

IBBK

DK1475SI(RU)

Service Manual



Model Version:SI2.00 SI6.10

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Caution :

This Service Manual is only applicable to DK1475SI(RU) SI2.00,SI6.10.

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

Formats:

- #Digital video playback of DVD-Video, Super VCD and VCD formats
- #MPEG-4 compatibility: playback of DivX3.11, DivX4, DivX5, DivX Pro and XviD formats
- #Playback of musical compositions in CD-DA and HDCD formats
- #Playback of compressed musical files in WMA formats
- #Playback of karaoke-discs in DVD, VCD and CD+G formats
- #Playback of photo albums, recorded in Kodak Picture CD and JPEG digital formats

Audio:

- #192 KHz/24 bit audio D/A converter
- #Coaxial and optical audio outputs, providing digital sound playback in Dolby Digital/DTS/LPCM formats
- #Stereophonic audio output for connection to TV and amplifier
- #Integrated digital multi-channel sound decoders, providing playback of Dolby Digital and DTS audio tracks
- #Integrated Dolby Pro Logic II decoder, providing transformation of stereophonic signal to multi-channel one
- #Microphone input providing karaoke functions

Video :

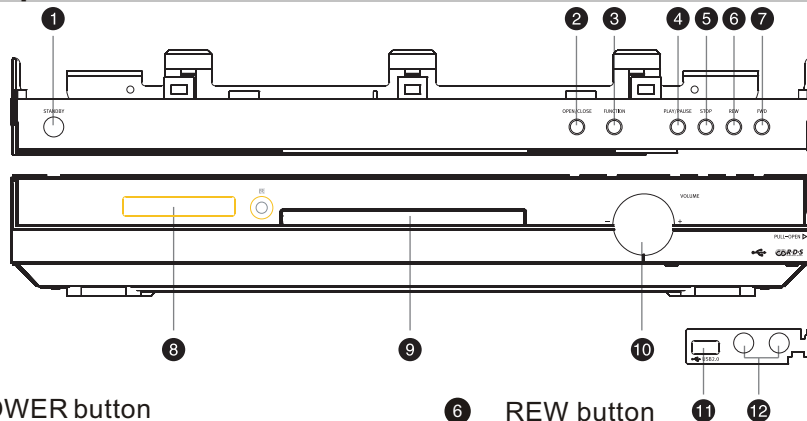
- #108kHz/12 bit video D/A converter
- #Progressive scan(Y Pb Pr) video signal output, securing high resolution and absence of image flicker
- #Composite and component(Y Cb Cr), and RGB/SCART video outputs, providing advanced switching capabilities
- #NTSC/PAL transcoder
- #Support of many camera angles, dubbed languages and subtitles
- #Sharpness, Gamma, Brightness, Contrast, Hue and Saturation adjustment

Miscellaneous:

- #Support of CD-R/CD-RW, DVD-R/DVD-RW, DVD+R/DVD+RW
- #FM/AM tuner
- #USB port, providing playback of files of supported formats from external flash-memory devices
- #KARAOKE+, providing extended karaoke features
- #Easy to use on-screen menu in Russian
- #Support of Russian file names, Id3 tags and CD-text
- #"Memory" function which can load the last disc position on stop
- #"Capture" function, auto loading selected bookmarked image as the wallpaper
- #Q-Play function that will bring you to the main movie title and skip unskippable commercials
- #Virtual control panel function makes your control of the device much easier when playing the movie
- #Browser function displays information about playback modes
- #Auto protection of TV screen
- #Child lock, parental control(protection against playing undesirable discs)

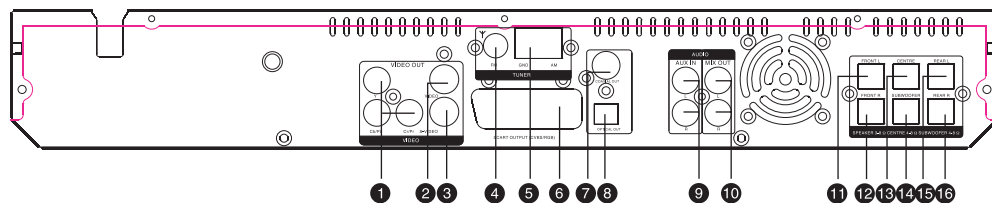
2.2 Controls and functions

2.2.1 Front panel controls



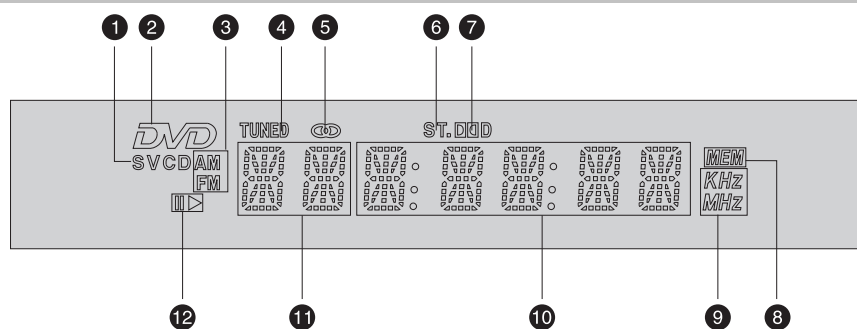
- | | |
|--|---|
| <p>1 STANDBY/POWER button
Press to switch the device on/into stanby</p> <p>2 OPEN/CLOSE button
Press to open/close the disc tray.</p> <p>3 FUNCTION button
Press to change audio signal source.</p> <p>4 PLAY/PAUSE button
Press to playback /pause.</p> <p>5 STOP button
Press to stop the playback.</p> | <p>6 REW button
Press to fast reverse/radio station tuning.</p> <p>7 FWD-button
Press to fast forward/radio station tuning.</p> <p>8 VFD display window.</p> <p>9 Disc tray.</p> <p>10 VOLUME adjuster
Press to adjust volume.</p> <p>11 USB port.</p> <p>12 Microphone input.</p> |
|--|---|

2.2.2 Rear panel connections



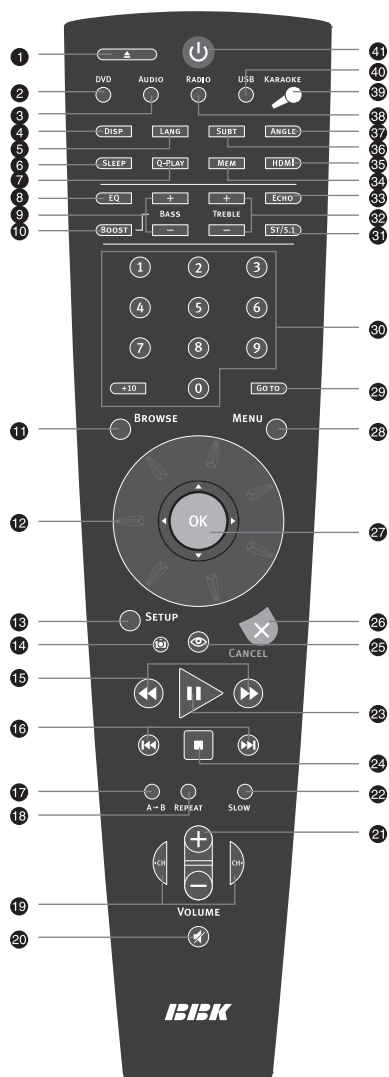
- | | |
|---|--|
| <p>1 Component video output Y Cb(Pb) Cr(Pr)</p> <p>2 Composite video output</p> <p>3 S-Video output</p> <p>4 FM Antenna input</p> <p>5 AM Antenna input</p> <p>6 SCART-type AV connector</p> <p>7 Coaxial digital audio output</p> <p>8 Optical digital audio output</p> <p>9 Audio input</p> <p>10 Stereophonic audio output</p> <p>11 Left front speaker input(output from the build-in amplifier)</p> | <p>12 Right front speaker input(output from the build-in amplifier)</p> <p>13 Center speaker input(output from the build-in amplifier)</p> <p>14 Subwoofer input(output from the build-in amplifier)</p> <p>15 Left Surround speaker input(output from the build-in amplifier)</p> <p>16 Right Surround speaker input(output from the build-in amplifier)</p> |
|---|--|

2.2.3 VFD display general view



- | | | |
|------------------------|----------------------------|-----------------------|
| 1 CD-,VCD-or SVCD-disc | 6 Stereo | 10 Playback time |
| 2 DVD-disc | 7 Dolby Digital | 11 Chapters or tracks |
| 3 AM/FM | 8 Programmed radio station | 12 Playback or pause |
| 4 Radio tuning mode | 9 Frequency | 13 DTS |

2.2.4 Remote control general view



- | | |
|-------------------|---|
| 1 EJECT button | Press to open/close the disc tray. |
| 2 DVD button | Press to switch to DVD mode. |
| 3 AUDIO button | Press to switch to audio input mode. |
| 4 DISP button | Press to display the disc information. |
| 5 LANG button | Press to change the language. |
| 6 SLEEP button | Press to turn the sleep mode on. |
| 7 Q-PLAY button | Press to turn the Q-Play mode on. |
| 8 EQ button | Press to adjust the equalizer. |
| 9 BASS+/-button | Press to adjust the tone. |
| 10 BOOST button | Press to bass boosting. |
| 11 BROWSER button | Press to turn on/off the browser function. |
| 12 JOG DIAL wheel | Functions are set manually. Default function: ZOOM. |
| 13 SETUP button | Press to switch to setup mode. |

- 14 Button 

Press to capture and bookmark image for the wallpaper.
- 15 Buttons 

Press to start reverse or forward scanning.
- 16 SKIP/PRESET+/-

Press to switch between files on disc/tuned radio stations..
- 17 A-B buttons

Press to repeat the selected portion.
- 18 REPEAT button

Press to repeat playback.
- 19 CH+/CH- button

Press to change the acoustic channel.
- 20 MUTE button

Press to turn on/off the sound.
- 21 VOLUME+/- button

Press to adjust the volume.
- 22 SLOW button

Press to switch to slow down the playback.
- 23 PLAY/PAUSE button

Press to stop the playback.
- 24 STOP button

Press to stop the playback.
- 25 Button 

Press to turn on/off the virtual control panel.
- 26 CANCEL button

Press to go one level back/cancel current operation.
- 27 OK button

Press OK for confirmation or use it like joystick during navigating in MENU.
- 28 MENU button

DVD-disc menu/PBC function.
- 29 GOTO button

Press to playback from the target place.
- 30 Numeric buttons
- 31 ST/5.1 button

Press to switch between STEREO/5.1CH.
- 32 TREBLE+/- button

Press to adjust the tone.
- 33 ECHO button

Press to adjust the echo function of the microphone.
- 34 MEM button

Press to memorize the point where playback was stopped/playback from the previously memorized point.

- 35 SUBT button

Press to change the subtitles language.
- 36 ANGLE button

Press to change the camera angel.
- RADIO button

Press to switch to radio mode.
- 38 KARAOKE button

Press to set the karaoke functions.
- 39 USB button

Press to switch to USB mode.
- 40 Button 

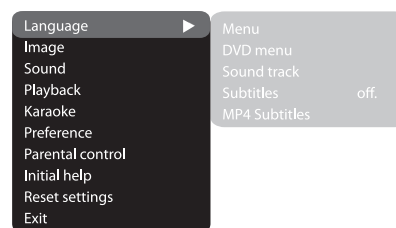
Press to switch the device on/into standby.

2.3 FUNCTION SETTINGS

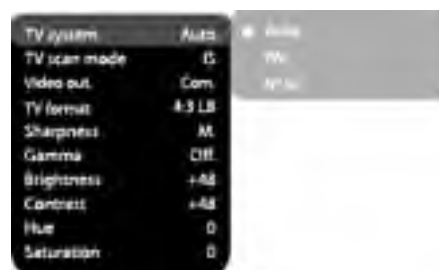
2.3.1 Function selection and change

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 Jog Dial; press the OK for confirmation.



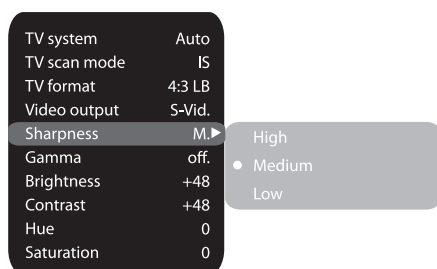
1. For example, if you wish to change the image settings, you have to select the Image item and press the OK or RIGHT key of the cursor joystick.



2. Using the Jog Dial, select the desired item and press OK or RIGHT key of the cursor joystick. 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 key of the cursor joystick for exit to previous menu level.

4. Press SETUP to exit setup menu.

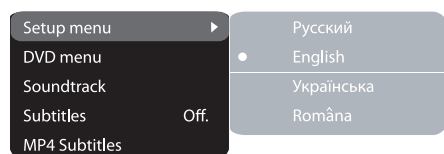


2.3.2 Language settings

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, Byelorussian, Ukrainian, Chinese, Others.

#Default : English.

#Selection of other languages: select the OTHERS item using the Jog Dial 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. Subtitles DVD/MP4 : 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 Jog Dial 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.

2.3.3 Image settings menu

1. TV system: TV system selection

#Options: Auto, PAL, NTSC.

