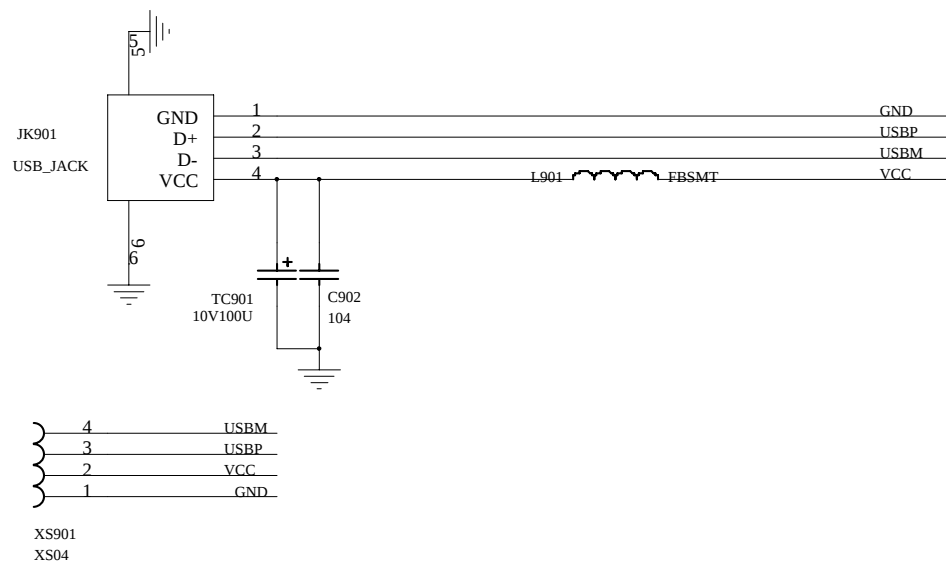
5.2.4 OK Board.



5.2.5 Output Board.



5.2.6 USB Board.



Chapter Six BOM List

BOM LIST VERSION NO.: SI09.01

DVD PLAYER DV924HD (RU MTK1389DE-M(HDMI+5.1CH+USB+(KARAOKE++))+Scart+Coaxial+Optical+YUV+S-Video+Video+DivX3,4,5,6,Xvid Mpeg4+Firmware+P-SCAN)

SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
1.1	832-924H04-0	DISPLAY&KEY BOARD		SET	1	
1.2	832-924H16-0	POWER KEY BOARD		SET	1	
1.3	803-0USB02-1	USB BOARD		SET	1	
1.4	803-924H03-0	PLASTIC COMPONENTS OF FRONT PANEL		SET	1	
2	804-924H01-0	HARDWARE COMPONENTS		SET	1	
3	821-051621-0	DECODER BOARD		SET	1	
4	820-030801-01	DVD LOADER COMPONENTS		SET	1	
5	803-D92401-0	POWER BOARD		SET	1	
6	805-924H01-0	PACKAGE MATERIAL		SET	1	
7	832-924H27-0	SCART BOARD		SET	1	
8	832-092130-0	MIC BOARD		SET	1	

1.1. DV924HD DISPLAY & KEY BOARD

832-924H04-0

SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
1.1	832-924H04-0	DISPLAY & KEY BOARD	DV924HD	PCS	1	
1.1.1	190924H07-11	PCB	DV924HD- 2009-01-08	PCS	1	
1.1.2	033-PT6961-0	IC	PT6961B SMD 32PIN	PCS	1	
1.1.3	135-600039-1	DISPLAY	XL-0039 ORANGE 34*8*6.6MM FOOT DISTANCE =2.54, L=24MM, -10+60℃	PCS	1	
1.1.4	136-600838-6	RECEIVING HEAD	SMK838 VCC=2.7-5.5V -25	PCS	1	
1.1.5	013-000005-30	RESISTOR	0Ω 1206 1/4W ±5% "SM	PCS	5	J1,2,3,4,5
1.1.6	013-479005-20	RESISTOR	4.7Ω 0805 1/8W ±5% "SN	PCS	1	R407
1.1.7	013-750005-20	RESISTOR	75Ω 0805 1/8W ±5% "SM	PCS	1	C406
1.1.8	013-101005-20	RESISTOR	100Ω 0805 1/8W ±5% "SMD	PCS	4	R408,409,410,423
1.1.9	013-511005-20	RESISTOR	510Ω 0805 1/8W ±5% "SMD	PCS	1	R414
1.1.10	013-103005-20	RESISTOR	10K 0805 1/8W ±5% "SMD"	PCS	4	R401,402,403,408
1.1.11	013-513005-20	RESISTOR	51K 0805 1/8W ±5% "SMD"	PCS	1	R405
1.1.12	127-107042-7	CAPACITOR	100uF/16V ±20% 6.3*5mm -	PCS	1	
1.1.13	127-227032-7	CAPACITOR	220uF/10V ±20% 6.3*5mm -	PCS	1	
1.1.14	023-102041-20	CHIP CAPACITOR	1000PF 16V +10%/-10% 080	PCS	1	C407
1.1.15	023-104074-20	CHIP CAPACITOR	0.1uF 50V +80/-20% 0805	PCS	2	R404,C405
1.1.16	023-151041-20	CHIP CAPACITOR	150PF 16V 10%/-10% 0805	PCS	3	C409,410,411
1.1.17	085-600R25-2	CHIP BEAD	FB600/0805	PCS	1	
1.1.18	147-001100-C	LIGHT TOUCH SWITCH	6*6*5mm 180	PCS	3	
1.1.19	130-053007-B	LED LIGHT		PCS	1	
1.1.20	214-0SKY06-0	PILLAR OF LED LIGHT		PCS	1	
1.1.21	030-004148-1	DIODE	1N4148 (DIP) 1/2W	PCS	3	D401,402,403
1.1.22	172-000070-00	EXTENSIO	L=7.0MM	PCS	1	
1.1.23	501-070717-20	SPONGE	7*7*17MM BLACK (7*7)	PCS	1	UNDER RECEIVING HEAD
1.1.24	511-360613-20	RUBBER PAD	36*6*13MM	PCS	1	UNDER DISPLAY
1.1.25	191-078150-2H	FLAT CABLE	A:7PIN, B: 6PIN 26# 2.0MM	PCS	1	PANEL CABLE
1.1.26	191-028220-20	FLAT CABLE	2PIN 26# 2.0MM L=240MM	PCS	1	PANEL CABLE