#Default option: PAL

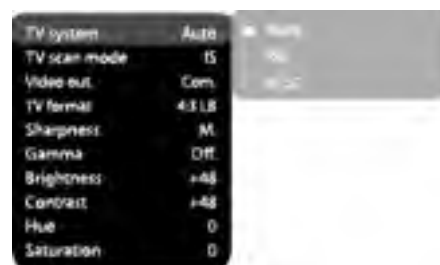
2. TV scan mode: scan mode selection

#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. TV Format: image ratio settings

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

#Default option: 4:3 letterbox

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

4. Video output: selection of video signal

#Options: Comp, SCART.

#Default option: Comp.

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 Jog Dial. Press OK or RIGHT key to start adjusting the relevant option.

#Change the option value using the Jog Dial.

#Upon completion press the LEFT key of the cursor joystick to return to image setup menu.

2.3.4 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: 5.1.

#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.

#Options: L+R, L, R.

#Default option: L+R.

C) Surr. Mix: set-up of surround options while playing the stereo disc.

#Options: Off, sum, L+R, 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, Center C, Surround Sr, Subwoofer SW.

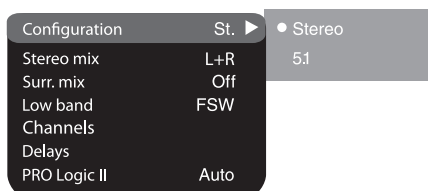
If you want the low-frequency component of the sound signal enter only the subwoofer channel, select and confirm the parameter Subwoofer SW.

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

#Select the channel you want.

#Adjust the sound volume of each channel using the wheel.

#Press the OK to return to sound settings menu.

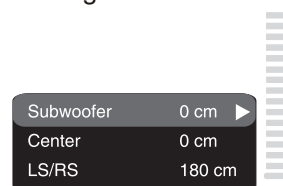


F)Delay of the channel: set-up signal delay in speaker channels(central, rear and subwoofer).

#Using the Jog Dial, select the channel, for which you want to set up the delay, and press OK for confirmation.

#Using the Jog Dial set up the desired distance from the listener to each speaker(detailed description of this operation see on page43).

#Press LEFT key of the cursor joystick to return to speaker configuration 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 receiver 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 receiver's digital outputs, the decoded signal is transferred to analog outputs. Decoding is performed by the built-in decoder of the DVD receiver.

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 receiver'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.

#Default option: 48 kHz 16 bit.

3.Sound correction

a) Equalizer: equalizer modes

#Options: Off, 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 Jog Dial.

#Press the LEFT key of the cursor joystick to return to sound correction setup menu.

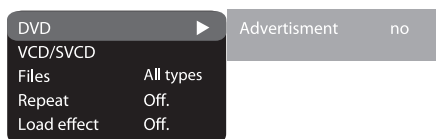
2.3.5 Playback settings

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, All types.

#Default option: All types.

4.Repeat: file repeat mode

#Options: Off, Single, All.

#Default option: Off.

5.Load effect: type of transition from one JPEG file to another

#Options: Off, from top, from bottom

#Default option: Off.

2.3.6 Karaoke settings menu

1.Microphone: microphone on/off

#Options: Off, On.

#Default option: Off.

2.Kar.help: karaoke-disc playback mode

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

#Default option: No vocal assist.

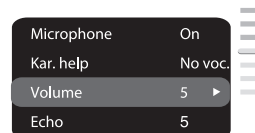


3. Volume:

Microphone: microphone sound volume level

#Using the Jog Diall adjust the microphone volume level.

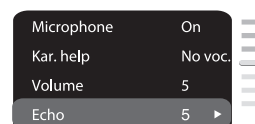
#Press LEFT key of the cursor joystick to return to karaoke settings menu.



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

#Adjust the echo level Using the Jog Dial.

#Press LEFT key of the cursor joystick to return to karaoke settings menu.



2.3.7 Preference settings

1. Backlight: Selection of open/close button LED

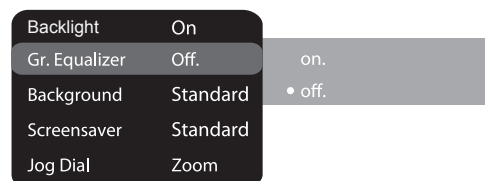
#Options: On, Off.

#Default option: On.

2.Gr.Equalizer: spectrum analyzer

#Options: On, Off.

#Default option: Off.



3.Background: selection of an image as TV screen wallpaper

#Options: Standard, Saved.

#Default option: Standard.

4.Screensaver: screen saver on/off

#Options: On, Off.

#Default option: On.

5.Jog Dial

#Options: Zoom, Step, Fast, Skip, Volume.

#Default option: Zoom.



2.3.8 Parental Control

1.Category: setup of age restrictions to prevent children from seeing undesirable discs.

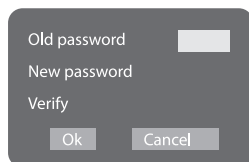
#Options: Any, Kid, G, PG, PG-13, PGR, R, NC-17.

#Default option: Any.



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

#Default option: 7890



2.3.9 Initial setup menu

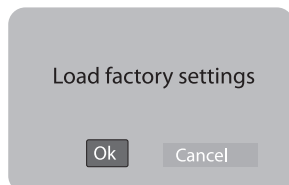
#Press the RIGHT key of the cursor joystick to enter the initial setup menu, then select the desired item using the Jog Dial and press OK key for confirmation.

#While being in this menu section, you cannot return to the previous level by pressing the LEFT key of the cursor joystick.



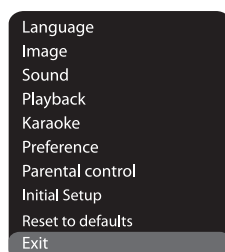
2.3.10 Reset to defaults

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



2.3.11 Exit settings menu

#Select the exit item using the Jog Dial and press the OK to exit the menu.



2.3.12 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.

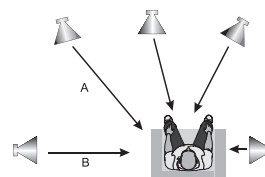


Fig.1. Take into account the A-B distance; use both figures for setting the desired time delay.

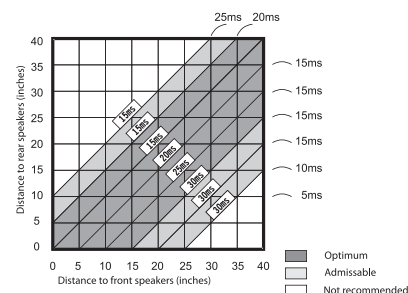


Fig.2. Determine delay value as to Dolby Pro Logic mode.

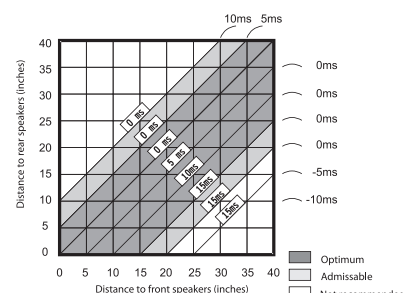


Fig.3. Determine delay value as to Dolby Digital mode.

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".

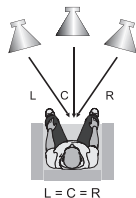


Fig.1. Delay of central channel=0
 $L=R=C$

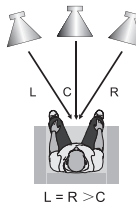


Fig.2. Small area
Delay of central channel
 $=L=(\text{or } R)-C$

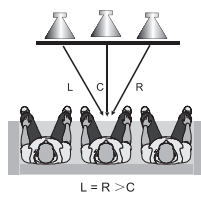
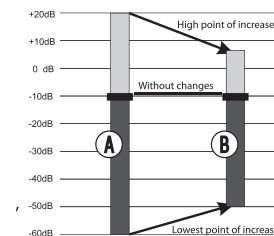


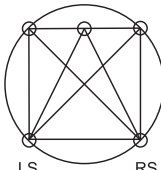
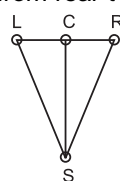
Fig.3. Small area
Delay of central channel=0
 $L= R>C$

"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 an inverse transformation (volume expansion) takes place, 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.

Miscellaneous	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.
	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.

2.4 MISCELLANEOUS

2.4.1 Useful notes

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

#Disconnect the DVD- receiver from the wall outlet after shutdown.

#Some DVD receiver's functions may not be applied to some discs.

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

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

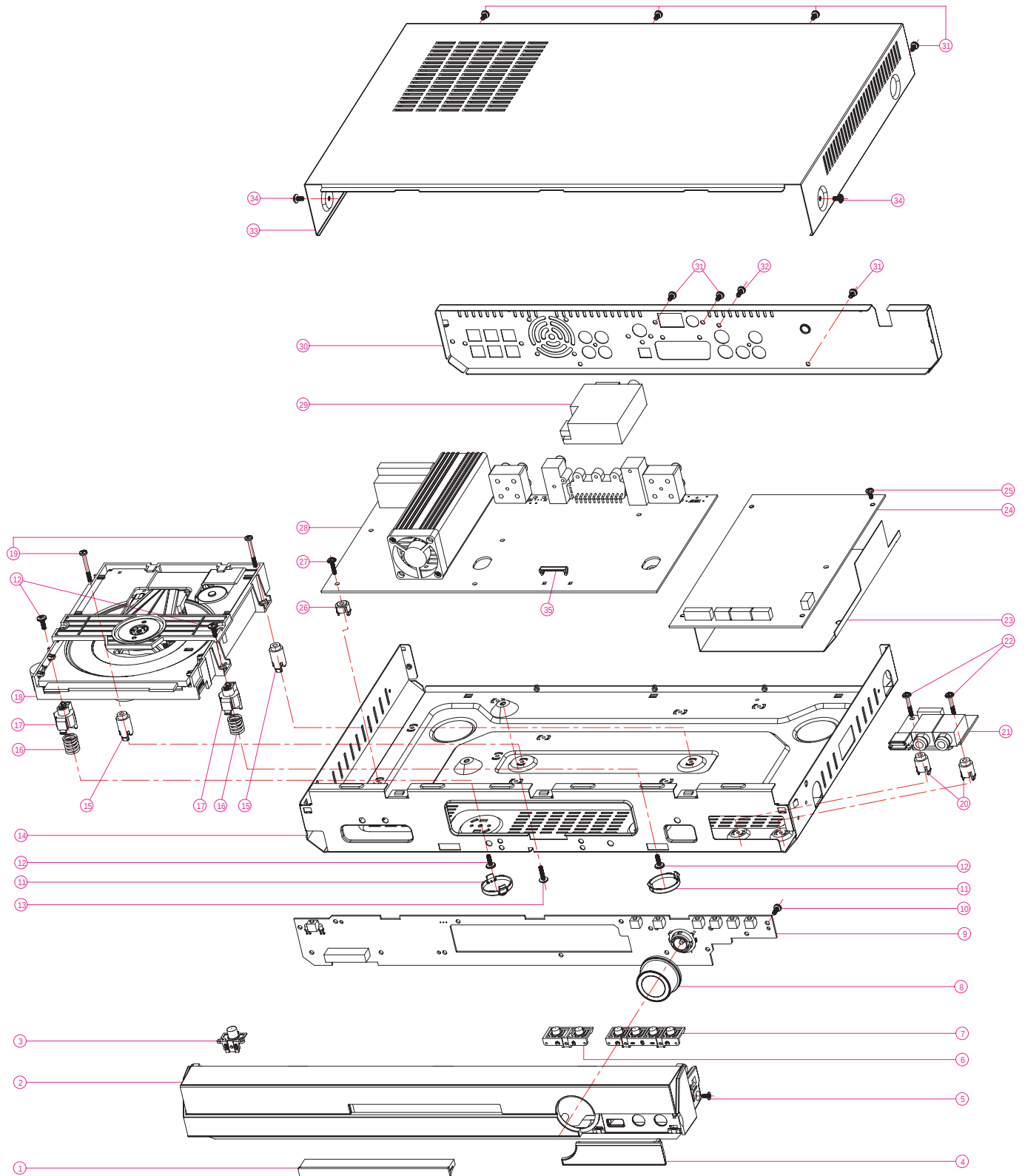
2.4.2 Trouble shooting

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 receiver'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 receiver 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 receiver's laser head.	1. Insert the disc. 2.Install the disc with the label side facing up. 3. Switch the DVD receiver 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 receiver 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 receiver. 3. Replace both batteries.
Some functions do not work	1. Disc is recorded incorrectly. 2.Incorrect key sequence. 3.Static voltage on the DVD receiver's housing.	1.Wait 5-10 seconds and the DVD receiver will automatically return to normal state. 2. Repeat the operation one more time. 3.Switch the DVD receiver off for 1-2 minutes and then switch it on again.
Unstable image	1.Incorrect TV set settings.	1.Correct the TV set settings.

Chapter Three Exploded Views



SERIAL NUMBER	MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	UNIT	QUANTITY
35	3074665	PLASTIC BRACKET	2870SI(RU)	PCS	1
34	4000438	SELF-TAPPING SCREW	PWT 3×6×7H BLACK	PCS	2
33	3102802	UPPER COVER	2100SI(RU) BLACK ,WITH PVC PIECE	PCS	1
32	4000073	SELF-TAPPING SCREW	BT 3×8 BLACK	PCS	9
31	4000436	SELF-TAPPING SCREW	BT 3×6H BLACK	PCS	11
30	3102778	REAR COVER	2100SI(RU) BLACK	PCS	1
29	1020104	DIGITAL RECEIVE TUNER	YST961-A0C2	PCS	1
28	4940723	PCB SEMI-FINISHED PRODUCT	2 2100SI-1 2100SI(RU)	PCS	1
27	4000884	SELF-TAPPING SCREW	PWT 3×12×7H WHITE NICKEL(CIRCLE TAIL)	PCS	5
26	3028359	PLASTIC BRACKET	6mm WITH CLASP,ASSEMBLE SIZE 1.1mm	PCS	5
25	4000886	SELF-TAPPING SCREW	BT 3×6H WHITE NICKEL(CIRCLE TAIL)	PCS	2
24	4940724	PCB SEMI-FINISHED PRODUCT	5 2100SI-2 2100SI(RU)	PCS	1
23	5237101	PVC PIECE	2100SI(RU) BLACK, WITHOUT GLUE IN REAR SIDE	PCS	1
22	4000885	SELF-TAPPING SCREW	PWT 3×19×7H WHITE NICKEL(CIRCLE TAIL)	PCS	4
21	4941012	PCB SEMI-FINISHED PRODUCT	6 2870HD-2 2100SI(RU)	PCS	1
20	3023737	PLASTIC BRACKET	13mm (UL) WITH CLASP	PCS	4
19	4000887	SELF-TAPPING SCREW	BT 3×26H WHITE NICKEL(CIRCLE TAIL)	PCS	2
18	5462564	LOADER COMPONENTS	3121-B(62SV1)+8801 CORD 100	PCS	1
17	3074252	PLASTIC BRACKET	1910SI(RU)	PCS	2
16	3810119	COMPRESSED SPRING	Φ11.5×12.5 Φ1.5	PCS	2
15	3025213	PLASTIC BRACKET	H=18mm WITH CLASP	PCS	2
14	3102799	LOWER COVER	2100SI(RU) GREY	PCS	1
13	4000564	SELF-TAPPING SCREW	PWT 3×12×7H WHITE NICKEL	PCS	2
12	4210294	MACHINE-TAPPING SCREW	BM 3×9 WHITE NICKEL	PCS	4
11	3074253	BOLT COVER BOARD	1910SI(RU)	PCS	2
10	4000048	SELF-TAPPING SCREW	PB 3×8 COLOR ZINC	PCS	13
9	4940419	PCB SEMI-FINISHED PRODUCT	4 2860SI-0 2870SI(RU)	PCS	1
8	3074568	VOLUME KNOB	2870SI(RU) BLACK	PCS	1
7	3074565	4-DIRECTION BUTTON	2870SI(RU) BLACK	PCS	1
6	3074564	2-DIRECTION BUTTON	2870SI(RU) BLACK	PCS	1
5	4040051	SELF-TAPPING SCREW	FB 3×6H BLACK	PCS	2
4	3074989	OVERTURN DOOR	2870SI(RU) SILVER WHITE 3#	PCS	1
3	3074563	POWER BUTTON	2870SI(RU) BLACK	PCS	1
2	3005361	PANEL	2100SI(RU) BLACK/SILVER WHITE	PCS	1
1	3074872	DOOR	2100SI(RU) BLACK	PCS	1

Block diagram for DK2100SI player is shown in figure 4.2.1



Chapter Five

Block Diagram of Unit Circuit

5.1 Servo circuit

Servo system of this machine adopts HD62 loader and MTK decode scheme. And servo circuit is mainly composed of front signal processing, digital servo processing, digital signal processing chip MT1389 and driving chip AM5888. MT1389 is also main part of decode circuit. Block diagram of servo circuit is shown in figure 5.1.1:

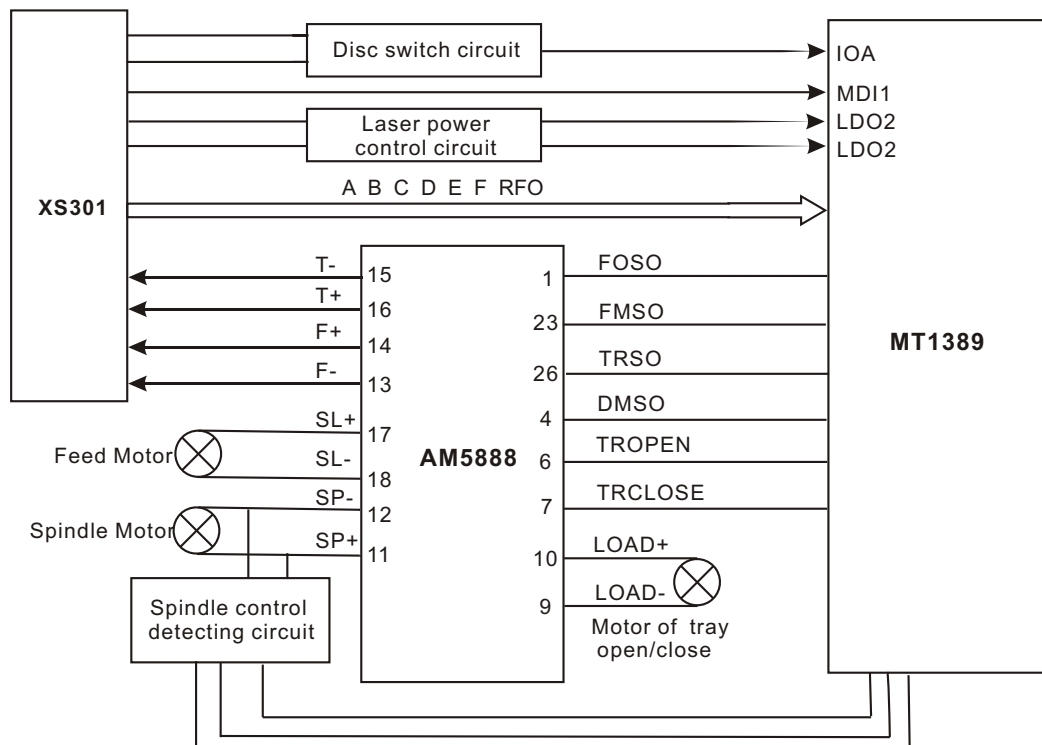


Figure 5.1.1 Block diagram of servo circuit

5.2 Decode Circuit

Decode circuit is mainly composed of MT1389,SDRAM and FLASH. Block diagram of circuit is shown in figure 5.2.1:

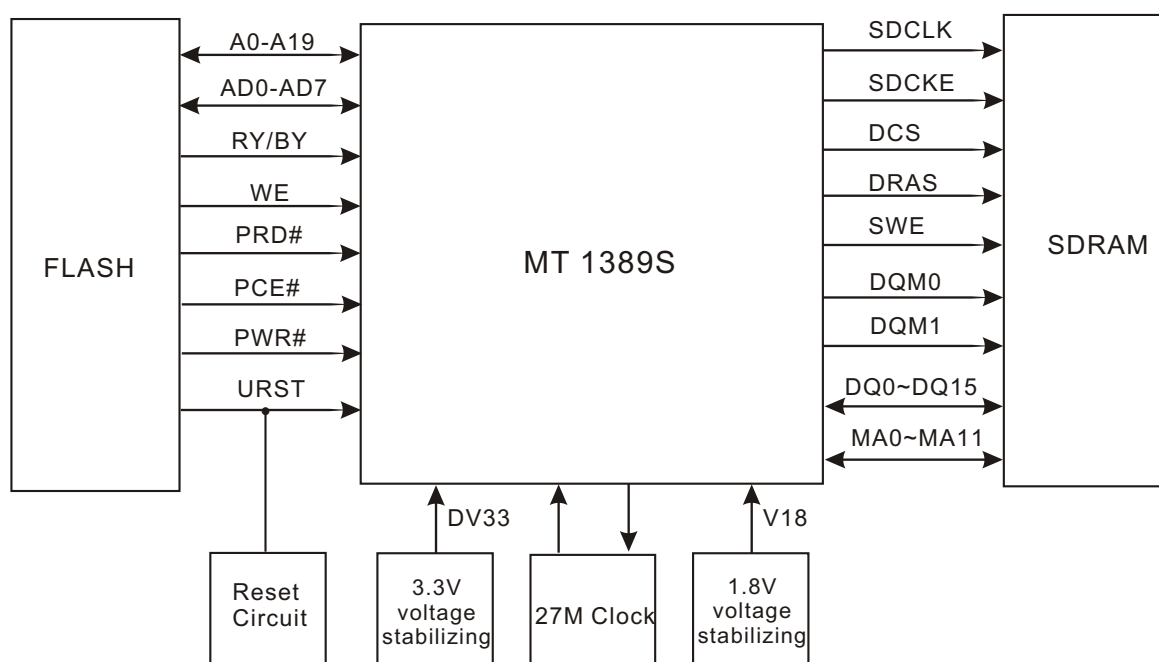


Figure 5.2.1 Block diagram of decode circuit

5.3 Video circuit

Video circuit block diagram is shown as the following figure 5.3.1:

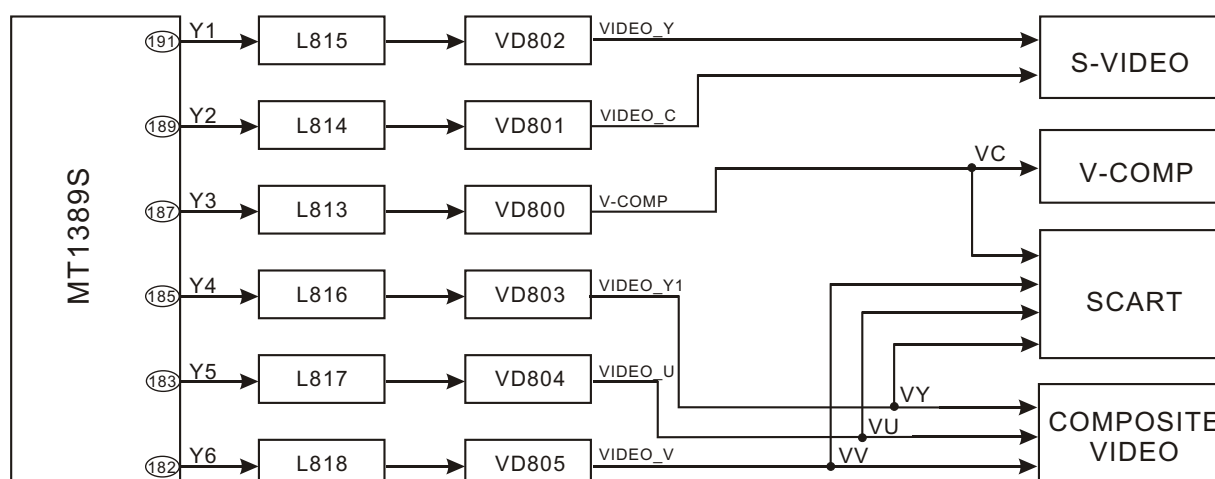


Figure 5.3.1 Video circuit block diagram

5.4 Audio power amplifying circuit block diagram

Audio power amplifying circuit block diagram is shown as the following figure 5.4.1:

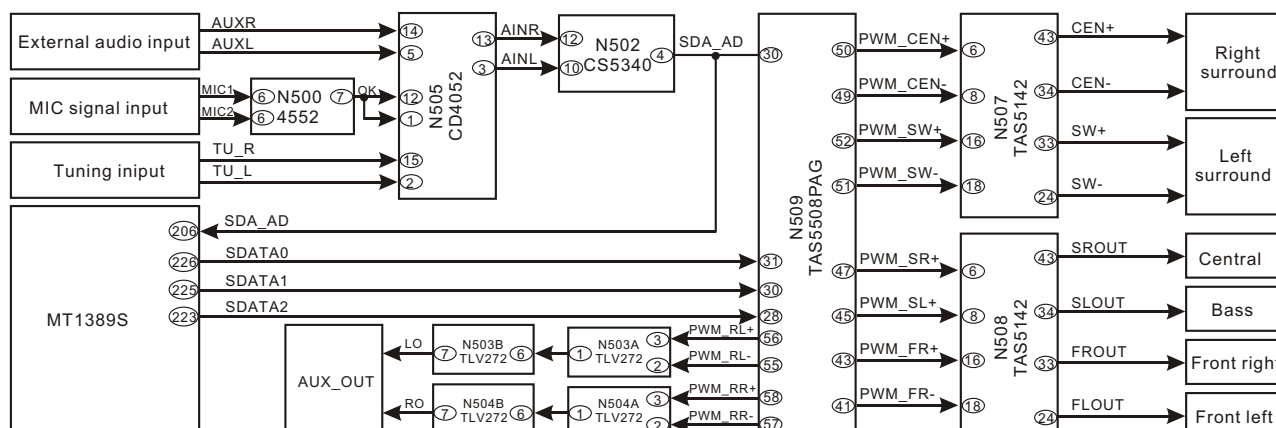


Figure 5.4.1 Audio power amplifying circuit block diagram

5.5 Power supply circuit

Power supply circuit block diagram is shown as the following figure 5.5.1:

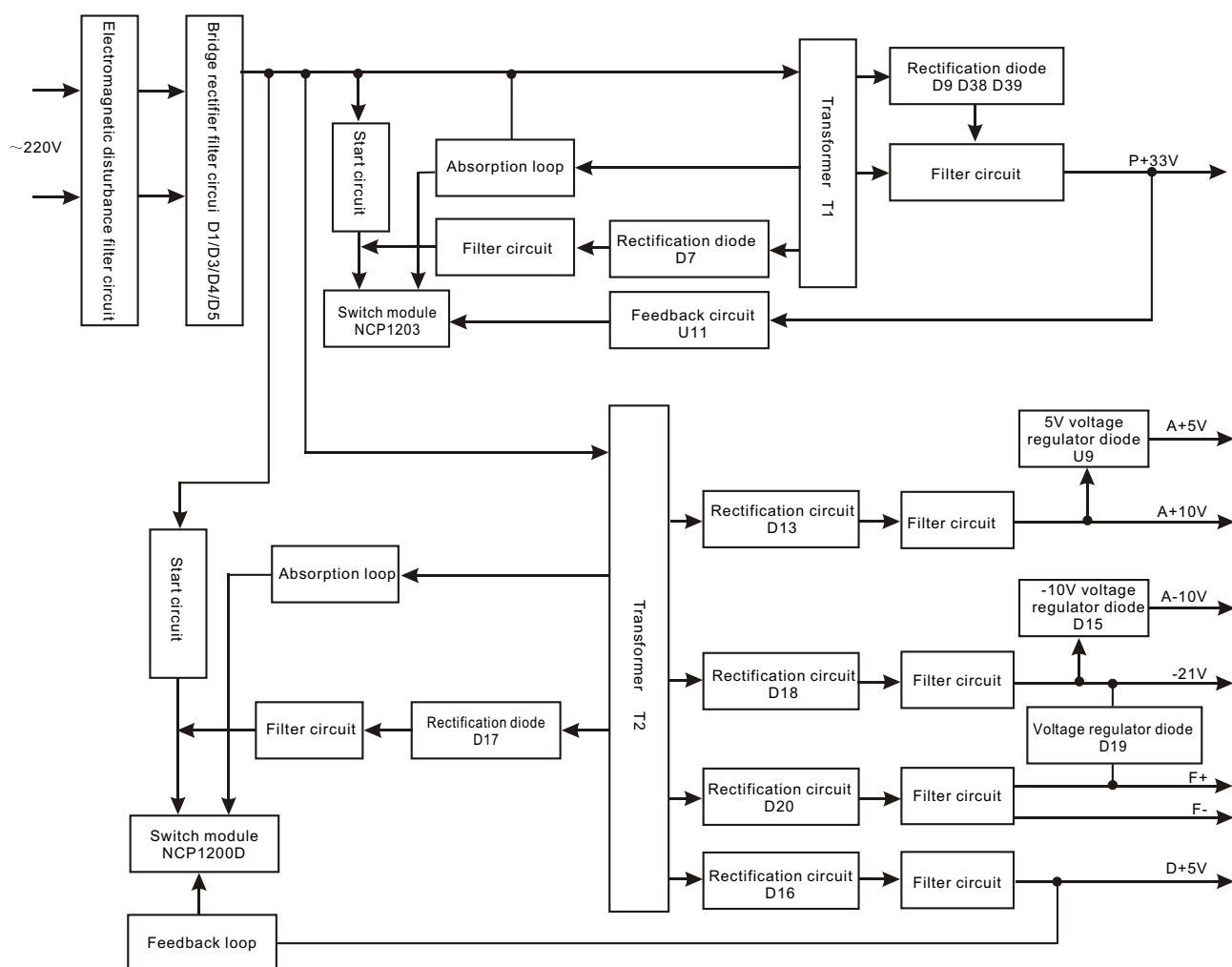
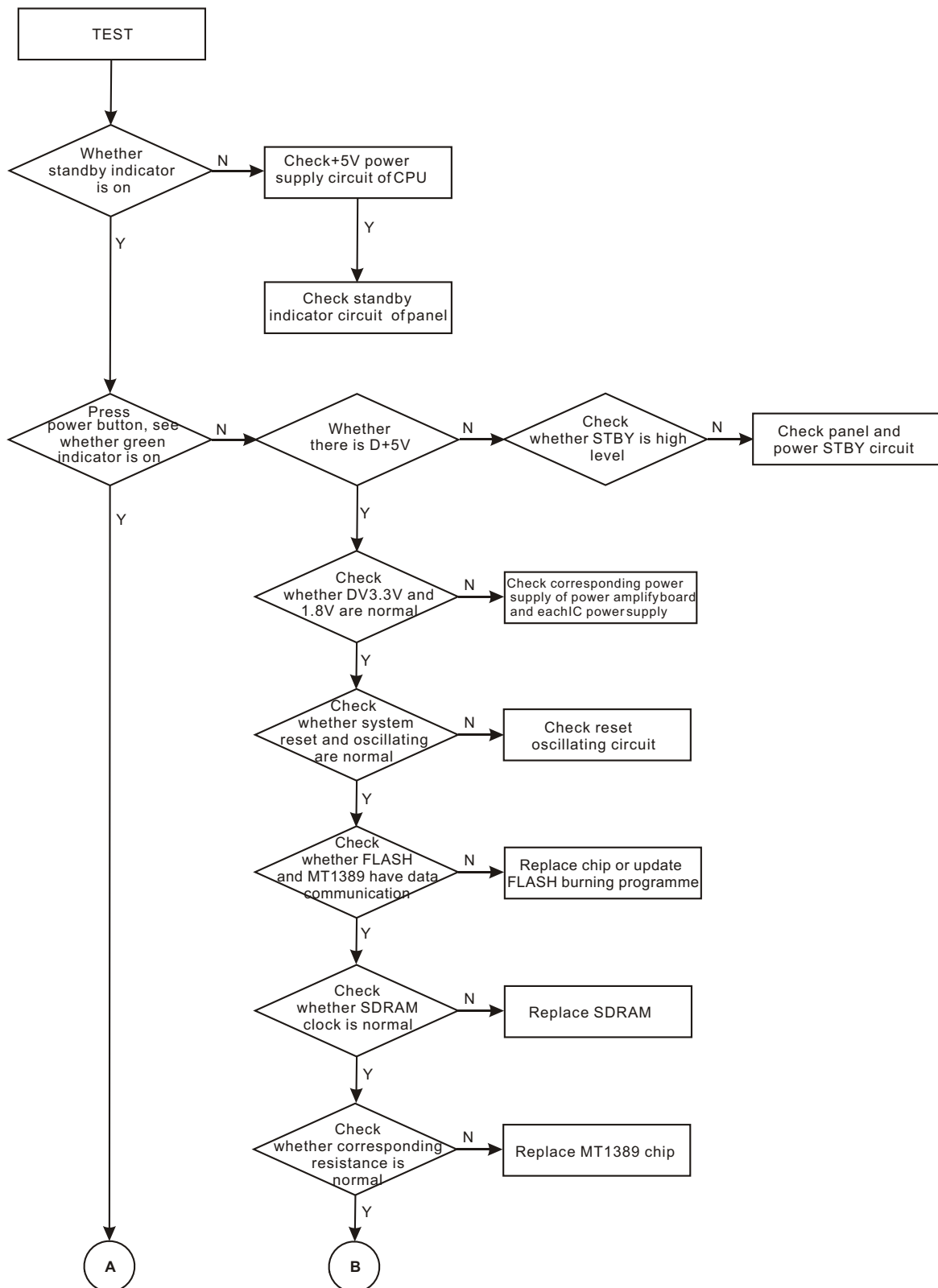
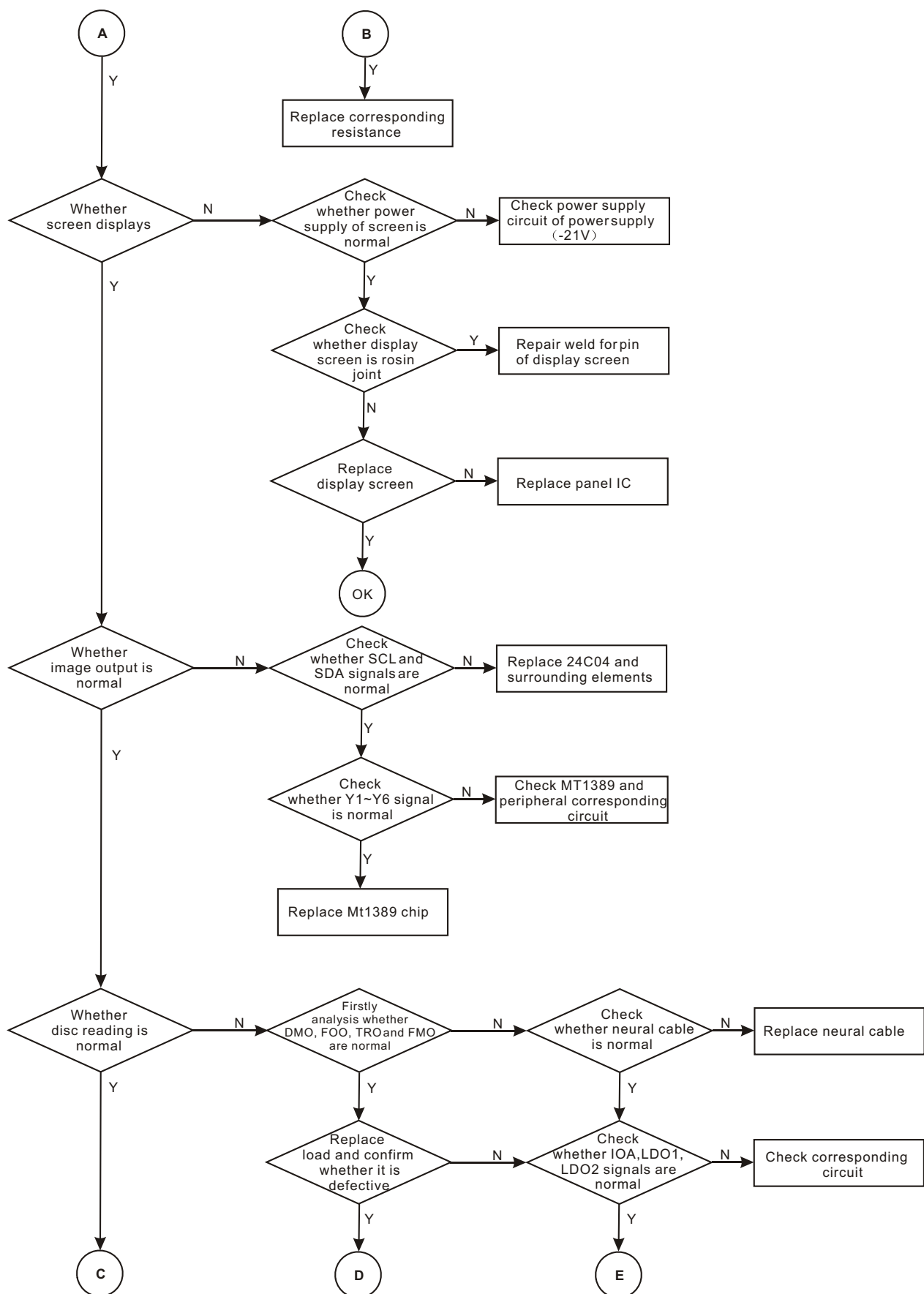
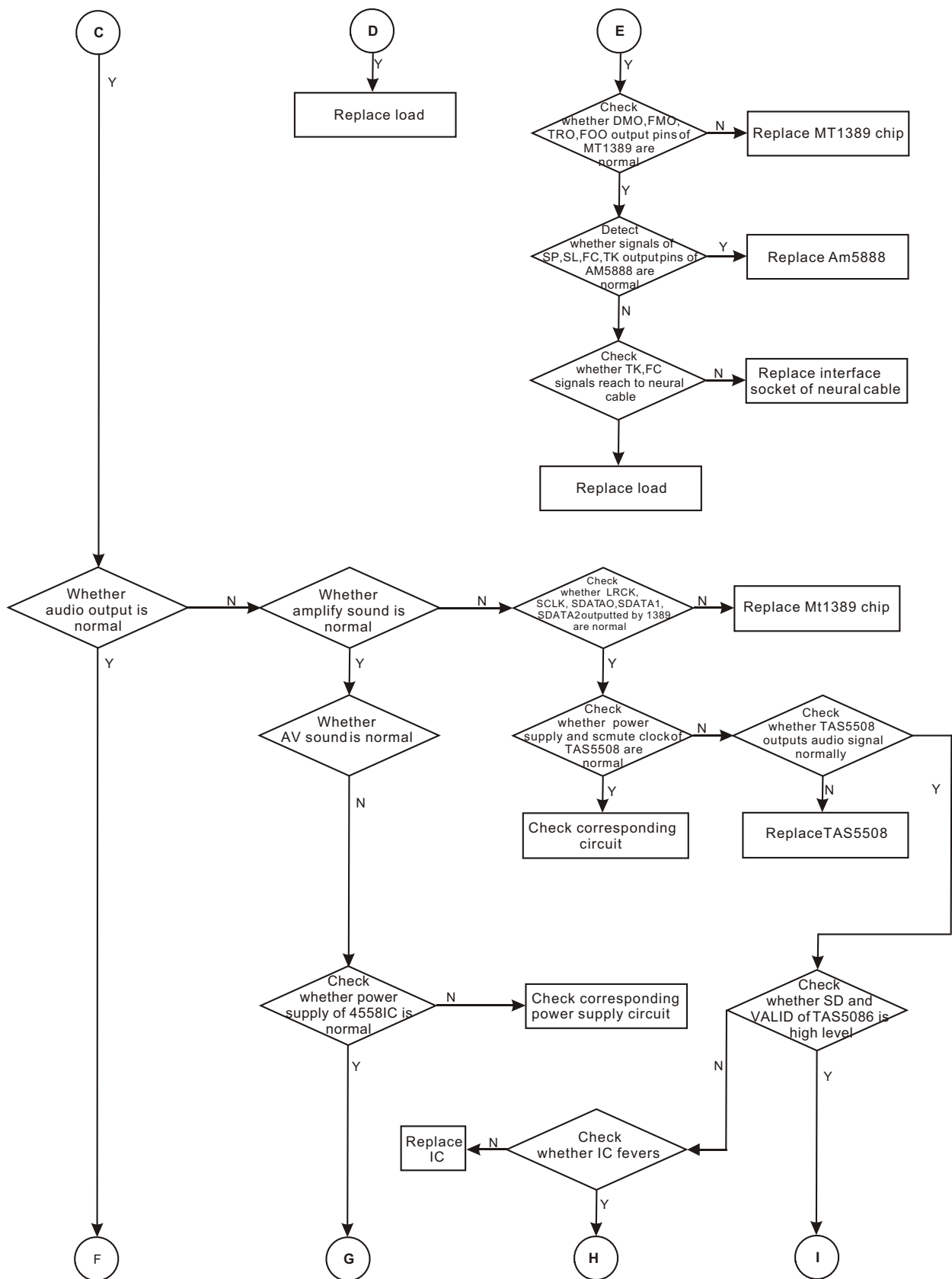