1.2. DV924HD POWER KEY BOARD				832-924H16-0		
SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
1.2	832-924H16-0	POWER KEY &USB BOARD	DV924HD	SET	1	
1.2.1	190-924H22-00	PCB	DV924HD	PCS	1	
1.2.2	147-001100-C	LIGHT TOUCH SWITCH	6*6*5mm	PCS	1	

1.3. DV924HD USB BOARD				803-0USB02-1		
SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
1.3	803-0USB02-1	USB BOARD	DV924HD	SET	1	
1.3.1	190-924H21-02	PCB	USB.PCB-V1.0 2009-02-13	PCS	1	
1.3.2	162-010440-0	USB SOCKET	USB A-71PE 4PIN	PCS	1	
1.3.3	185-350861-1	CHIP BEAD	φ3.5*0.8*L4.8MM:4uH	PCS	1	
1.3.4	123-104370-1	CAPACITOR	0.1uF/50V ±80%	PCS	1	
1.3.5	127-227042-0	CAPACITOR	220uF/10V ±20% Φ4*7mm	PCS	1	
1.3.6	191-056090-22	FLAT CABLE	4/5PIN L=90MM 22#/28#	PCS	1	
1.3.7	191-046120-2A	FLAT CABLE	4PIN L=120MM 22#/28#	PCS	1	

1.4. DV924HDPLASTIC COMPONENTS OF FRONT PANEL				803-924H03-0		
SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
1.4	803-924H03-0	PLASTIC COMPONENTS OF FRONT PANEL	DV924HD	SET	1	
1.4.1	200-927H00-02	FRONT PANEL	DV924HD ABS BLACK OIL PAINTING, LEFT:MIC SOCKET	PCS	1	
1.4.2	230-924H-02	POWER KEY	DV924HD	PCS	1	
1.4.3	234-924H-02	PLAY/STOP KEY	DV924HD	PCS	1	
1.4.4	235-924H00-02	OPEN KEY	DV924HD	PCS	1	
1.4.5	206-924H00-02	CD DOOR	DV924HD	PCS	1	
1.4.6	293-924H10-01	DECORATION CIRCLE	DV924HD	PCS	1	
1.4.7	254-924H00-01	PANEL MIRROR FILM	DV924HD	PCS	1	
1.4.8	273-924H13-02	USB COVER	DV924HD	PCS	1	

2. DV924HD HARDWARE COMPONENTS

804-924H01-0

SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATION	UNIT	QUANTITY	LOCATION
2.1	303-924H03-00	BOTTOM COVER	DV924HD 420*43*200MM	PCS	1	
2.2	301-924H03-00	BACK COVER	DV924HD 420*43MM 0.6MM	PCS	1	
2.3	302-924H00-00	TOP COVER	DV924HD 420*43*200MM	PCS	1	
2.4	315-924H26-0	METAL FRAME OF PANEL	DV924HD	PCS	1	
2.5	368-301704-2	SELF-TAPPING SCREW	7PWB3*4	PCS	2	METAL FRAME OF PANEL
2.6	368-306706-2	SELF-TAPPING SCREW	7PWB3*6	PCS	3	BOTTON CABINET & FRONT PANEL
2.7	358-300606-2	SELF-TAPPING SCREW	6BB3*6	PCS	7	TOP CABINET
2.8	358-300106-2	SELF-TAPPING SCREW	6BB3*6	PCS	4	BACK PANEL
2.9	351-301006-2	SCREW	KM3*6	PCS	2	FRONT PANEL
2.10	351-301006-2	SCREW	KM3*6	PCS	2	USB PANEL
2.11	368-301708-2	SELF-TAPPING SCREW	7PWB3*8	PCS	4	LOADER
2.12	358-300105-2	SELF-TAPPING SCREW	BB3*5	PCS	4	POWER BOARD
2.13	358-300105-2	SELF-TAPPING SCREW	BB3*5	PCS	2	DECORD BOARD
2.14	361-230107-0	SELF-TAPPING SCREW	PA2.3*7	PCS	6	FRONT PANEL PCB BOARD
2.15	364-300606-1	SELF-TAPPING SCREW	PB3*6	PCS	2	POWER BOARD
2.16	364-300606-1	SELF-TAPPING SCREW	PB3*6	PCS	4	METAL FRAME OF PANEL
2.17	358-300108-1	SELF-TAPPING SCREW	6BB3*8	PCS	4	SCART BOARD
2.18	358-300108-1	SELF-TAPPING SCREW	6BB3*8	PCS	3	DECORD BOARD
2.19	350-300106-1	SCREW	BM3*6	PCS	1	HDMI SOCKET
2.20	350-300106-1	SCREW	BM3*6	PCS	1	USB BOARD
2.21	358-300117-2	SELF-TAPPING SCREW	BB3*17	PCS	1	MIC PCB BOARD
2.22	283-331110-1	PILLAR	3*11*10MM H=10MM	PCS	1	MIC PCB BOARD
2.23	530-924H00-0	INSULATION PAPER	90*90	PCS	1	POWER BOARD
2.24	530-318S00-1	INSULATION PAPER	100*60*0.25MM	PCS	1	TOP CABINET
2.25	281-088801-0	POWER CABLE BANDING W	L=125MM W=10MM	PCS	1	BACK PANEL
2.26	511-300402-12	RUBBER	30*4*2.5MM	PCS	2	LOADER
2.27	502-200030-11	SPRRONG CUSHION	EVA90 φ20MM*3MM	PCS	2	BOTTON CABINET
2.28	501-171106-11	SPRRONG CUSHION	EVA90 L17.5*W11*H6MM	PCS	2	FRONT PANEL FEET
2.29	551-318S01-0	DOUBLE-FACE YELLOW ADH	150MM 9M/R	PCS	2	24PIN CABLE
2.30	191-043420-21	FLAT CABLE	4PIN 24# :2.0MM L=420MM	PCS	1	DECORDE BOARD
2.31	171-431120-9	POWER CABLE	(H03VVH2-F):L=1200MM+50MM		1	