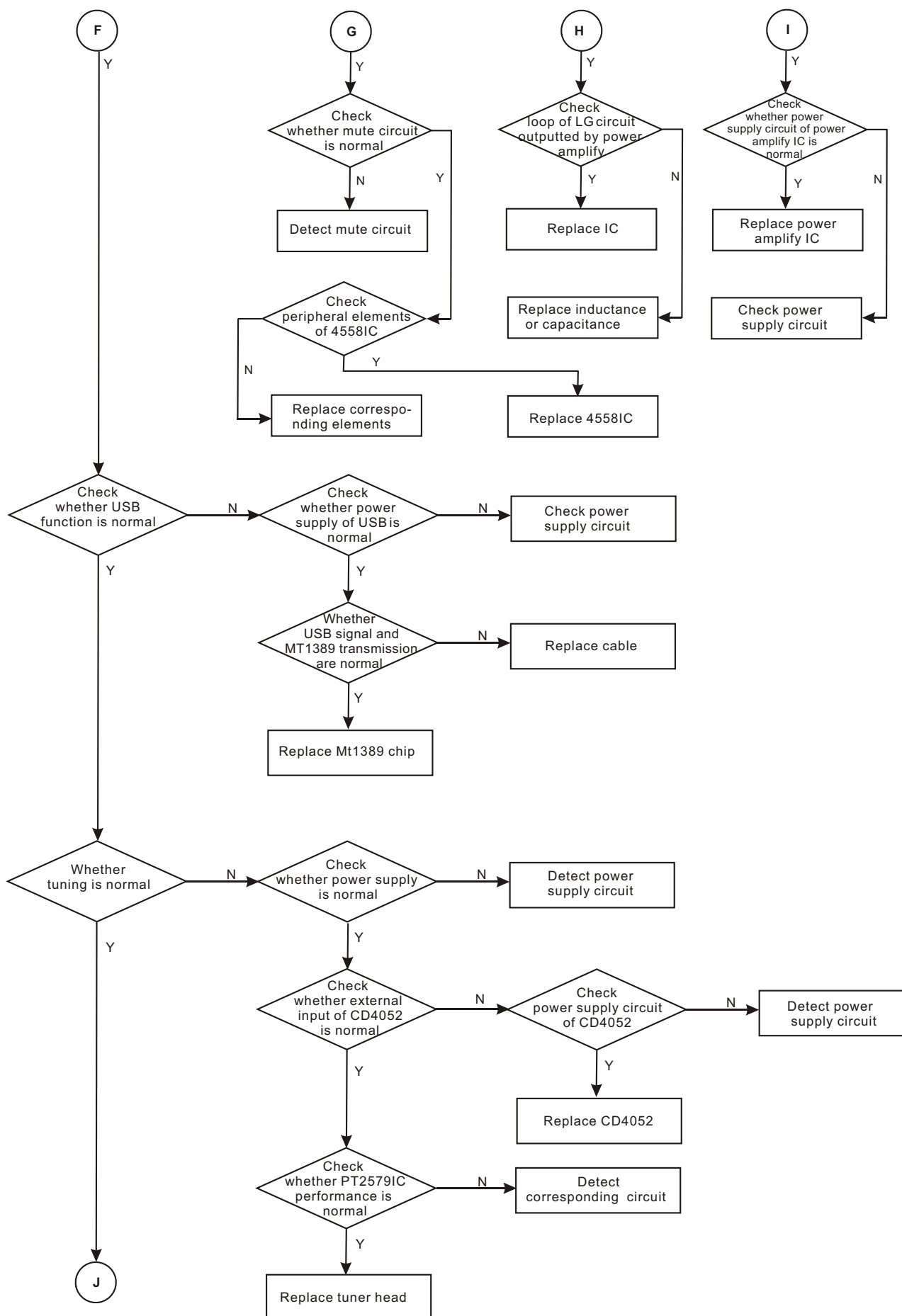
Figure 5.5.1 Power supply circuit block diagram

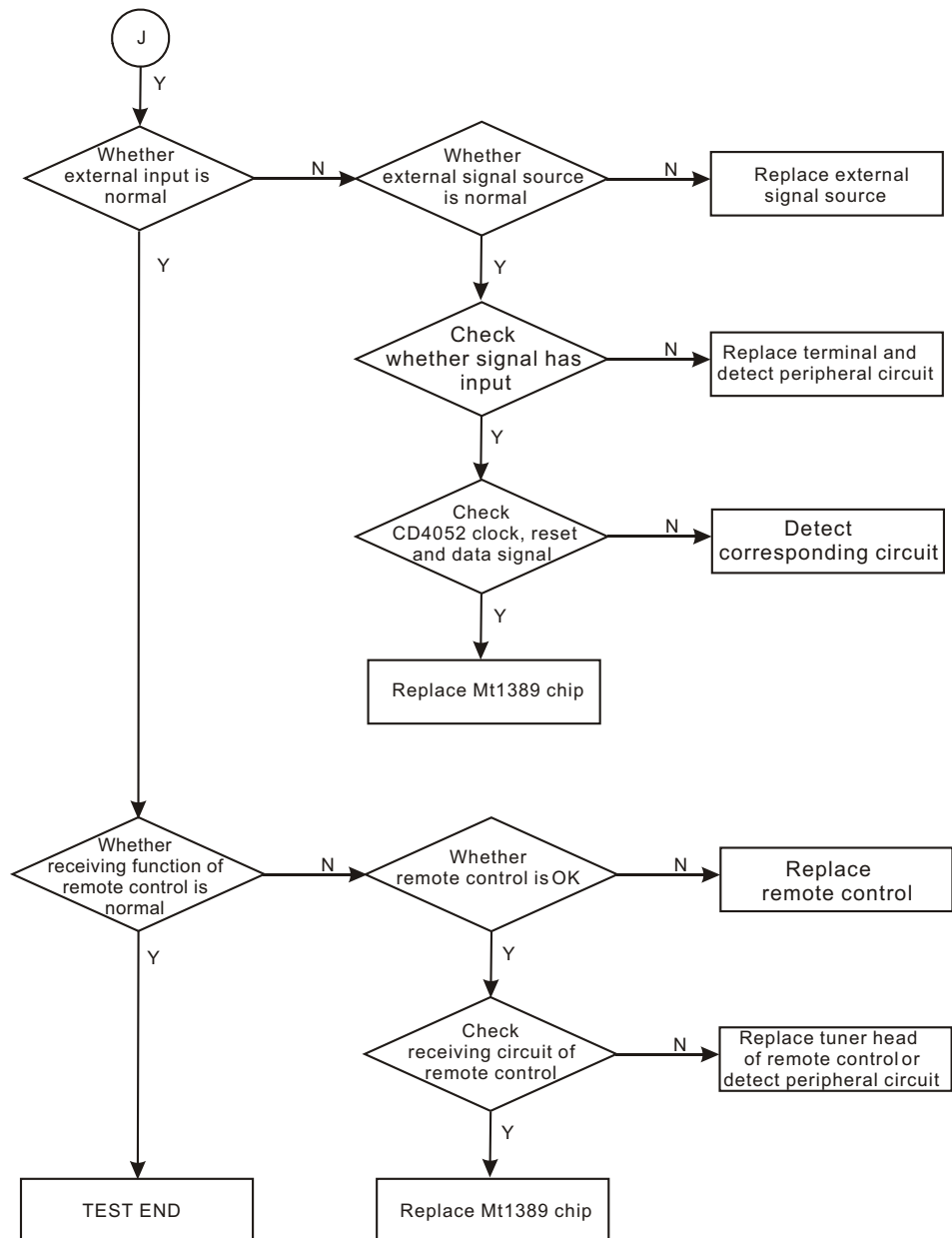
Chapter Six Troubleshooting Flow Chart







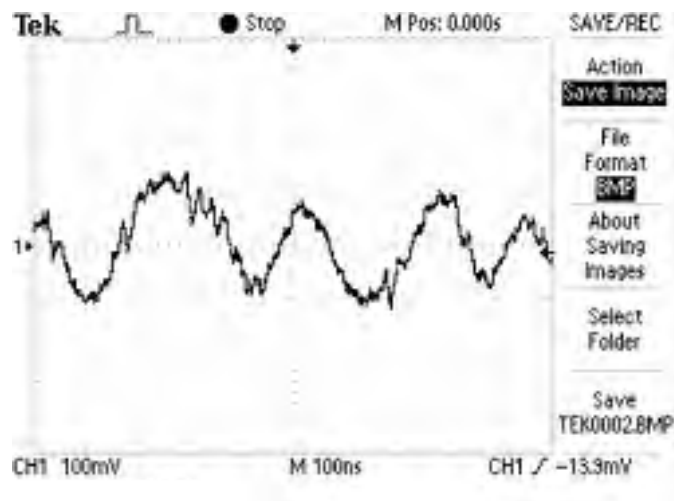




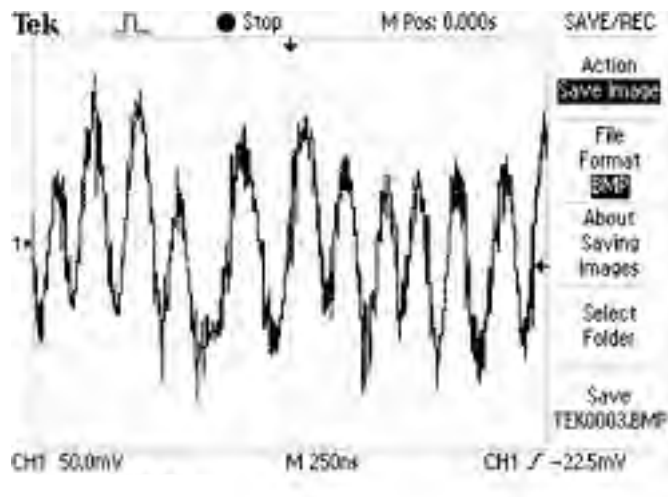
Chapter Seven Waveform diagram

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.

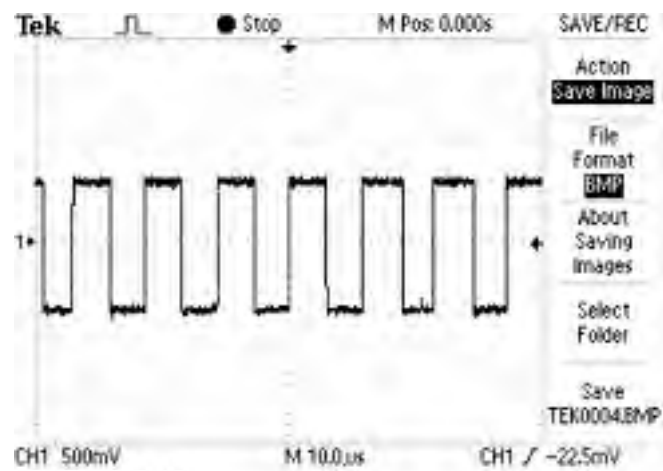
1. RFO signal waveform diagram of pin 7 of Xs301.



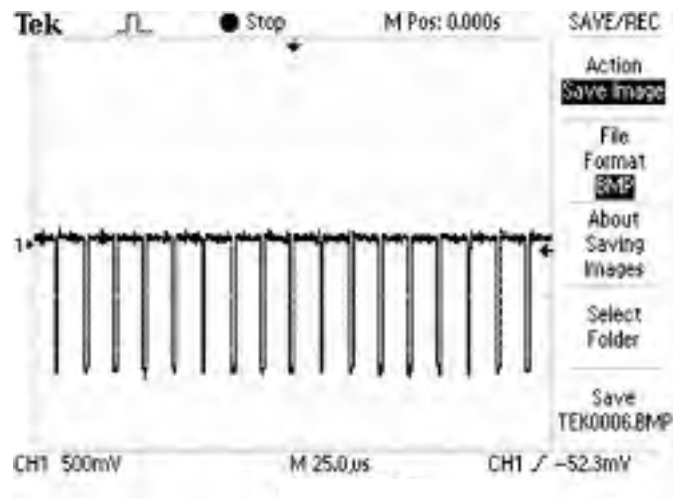
2. A signal waveform diagram of pin 9 of XS301(B、C、D、E、F) .



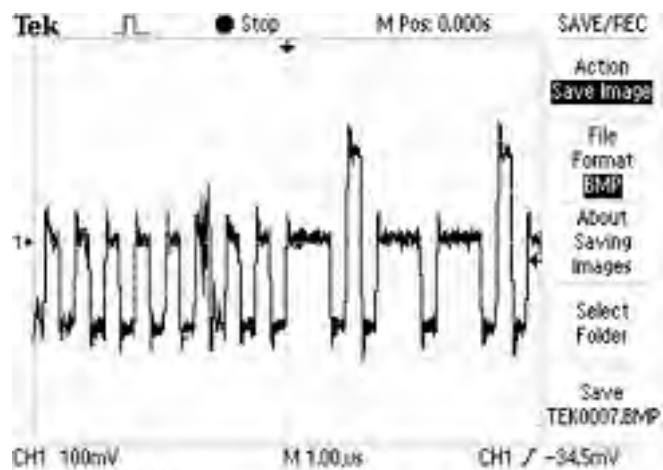
3. DMO signal (when there is main axis rotation) waveform diagram of pin 33 of N3 (Mt1389).



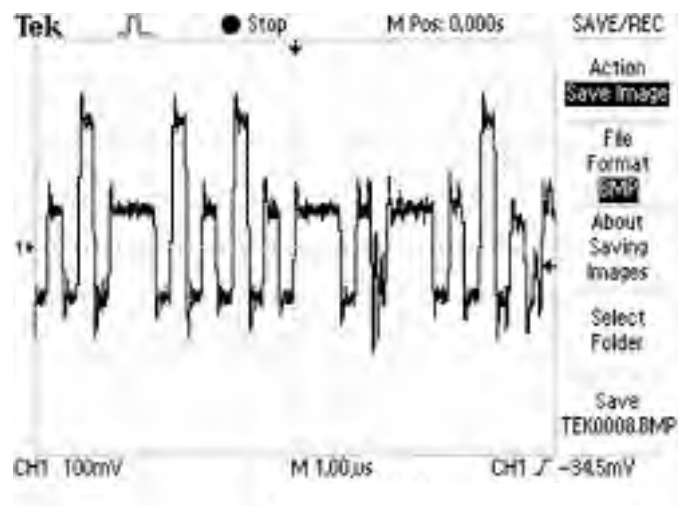
4. FMO signal (when there is feed) waveform diagram of pin 37 of N3 (Mt1389).



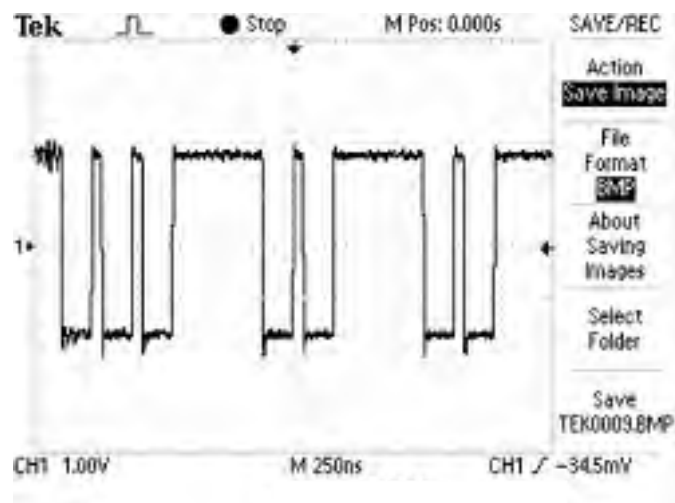
5. TRO signal (when there is trace) waveform diagram of pin 40 of N3 (Mt1389).



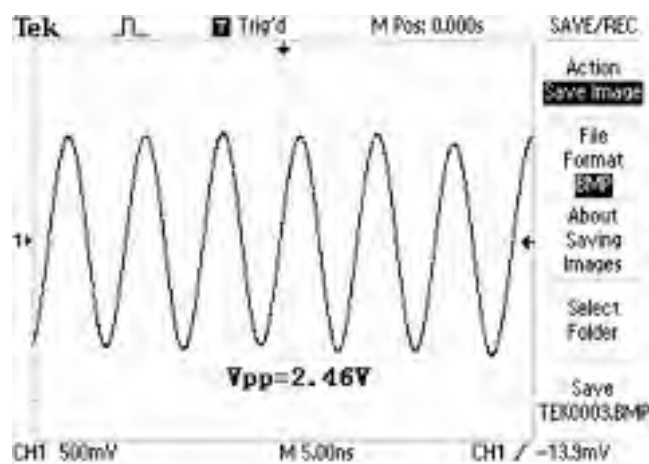
6. FOO signal (when there is focus) waveform diagram of pin 41 of N3 (Mt1389).



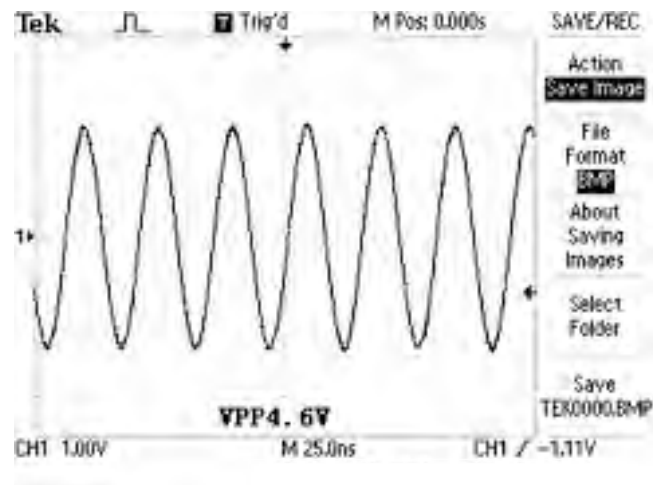
7. Waveform diagram of pin 29 (when no disc in) of N83 (FLASH).



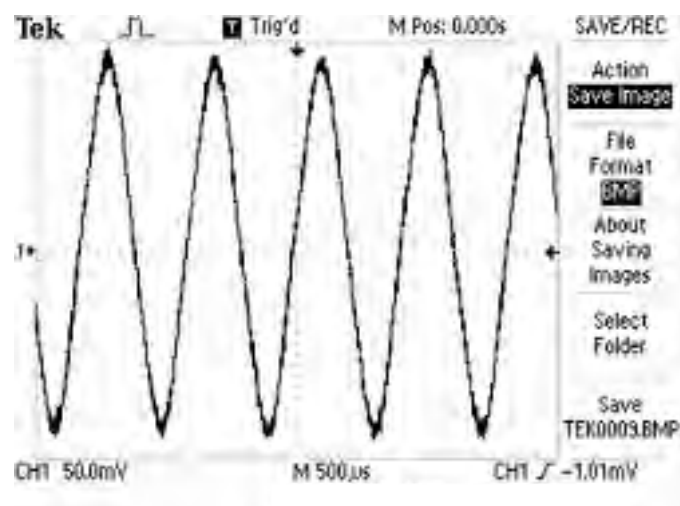
8. Waveform diagram of pin 38 of N81 (SDRAM).



9. 27M clock signal waveform diagram.

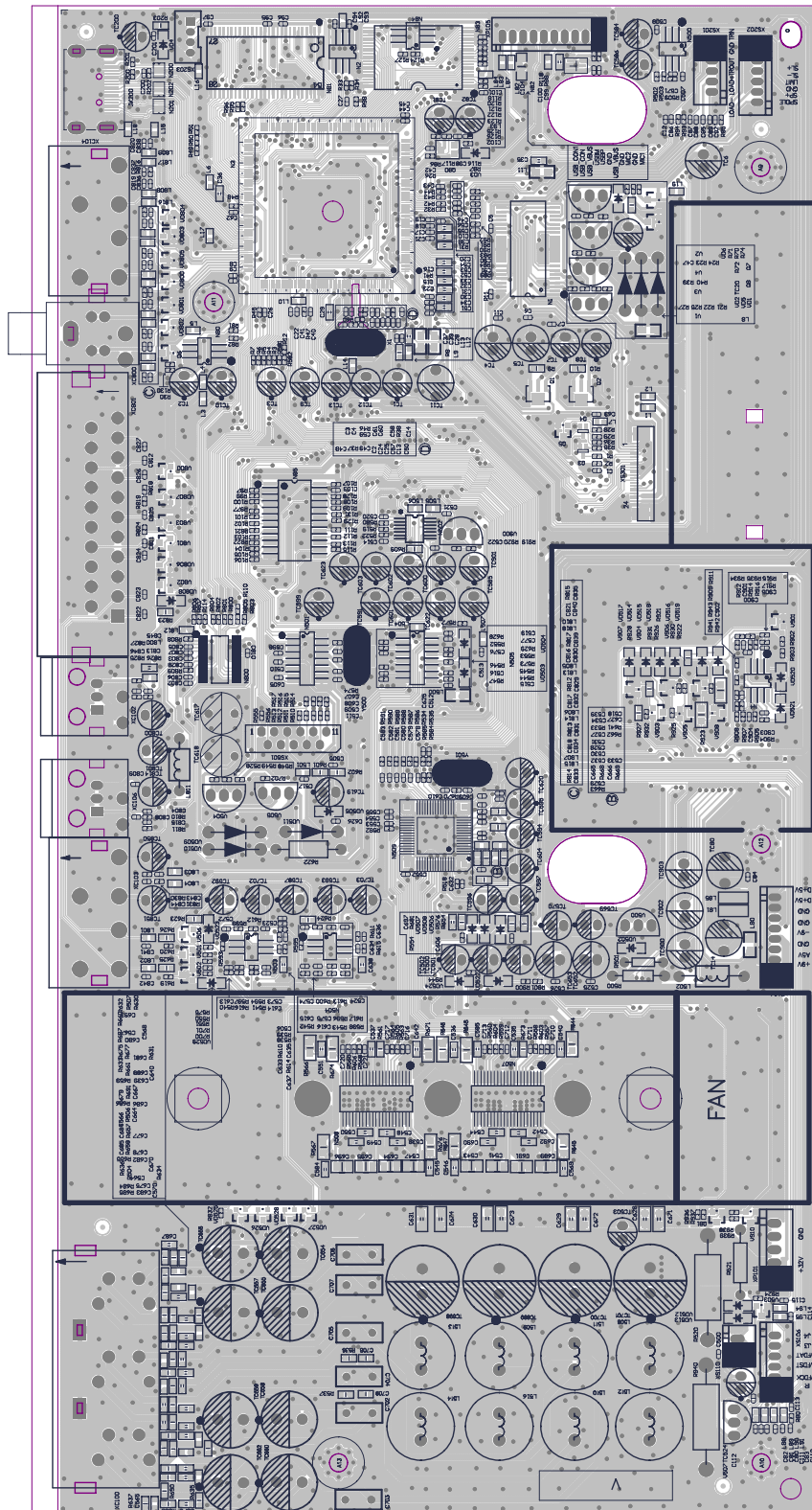


10. 1KHZ signal waveform diagram. It is suggested to use test disc, if not, the tested waveform will change at any time to affect judgment.