3.1 DV924HD MTK1389DE-M DECODER BOARD COMPONENTS

821-051621-0

SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
3	821-051621-0	DECODER BOARD	MTK1389DE-M(PCB VER. :CX9HD)	SET	1	
3.1	013-000005-20	CHIP RESISTOR	0 Ω 0805 1/8W $\pm 5\%$ "SMD	PCS	1	L10
3.2	013-330005-20	CHIP RESISTOR	33 Ω 0805 1/8W $\pm 5\%$ "SM	PCS	2	R136,R137
3.3	013-109005-20	CHIP RESISTOR	1 Ω 0805 1/8W $\pm 5\%$ "SMD	PCS	1	R128
3.4	013-000005-00	CHIP RESISTOR	0 Ω 0402 1/16W $\pm 5\%$ "SM	PCS	13	R27,R138,R31,R34,R44,R46,R47,R48,R51
3.5	013-330005-00	CHIP RESISTOR	33 Ω 0402 1/16W $\pm 5\%$ "SI	PCS	3	R65,R66,R50
3.6	013-750005-00	CHIP RESISTOR	75 Ω 0402 1/16W $\pm 5\%$ "SI	PCS	1	R64
3.7	013-101005-00	CHIP RESISTOR	100 Ω 0402 1/16W $\pm 5\%$ "S	PCS	12	R8,R9,R60,R61,R62,R63,R118,R18,R19,R
3.8	013-151005-00	CHIP RESISTOR	150 Ω 0402 1/16W $\pm 5\%$ "S	PCS	1	R124
3.9	013-331005-00	CHIP RESISTOR	330 Ω 0402 1/16W $\pm 5\%$ "S	PCS	8	R37,R69,R70,R71,R80,R87,R94,R68
3.1	013-511005-00	CHIP RESISTOR	510 Ω 0402 1/16W $\pm 5\%$ "S	PCS	1	R123
3.11	013-561005-00	CHIP RESISTOR	560 Ω 0402 1/16W $\pm 5\%$ "S	PCS	1	R5
3.12	013-102005-00	CHIP RESISTOR	1K 0402 1/16W $\pm 5\%$ "SM	PCS	14	R78,R139,R79,R85,R86,R92,R93,R99,R10
3.13	013-182005-00	CHIP RESISTOR	1.8K 0402 1/16W $\pm 5\%$ "S	PCS	1	R40
3.14	013-202005-00	CHIP RESISTOR	2K 0402 1/16W $\pm 5\%$ "SM	PCS	2	R6,R7
3.15	013-472005-00	CHIP RESISTOR	4.7K 0402 1/16W $\pm 5\%$ "S	PCS	1	R67
3.16	013-512005-00	CHIP RESISTOR	5.1K 0402 1/16W $\pm 5\%$ "S	PCS	7	R22,R76,R83,R90,R97,R104,R111
3.17	013-103005-00	CHIP RESISTOR	10K 0402 1/16W $\pm 5\%$ "SI	PCS	28	R2,R3,R11,R12,R16,R17,R23,R28,R30,R41,R42,R43,R45,R49,R56,R57,R58,R75,R82,R89,R96,R103,R108,R110,R119,R121,R126,R127
3.18	013-123005-00	CHIP RESISTOR	12K 0402 1/16W $\pm 5\%$ "SI	PCS	1	R24
3.19	013-153005-00	CHIP RESISTOR	15K 0402 1/16W $\pm 5\%$ "SI	PCS	1	R131
3.2	013-203005-00	CHIP RESISTOR	20K 0402 1/16W $\pm 5\%$ "SI	PCS	2	R25,R135
3.21	013-223005-00	CHIP RESISTOR	22K 0402 1/16W $\pm 5\%$ "SI	PCS	1	R122
3.22	013-243005-00	CHIP RESISTOR	24K 0402 1/16W $\pm 5\%$ "SI	PCS	6	R77,R84,R91,R98,R105,R112
3.23	013-273005-00	CHIP RESISTOR	27K 0402 1/16W $\pm 5\%$ "SI	PCS	2	R132,R133
3.24	013-333005-00	CHIP RESISTOR	33K 0402 1/16W $\pm 5\%$ "SI	PCS	1	R54
3.25	013-473005-00	CHIP RESISTOR	47K 0402 1/16W $\pm 5\%$ "SI	PCS	2	R154,R29
3.26	013-104005-00	CHIP RESISTOR	100K 0402 1/16W $\pm 5\%$ "S	PCS	11	R10,R73,R13,R35,R81,R88,R95,R101,R102,R109,R116
3.27	013-220005-00	CHIP RESISTOR	22 Ω 0402 1/16W $\pm 5\%$ "SI	PCS	5	R134,R142,R143,R144,R145
3.28	013-512001-00	CHIP RESISTOR	5.1K 0402 1/16W $\pm 1\%$ "S	PCS	1	R1
3.29	013-242001-09	CHIP RESISTOR	2.49K 0402 1/16W $\pm 1\%$ "	PCS	1	R4
3.3	013-689005-00	CHIP RESISTOR	6.8 Ω 0402 1/10W $\pm 5\%$ "S	PCS	2	R14,R15
3.31	127-227042-6	ELECTROLYTIC CAPACITOR	220uF/16V $\pm 20\%$ 6.3*12mm	PCS	3	CE14,CE19,CE33
3.32	127-107032-1	ELECTROLYTIC CAPACITOR	100uF 10V $\pm 20\%$ $\Phi 5 \times 7$ mm	PCS	8	CE1,CE3,CE6,CE12,CE32,CE35,CE10,CE16

3.33	127-108032-0	ELECTROLYTIC CAPACITOR	1000uF 10V ±20% 8*16mm	PCS	1	CE11
3.34	127-226042-3	ELECTROLYTIC CAPACITOR	22uF/16V ±20% 4*7mm	PCS	1	CE17
3.35	127-476042-2	ELECTROLYTIC CAPACITOR	47uF/16V ±20% 5*7mm	PCS	4	CE7,CE8,CE9,CE15
3.36	127-477042-0	ELECTROLYTIC CAPACITOR	470uF/16V ±20% 8*12mm -4	PCS	1	CE4
3.37	127-106042-0	ELECTROLYTIC CAPACITOR	10uF/16V ±20% 5*11mm	PCS	14	CE5,CE13,CE20~CE31
3.38	023-105044-10	CHIP CAPACITOR	1UF 16V +80% -20% 0603	PCS	8	C1,C10,C12,C14,C27,C85,C90,C91
3.39	023-102071-00	CHIP CAPACITOR	1000PF 50V ±10% 0402	PCS	15	C3,C4,C5,C6,C7,C8,C71,C73,C75,C77,C79,C81,C84,C127,L33
3.4	023-220070-00	CHIP CAPACITOR	22PF 50V ±5% 0402	PCS	8	C52,C53,C54,C55,C56,C57,C58,C59
3.41	023-270070-00	CHIP CAPACITOR	27PF 50V ±5% 0402	PCS	2	C29,C30
3.42	023-470070-00	CHIP CAPACITOR	47PF 50V ±5% 0402	PCS	3	C64,C65,C66
3.43	023-101070-00	CHIP CAPACITOR	100PF 50V ±5% 0402	PCS	7	C67,C72,C74,C76,C78,C80,C82
3.44	023-221070-00	CHIP CAPACITOR	220PF 50V ±5% 0402	PCS	1	C2
3.45	023-152071-00	CHIP CAPACITOR	1500PF 50V ±10% 0402	PCS	1	C86
3.46	023-153041-00	CHIP CAPACITOR	15nF 16V ±10% 0402	PCS	1	C93
3.47	023-121070-00	CHIP CAPACITOR	120PF 50V ±5% 0402	PCS	1	C19
3.48	023-225034-10	CHIP CAPACITOR	2.2UF 10V +80% -20% 0603	PCS	3	C38,C39,C136
3.49	023-104041-00	CHIP CAPACITOR	100nF 16V ±10% 0402	PCS	42	C9,C11,C13,C15,C16,C17,C18,C20,C21,C22,C23,C24,C25,C26,C28,C32,C33,C34,C35,C36,C37,C40,C41,C43,C45,C46,C47,C48,C49,C50,C51,C60,C61,C62,C68,C69,C70,C83,C88,C92,C98,C99
3.5	023-331040-00	CHIP CAPACITOR	330PF 16V ±5% 0402	PCS	2	C87,C89
3.51	023-682041-00	CHIP CAPACITOR	6800PF 16V ±10% 0402	PCS	1	C31
3.52	085-221R25-1	CHIP BEAD	(FCM1608K-221T05) FB2201	PCS	8	L1,L2,L7,L8,L12,L15,L21,L39
3.53	005-479100-0	INDUCTANCE	4.7uH 0603 ±10%	PCS	5	L3,L4,L32,L20,C94
3.54	005-220100-1	INDUCTANCE	22uH 0805 ±10%	PCS	2	L6,L11
3.55	085-121R25-2	CHIP BEAD	(PZ2012U121) FB120R/0805	PCS	3	L5,L14,L22
3.56	085-221R25-0	CHIP BEAD	GZ1005D221T) FB220R/040	PCS	10	L9,L24,L25,L26,L27,L28,L29,L13,L30,L31
3.57	005-228100-0	INDUCTANCE	0.22uH 0603 ±10%	PCS	4	L16,L17,L18,L19
3.58	130-004001-0	DIODE	IN4001	PCS	3	D1,D2,D3
3.59	030-004148-2	DIODE	LS4148	PCS	2	D12,D15
3.6	030-064148-0	DIODE ARRAYS	MMBD4148CC SOT-23	PCS	1	D19
3.61	031-003904-0	TRIODE	MMBT3904LT1 SOT-23 HEF	PCS	1	Q3
3.62	031-001132-1	TRIODE	2SB1132(SOT-89) SMD	PCS	2	Q4,Q5
3.63	031-S8550D-0	TRIODE	S8550D	PCS	2	Q22,Q23
3.64	031-003018-0	TRIODE	2SK3018(SOT-23) SMD	PCS	2	V1,V2
3.65	031-0C1815-0	TRIODE	C1815/SOT-23	PCS	8	Q10,Q11,Q12,Q13,Q14,Q15,Q16,Q20
3.66	031-001015-0	TRIODE	2SA1015/SOT-23	PCS	3	Q17,Q18,Q19
3.67	131-0S8550-0	TRIODE	SS8550 TO-92	PCS	4	Q6~Q9
3.68	031-002302-0	TRIODE	CES2302/SOT-23	PCS	1	V21
3.69	033-004558-2	IC	JRC4558D / SOP-8	PCS	3	U6~U8
3.70	033-641620-2	IC	IC : HY57V641620ETP-6	PCS	1	U3
3.71	033-CD5888-0	IC	IC: CD5888CB	PCS	1	U2
3.72	033-1389DE-2	IC	MTK1389DE/M(M) LQFP	PCS	1	U1
3.73	033-0DF161-0	IC	AT26DF161-SU SOIC	PCS	1	U5
3.74	137-270000-30	CRYSTAL OSCILLATOR	27MHZ	PCS	1	X1
3.75	014-SDV320-00	CHIP VOLTAGE DEPENDENT	SDV1005E5R5C400NPT 040	PCS	6	R72,R74,R146,R147,R148,R149
3.76	162-151940-0	HDMI SOCKET	51U019S-333N-A	PCS	1	JK202
3.77	161-134224-0	RCA SOCKET	8RCAAV8-8.4-6G-3 φ3.4MM	PCS	1	JK2