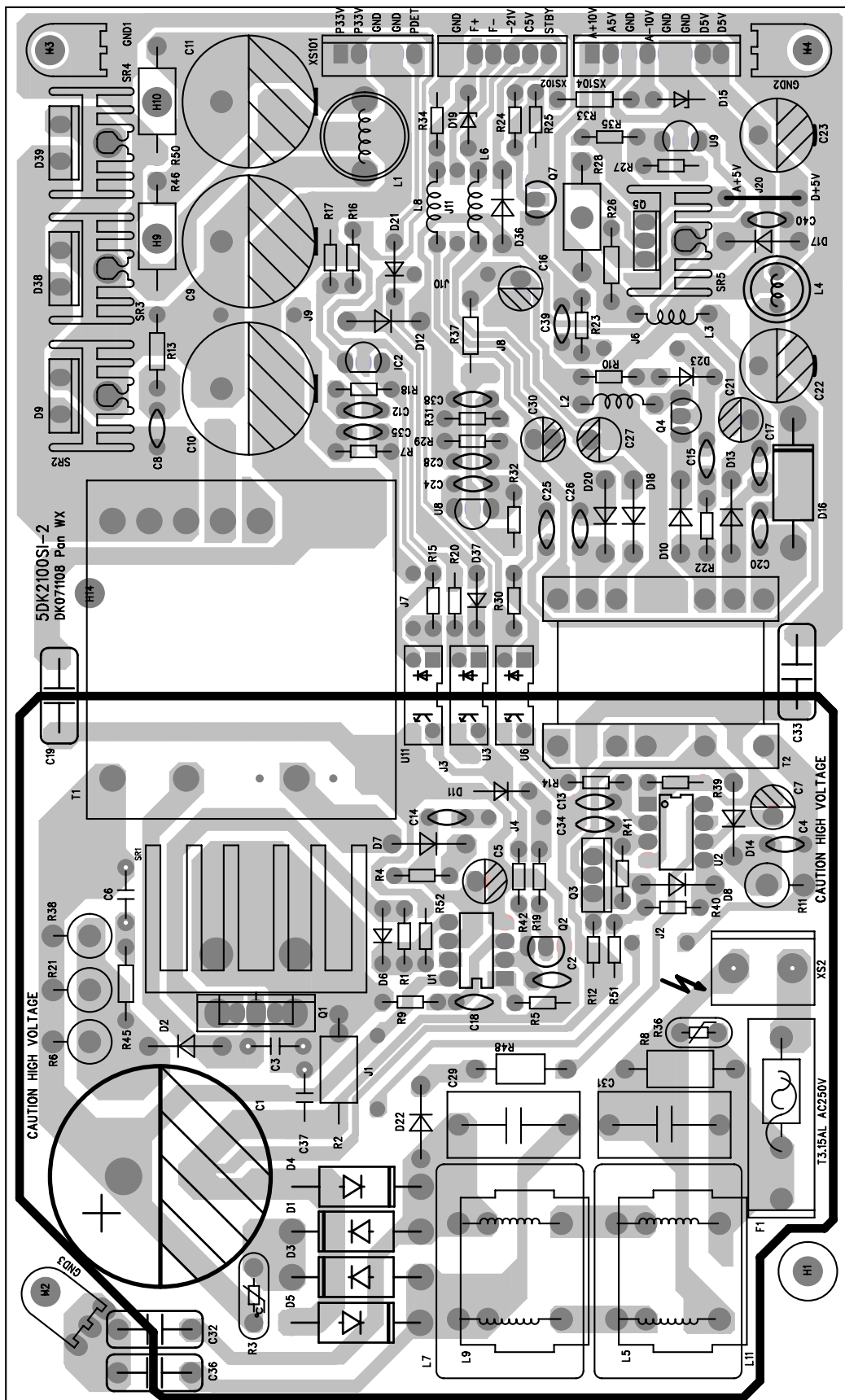


Chapter Eight PCB Board

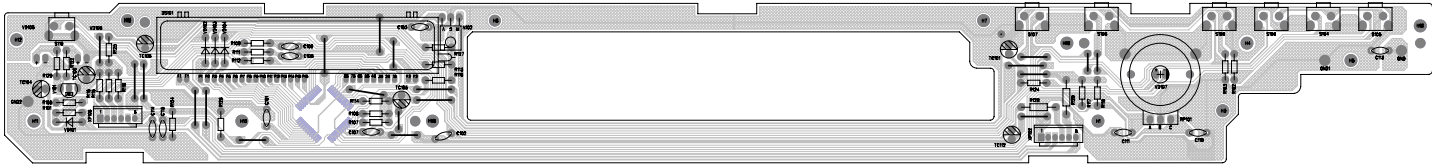
8.1 Surface layer of Decode Board(2DK2100SI-1)4940723