3.78	161-434054-1	AV-S SOCKET	S-VIDEO+AV VIDEO RCA:	PCS	1	JK1
3.79	160-006200-0	PIN SOCKET	PH-6A 6PIN =2.0MM	PCS	3	CN3,CN8,CN9
3.8	160-004200-0	PIN SOCKET	PH-4A 4PIN =2.0MM	PCS	1	CN5
3.81	160-007200-0	PIN SOCKET	PH-7A 7PIN =2.0MM	PCS	1	CN6
3.82	160-005200-0	PIN SOCKET	PH-5A 5PIN =2.0MM	PCS	2	CN2,CN10
3.83	160-003200-0	PIN SOCKET	PH-3A 3PIN =2.0MM	PCS	1	CN11
3.84	160-009200-0	PIN SOCKET	PH-9A 9PIN =2.0MM	PCS	1	CN7
3.85	060-124050-0	FPC SOCKET	24PIN :0.5MM	PCS	1	CN1
3.86	190-138902-62	PCB	2DV924HD-2 FR4 H=1.2MM	1		

4 DV924HD LOADER COMPONENTS

820-030801-01

SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
4	820-030801-01	DVD LOADER	JL-028 + SONY OPTICAL LENSE	SET	1	
4.1	830-020001-4	DVD LENS(Optical eye only)	SONY313	PCS	1	
4.2	829-002801-0	PLASTIC FRAME OF LOADER(BIG &SMALL)	JL-028	PCS	1	
4.3	150-0300C5-0	MOTOR	RF-300C-11440 D/V:5V	PCS	1	
4.4	150-0350F6-0	MOTOR	RF-300FA-12350 D/V:5.9V	PCS	1	
4.5	150-003006-0	MOTOR	RF-356CA-10250 D/V:5.9V	PCS	1	
4.6	191-053140-24	FLAT CABLE	5PIN26# 2.0MM L=140MM	PCS	1	LOADER CABLE
4.7	191-063130-20	FLAT CABLE	6PIN 2.0MM L=130MM	PCS	1	LOADER CABLE
4.8	197-242501-0	FLAT CABLE	24PIN :0.5MM L=250MM	PCS	1	OPTICAL LENS

5 DV924HD POWER BOARD COMPONENTS

803-D92401-0

SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
5	803-D92401-0	POWER BOARD		SET	1	
5.1	113-912801-62	CARBON FILM RESISTOR	9.1K 1/8W ±1%	PCS	1	R509
5.2	113-103801-62	CARBON FILM RESISTOR	10K 1/8W ±1%	PCS	1	R508
5.3	113-750405-12	CARBON FILM RESISTOR	75Ω 1/4W ±5%	PCS	1	R505
5.4	113-331405-12	CARBON FILM RESISTOR	330Ω 1/4W ±5%	PCS	1	R506
5.5	113-102405-12	CARBON FILM RESISTOR	1K 1/4W ±5%	PCS	1	R507
5.6	113-912405-12	CARBON FILM RESISTOR	9.1K 1/4W ±5%	PCS	1	R512
5.7	113-684205-12	CARBON FILM RESISTOR	680K 1/2W ±5%	PCS	1	R501
5.8	113-393A05-12	CARBON FILM RESISTOR	39K 1W ±5%	PCS	1	R503
5.9	123-152150-0	CARBON FILM RESISTOR	1500PF 100V ±10%	PCS	1	C512
5.10	123-473160-0	CARBON FILM RESISTOR	0.047UF 100V ±20% Z5U	PCS	1	C506
5.11	123-104160-0	CARBON FILM RESISTOR	0.1UF 100V ±20% Z5U	PCS	1	C505,C515,C510
5.12	123-103660-1	CARBON FILM RESISTOR	0.01uF 1KV ±20% "F 103Z	PCS	1	C502
5.13	126-104A54-1	CARBON FILM RESISTOR	0.1UF ±10% 275V AC X2,4	PCS	1	BC501
5.14	123-221451-0	CARBON FILM RESISTOR	220PF 400V ±10%	PCS	1	BC503, BC504
5.15	127-476072-0	CARBON FILM RESISTOR	47uF 50V ±20% 6.3*12mm	PCS	1	TC502
5.16	127-477052-0	CARBON FILM RESISTOR	470uF/25V ±20% 8*14mm	PCS	1	TC503, TC509
5.17	127-226402-2	CARBON FILM RESISTOR	22uF/400V ±20% -40+105℃	PCS	1	TC501
5.18	127-108032-3	CARBON FILM RESISTOR	1000uF 10V ±20% 8*14mm	PCS	1	TC506
5.19	127-158042-0	CARBON FILM RESISTOR	1500uF 16V ±20% 105℃ (Φ	PCS	2	TC505
5.20	133-0HS817-0	IC	IC:HS817 (DIP) VCE=5V	PCS	2	U502
5.21	133-TL431A-0	IC	IC TL431A TO-92	PCS	1	U503
5.22	133-0ER22A-0	IC	IC: VIPer22A(DIP8)	PCS	1	U501
5.23	130-004007-0	DIODE	1N4007 VRRM=1000V IF=1.	PCS	1	D501-D504
5.24	130-000105-1	DIODE	HER105 VRRM=400V DO-4	PCS	1	D506, D508, D511
5.25	130-000107-1	DIODE	HER107 1A 800	PCS	1	D505
5.26	130-000560-0	DIODE	SR560 VRRM=60V IF=5.0A	PCS	1	D510
5.27	105-100151-0	INDUCTANCE	DR6*8 10uH ±15% (φ0.50MM	PCS	1	L507
5.28	108-D624HD-0	FILTER	UU-10.5	PCS	1	L501
5.29	101-19EL19-14	TRANSFORMER	EEL19(5+7) : EEL19-SKY9	PCS	1	T501
5.30	182-321600-0	FUSE	T1.6A L250V UL/VDE 32S φ	PCS	1	F501

5.31	160-103420-1	SOCKET	VH-3A=3.96MM	PCS	1	BCN501
5.32	160-004200-0	SOCKET	PH-4A 4PIN =2.0MM	PCS	1	CN501
5.33	333-0PCB01-0	GROUNDED SOLDERING FLA	Φ7.5MM Φ4.2MM :16MM	PCS	1	
5.34	172-000075-00	EXTENSIO	L=7.5MM	PCS	1	JP502 JP503
5.35	172-000090-00	EXTENSIO	L=9.0MM	PCS	1	JP501
5.36	516-204015-0	HEAT-SHRINK TUBE	φ4MM*15MM	PCS	1	
5.37	190-D92401-01	PCB	KY-P0924 V1.0 09/02/24 94V	PCS	1	
5.38	191-043420-21	FLAT CABLE	4PIN:2.0MM L=420MM	G/PC	1	

6. DV924HD PACKAGE MATERIAL

805-924H01-0

SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
6.1	619-566110-3	RCA CABLE	L=1000MM	PCS	1	
6.2	828-390103-0	REMOTE CONTROL	RC026-05R DV924HD	PCS	1	
6.3	617-3R0315-3	BATTERY	Zn/MnO2 GR03P 1.5V AAA	PCS	2	
6.4	630-0RBK05-00	MANUAL	DV924HD	PCS	1	
6.5	631-0RBK49-00	WARRANTY CARD	SKY-001	PCS	1	
6.6	643-111054-09	SERIAL NO. STICKERS	48MM*10MM	PCS	1	
6.7	643-211054-09	SERIAL NO. STICKERS	32MM*10MM	PCS	1	
6.8	643-411054-09	SERIAL NO. STICKERS	48MM*10MM	PCS	1	
6.9	643-311054-09	SERIAL NO. STICKERS	24MM*5MM	PCS	4	
6.10	643-511054-09	SERIAL NO. STICKERS	25MM*8MM	PCS	1	
6.11	650-0RBK04-0	ADVERTISMENT PAPER	A4 294*210mm, : KARAO	PCS	1	
6.12	650-0RBK02-0	ADVERTISMENT AND PUBLIC	210mm*148mm : MIC&HEA	PCS	1	
6.13	650-0RBK03-0	ADVERTISMENT PAPER	210mm*148mm : SONUDB	PCS	1	
6.14	633-0RBK02-0	AFTER-SALES SERVICE CON	SKY-001	PCS	1	
6.15	648-0RBK07-1	TOP COVER STICKER	KARAOKE++ STICKER	PCS	1	
6.16	648-0RBK51-0	USB/HDMI STICKER	DV924HD	PCS	1	GIFT BOX & UNIT
6.17	648-0RBK52-0	500 SONGS STICKER		PCS	1	
6.18	648-924H28-0	UNIT VERSION NO.STICKER	15*6MM (: SI09.01)	PCS	2	
6.19	648-MPEG28-F	DECODER BOARD NO.VERS	10*6MM	PCS	1	
6.20	648-LEAR02-6	FRAGILE STICKER	25*10MM	PCS	1	
6.21	648-LOAD02-0	FRAGILE STICKER		PCS	1	
6.22	648-LEAR02-B	OPEN-PREVENTATION STICKER		PCS	0.33334	
6.23	648-0RBK12-1	ROUND STICKER	φ5mm	PCS	0.33334	
6.24	600-924H01-00	POLYFOAM-L	DV924HD	PCS	1	
6.25	600-924H02-00	POLYFOAM-R	DV924HD	SET	1	
6.26	600-924H04-00	POLYFOAM-M	DV924HD	PCS	1	
6.27	607-0BOX01-0	GIFT BOX HANDEL	DV924HD	PCS	1	
6.28	602-924H01-00	GIFT BOX	DV924HD	PCS	1	
6.29	604-924H01-00	SHIPPING BOX	DV924HD	PCS	0.16667	
6.30	601-0RBK11-00	PE BAG	510*400MM	PCS	1	DVD UNIT
6.31	601-0RBK02-00	PE BAG	70*300MM*0.04MM	PCS	1	USER MANUAL
6.32	601-082740-01	PE BAG	185*278MM 0.04MM	PCS	1	REMOTE CONTROL
6.33	518-0USB02-1	USB COVER			1	

7. DV924HD SCART BOARD

832-924H27-0

SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
7	832-924H27-0	SCART+YUV+OPTICAL OUTPUT BOARD	SCART+YUV+OPTICAL+C OAXIAL	SET	1	
7.1	013-000005-10	CHIP RESISTOR	Ω 0603 1/10W ±5% "SM	PCS	7	R717,R719,C720,JP72 8.C727,R712,R716
7.2	013-102005-10	CHIP RESISTOR	1K 0603 1/10W ±5% "SM	PCS	1	R711
7.3	013-101005-10	CHIP RESISTOR	10Ω 0603 1/10W ±5% "S	PCS	1	R702
7.4	013-201005-10	CHIP RESISTOR	20Ω 0603 1/10W ±5% "S	PCS	1	R701
7.5	013-680005-10	CHIP RESISTOR	68Ω 0603 1/10W ±5% "S	PCS	1	R708
7.6	013-330005-10	CHIP RESISTOR	33Ω 0603 1/10W ±5% "S	PCS	1	R706
7.7	013-750005-10	CHIP RESISTOR	75Ω 0603 1/10W ±5% "S	PCS	1	R703

7.8	013-152005-10	CHIP RESISTOR	1.5K 0603 1/10W ±5% "S	PCS	3	R709,R722,R723
7.9	013-222005-10	CHIP RESISTOR	2.2K 0603 1/10W ±5% "S	PCS	3	R714,R710,C711
7.1	013-512005-10	CHIP RESISTOR	5.1K 0603 1/10W ±5% "S	PCS	2	R76,C85
7.11	013-103005-10	CHIP RESISTOR	10K 0603 1/10W ±5% "S	PCS	4	R75,R77,R83,R84
7.12	013-153005-10	CHIP RESISTOR	15K 0603 1/10W ±5% "S	PCS	1	R704
7.13	013-473005-10	CHIP RESISTOR	47K 0603 1/10W ±5% "S	PCS	2	R715,R783
7.14	023-102071-10	CHIP CAPACITOR	1000PF 50V ±10% 0603	PCS	9	C714,C729,C718,C723, C73,C728,C725,C728, C71
7.15	023-105034-10	CHIP CAPACITOR	1UF 10V +80% -20% 0603	PCS	2	C761,C71
7.16	023-106034-10	CHIP CAPACITOR	10UF 10V +80% -20% 0603	PCS	2	C72,C77
7.17	023-104041-10	CHIP CAPACITOR	100nF 16V ±10% 0603	PCS	2	C731,C710
7.18	023-101040-10	CHIP CAPACITOR	100PF 16V ±5% 0603	PCS	2	C79,C70
7.19	085-221R25-1	CHIP BEAD	(FCM1608K-221T05) FB220	PCS	5	L707,L708,L709,L713,L 711
7.2	030-040051-3	DIODE	ZD5V1 /1206 1/2W	PCS	4	ZD701, ZD702, ZD703, ZD704
7.21	031-008050-0	TRIODE	8050/SOT-23	PCS	3	V701, V702, V703
7.22	033-004558-2	IC	JRC4558D / SOP-8	PCS	1	U701
7.23	172-000050-00	EXTENSIO	L=5.0MM(9MM)	PCS	10	JP1, JP2, JP3, JP4, JP5, JP6, JP7, JP8, JP10, JP11
7.24	172-000100-00	EXTENSIO	L=10MM(9MM)	PCS	6	JP9, JP12, JP13, JP14, JP15, JP16
7.25	162-052110-1	21 PIN SCART JACK	(SC102-B)	PCS	1	JK706
7.26	162-090310-0	OPTICAL HEAD	CQ001-B	PCS	1	JK705
7.27	161-134203-0	RCA SOCKET	4RCA:AV-8.4-7D φ3.4MM	PCS	1	JK702
7.28	190-610S12-01	PCB	2DV610SI-01 08-12-12 SIZE	PCS	1	
7.29	191-158060-2B	FLAT CABLE	15PIN/9PIN+6PIN: L=60MM/	PCS	1	SCART

8. DV924HD MIC BOARD

832-092130-0

SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY	LOCATION
8	832-092130-0	MIC BOARD	DV921HD-MIC, 08-12-16,SIZE: 64*36mm 94V-0	SET	1	
8.1	013-000005-30	CHIP RESISTOR	0Ω 1206 1/4W ±5% "SM	PCS	3	J1,J2,J3
8.2	013-330005-30	CHIP RESISTOR	33Ω 1206 1/4W ±5% "SM	PCS	2	R28、R29
8.3	013-101005-30	CHIP RESISTOR	100Ω 1206 1/4W ±5% "S	PCS	1	R30
8.4	013-100005-10	CHIP RESISTOR	10Ω 0603 1/10W ±5% "S	PCS	1	R23
8.5	013-101005-10	CHIP RESISTOR	100Ω 0603 1/10W ±5% "S	PCS	2	R2、R3
8.6	013-331005-10	CHIP RESISTOR	330Ω 0603 1/10W ±5% "S	PCS	1	R13
8.7	013-561005-10	CHIP RESISTOR	560Ω 0603 1/10W ±5% "S	PCS	1	R22
8.8	013-102005-10	CHIP RESISTOR	1K 0603 1/10W ±5% "SM	PCS	2	R17、R25
8.9	013-332005-10	CHIP RESISTOR	3.3K 0603 1/10W ±5% "S	PCS	2	R9、R10
8.10	013-392005-10	CHIP RESISTOR	3.9K 0603 1/10W ±5% "S	PCS	2	R5、R8
8.11	013-512005-10	CHIP RESISTOR	5.1K 0603 1/10W ±5% "S	PCS	3	R21、R24、R18
8.12	013-103005-10	CHIP RESISTOR	10K 0603 1/10W ±5% "SM	PCS	8	R1、R4、R6、R15、 R7、R11、R19、R20

8.13	013-123005-10	CHIP RESISTOR	12K 0603 1/10W ±5% "S"	PCS	1	R26
8.14	013-223005-10	CHIP RESISTOR	22K 0603 1/10W ±5% "S"	PCS	1	R18
8.15	013-563005-10	CHIP RESISTOR	56K 0603 1/10W ±5% "S"	PCS	2	R14, R12
8.16	023-105051-10	CHIP CAPACITOR	1UF 25V ±10% 0603	PCS	1	C12
8.17	023-104051-10	CHIP CAPACITOR	0.1UF 25V ±10% 0603	PCS	7	C5、C6、CE9、C16、C17、C18、C19
8.18	023-103051-10	CHIP CAPACITOR	0.01UF 25V ±10% 0603	PCS	2	C11 C15
8.19	023-152051-10	CHIP CAPACITOR	1500PF 25V ±10% 0603	PCS	2	C8 C7
8.20	023-102051-10	CHIP CAPACITOR	1000PF 25V ±10% 0603	PCS	4	C1 C2、C13、C14
8.21	023-101051-10	CHIP CAPACITOR	100PF 25V ±10% 0603	PCS	4	C3 C4、C9、C10
8.22	085-000R25-1	CHIP BEAD	(Ø)/0603	PCS	2	L1, L2
8.23	127-106042-4	ELECTROLYTIC CAPACITOR	10uF/16V ±20% 5*8mm	PCS	4	TC1 TC3、TC5、TC4
8.24	127-476042-4	ELECTROLYTIC CAPACITOR	47uF/16V ±20% 5*8mm	PCS	3	CE2 CE8、CE4

8.25	127-107042-4	ELECTROLYTIC CAPACITOR	100uF/16V ±20% 5*8mm	PCS	4	TC2 TC6、CE3、CE7
8.26	127-477032-2	ELECTROLYTIC CAPACITOR	470uF/10V ±20% 6.3*10MM	PCS	1	CE6
8.27	030-040056-3	DIODE	ZD5V6 /1206 1/2W	PCS	1	ZD1
8.28	031-008050-0	TRIODE	8050/SOT-23	PCS	2	Q1、Q2
8.29	033-001308-0	IC	TDA1308 SOP-8	PCS	1	U1
8.3	033-004558-2	IC	JRC4558D / SOP-8	PCS	1	U2
8.31	161-2360B2-0	EARPHONE SOCKET	(9PIN)	PCS	1	
8.32	161-3650B2-5	MIC SOCKET	CK-6.35-304	PCS	1	
8.33	190-092117-0	PCB	DV921HD MIC-1, 08-12-16,S	PCS	1	
8.34	191-056080-2D	FLAT CABLE	5PIN/6PIN 26#/28# :2.0MM	PCS	1	