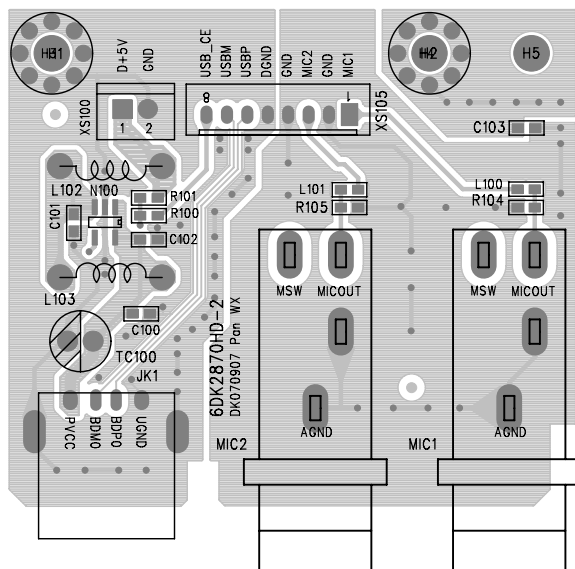
8.2 Power Board (@5DK2100SI-2)4940724



8.3 Surface layer of Main Panel (4DK2870HD-0)4940419

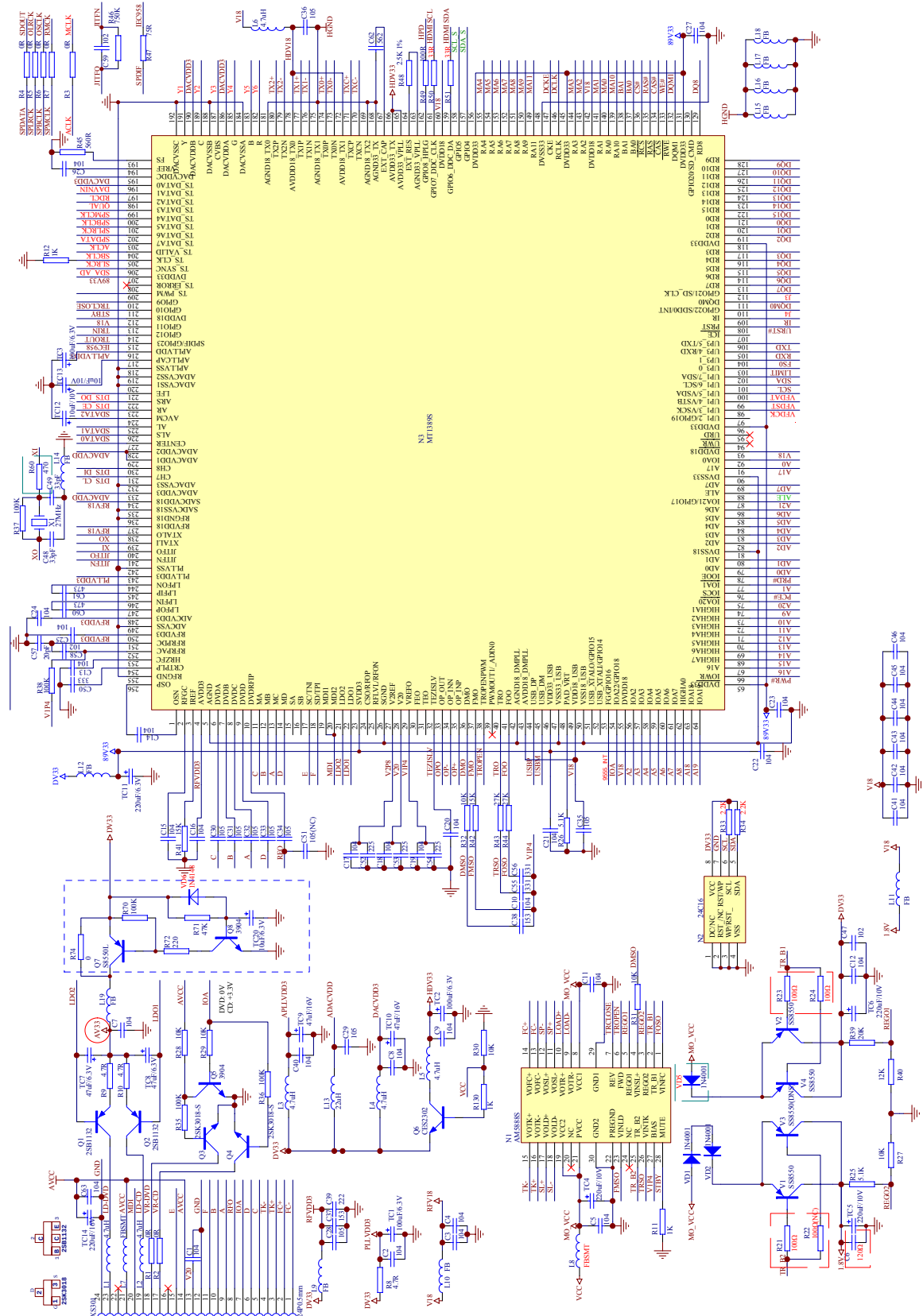


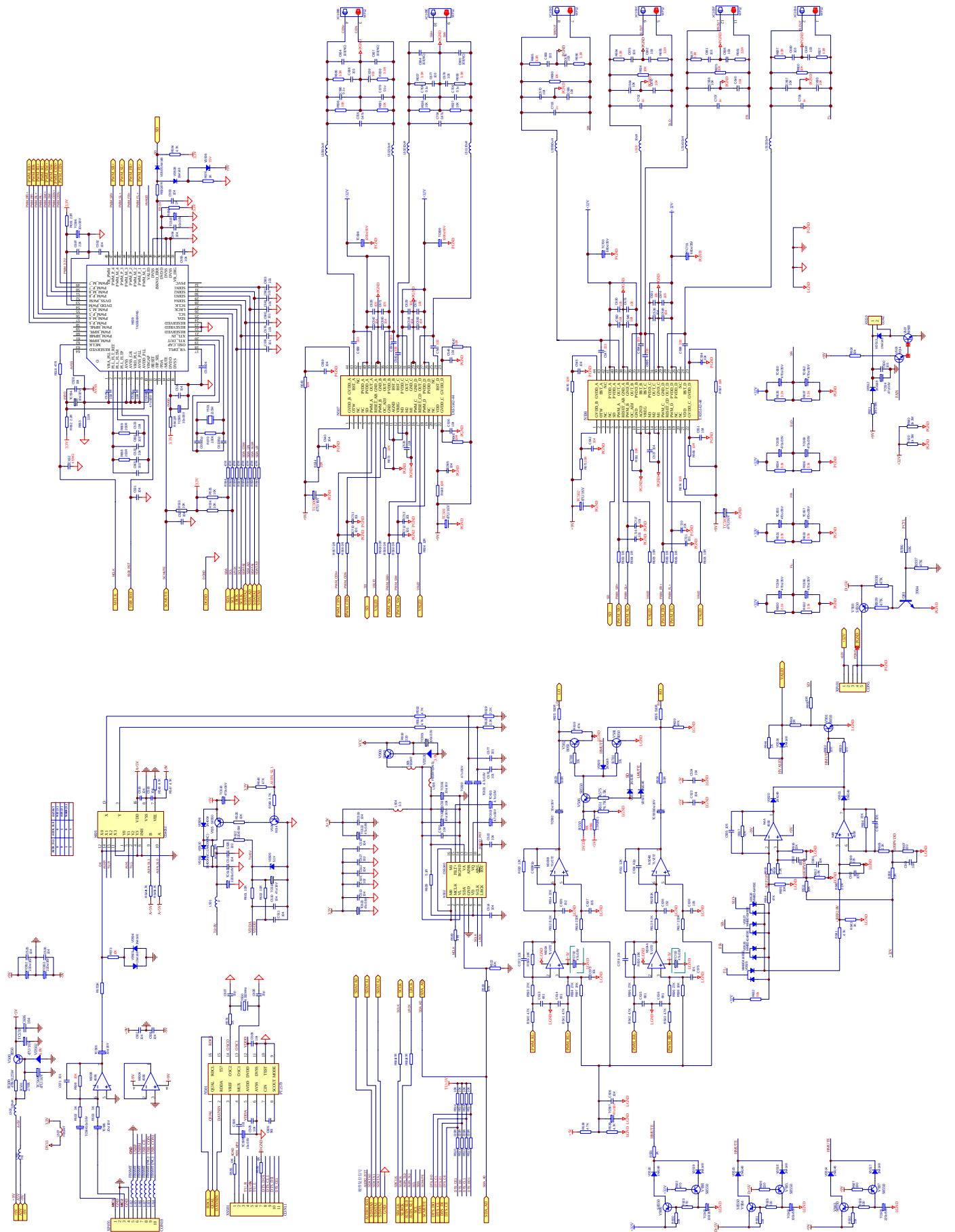
8.4 OK Board (6DK2870HD-2)4941012



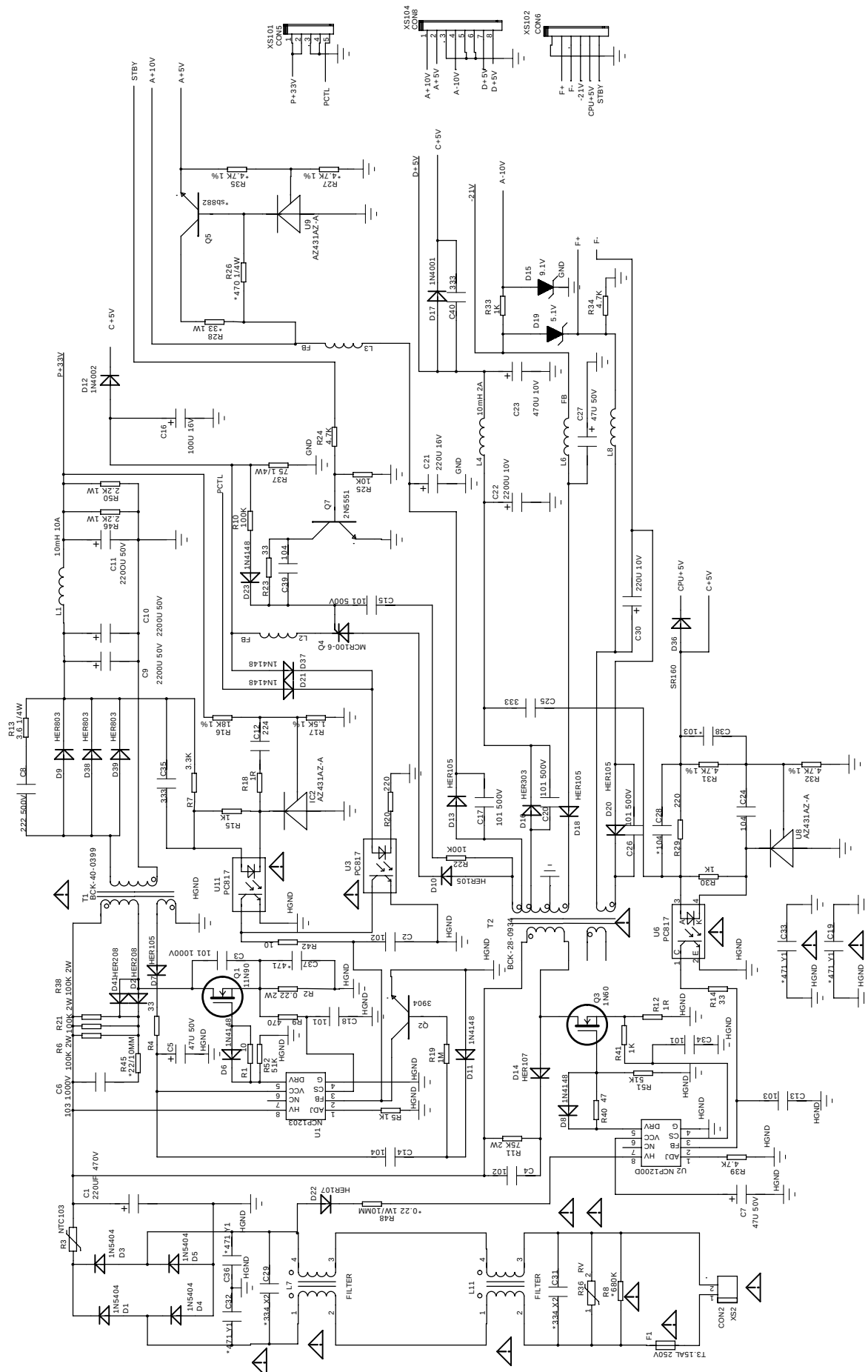
Chapter Nine Circuit Diagram

9.1 Decode Board(2DK2100SI-1)

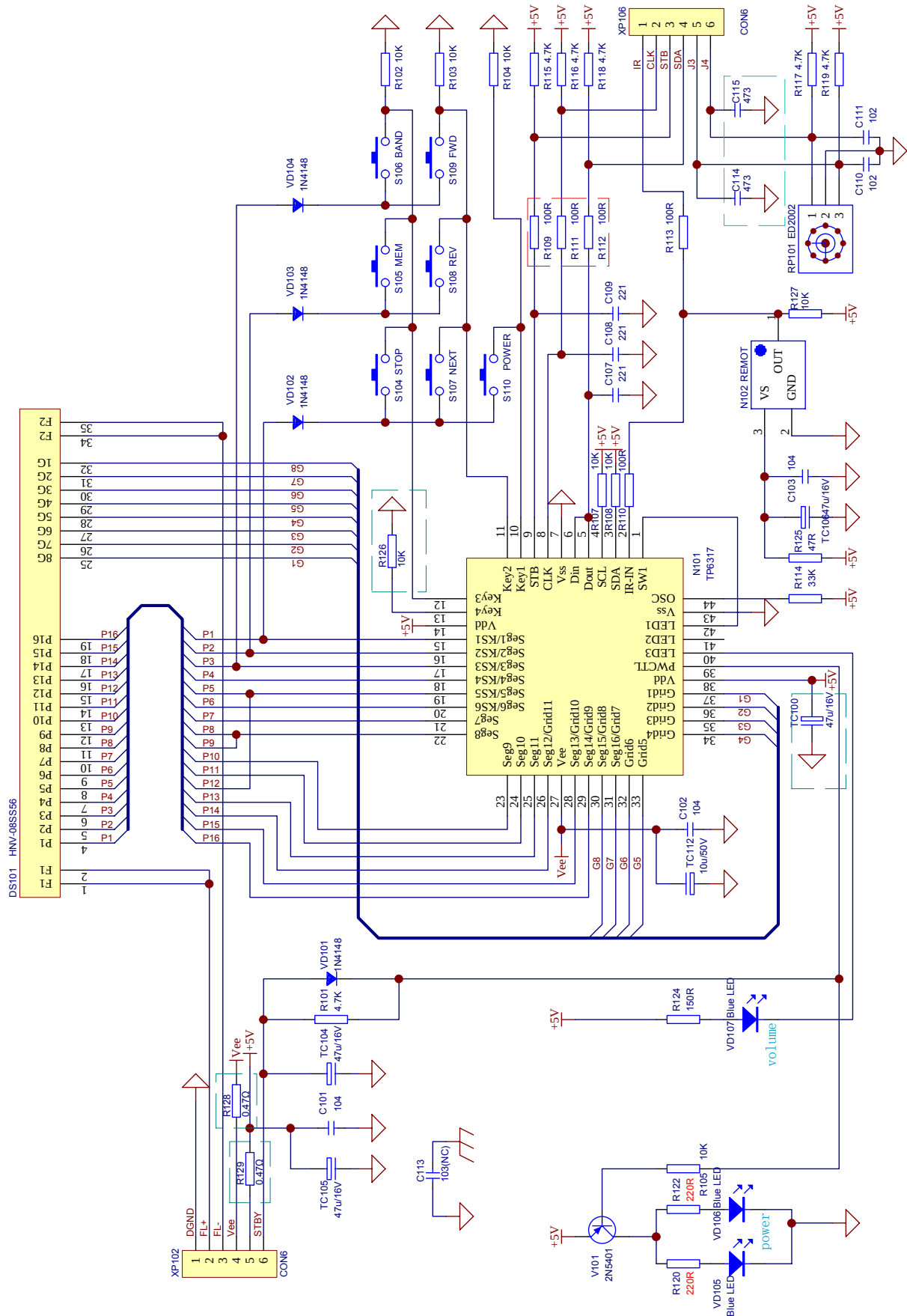




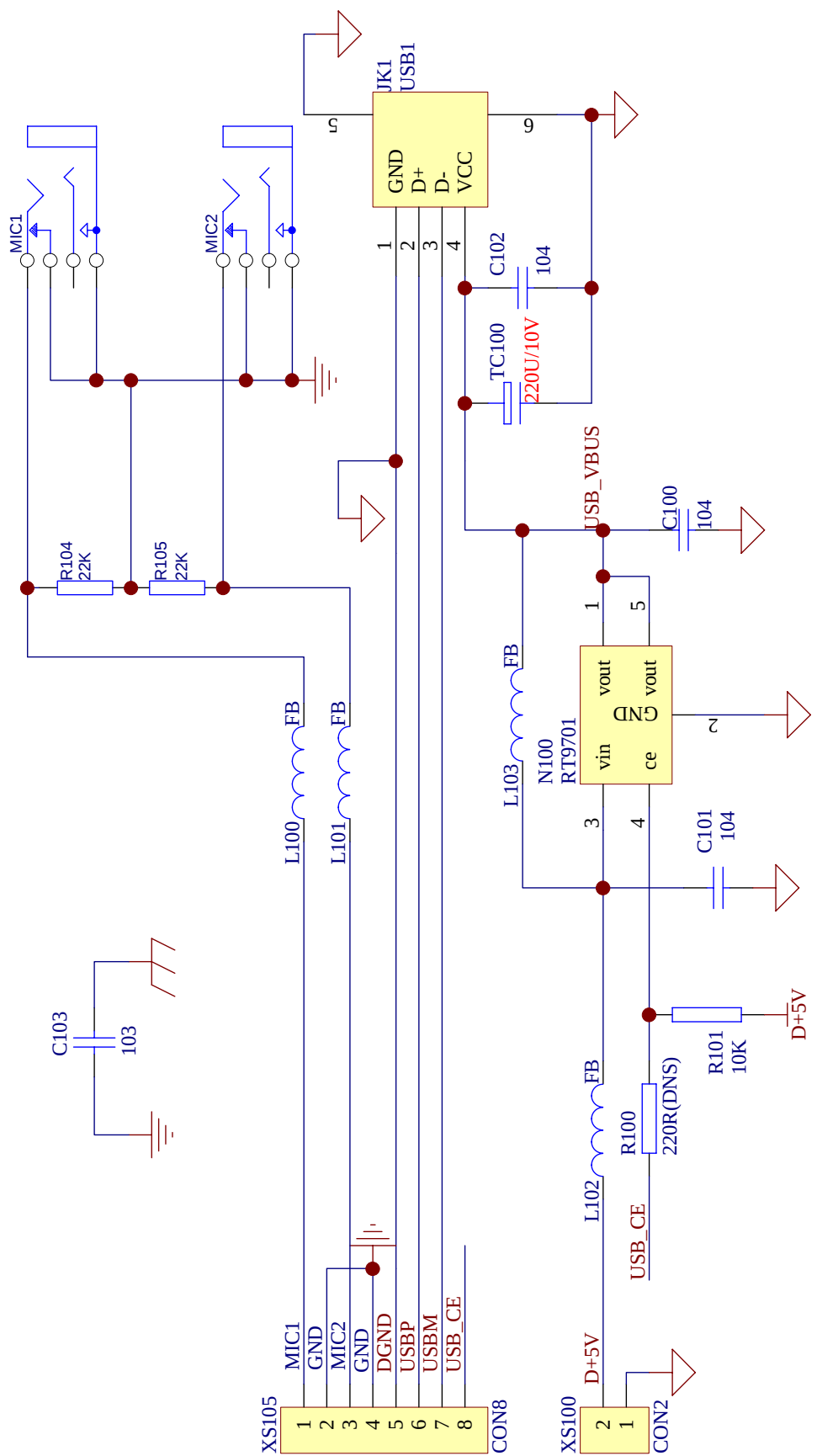
9.2 Power Board (@5DK2100SI-1)



9.3 Main Panel Board(4DK2870HD-0)



9.4 OK Board(6DK2870HD-2)



Chapter Ten BOM List

DK1475SI(RU) BLACK

MICROPHONE HOLDER BOARD: 6DK2870HD-2 4941012			
MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0260222	CD	CD11C 10V220U±20%6×7 2.5	TC100
0090026	SMD RESISTOR	1/16W 22K±5% 0603	R104,R105
0310202	SMD CAPACITOR	50V 223±10% 0603	C102
0310072	SMD CAPACITOR	50V 103±10% 7R 0603	C103
0390095	SMD MAGNETIC BEADS	FC160822105	L101,L100
1940001	SOCKET	2P 2.5mm	XS100
2100004	CONNENTION CORDS	Φ0.6 SHAPED 10mm	L103
03900579	MAGNETIC BEADS INDUCTOR	RH354708 BELT	L102
1860047	USB SOCKET	CAB85-4Pin	JK1
1980030	MICROPHONE SOCKET	C3-6.35-19	MIC1,MIC2
1940008	SOCKET	8P2.0mm	XS105
1634473	PCB	6 2870HD-2 FR4 D1.6 PX	

DK1475SI(RU) BLACK

POWER AMPLIFIER BOARD: 2DK2100SI-1 4940723			
MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
00003909	CARBON FILM RESISTOR	1/6270 Ω ±5% BELT	R501
00001699	CARBON FILM RESISTOR	1/447 Ω ±5% BELT	R500
00001679	CARBON FILM RESISTOR	1/433 Ω ±5% BELT	VD511
00006239	CARBON FILM RESISTOR	1/2W220 Ω ±5% BELT	R835
0010396	RY	1W2.2K±5%SHAPED R15×8	R520,R940
02608249	CD	C11 16V10U±20%5×11 C2.5 BELT	TC81,TC12,TC13,TC584~TC586,TC591~TC597,TC599,TC850,TC851,TC600~TC604
02607879	CD	C11C 16V47U±20%5×7 C2.5 BELT	TC7,TC8
02608519	CD	CD11 16V47U M 5×11 C2.5 BELT	TC9,TC10,TC200,TC500,TC501,TC502,TC503,TC524,TC569,TC570,TC587,TC619,TC620,TC622,TC623,TC702,TC703

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
02607819	CD	C11C 10V100U±20%5×11 C2.5 BELT	TC1~TC3,TC82,TC901
02602329	CD	CD11 35V47U±20%6×12 2.5BELT	TC900
02602229	CD	C11C 10V220U±20%6×7 2.5 BELT	TC4,TC5,TC6
02601819	CD	C11 16V220U±20%6×12 C5 BELT	TC11,TC80,TC14
02600289	CD	C11 16V220U±20%6×12 2.5 BELT	TC902,TC652,TC653,TC903
02603859	CD	C11 16V470U±20%8×12 C5 BELT	TC618
0260711	CD	CD288H 16V2200U±20%10×25 5	TC617
0260603	CD	CD11 105℃ 35V470U±20%10×20 5	TC654,TC655,TC656,TC657,TC658,TC659,TC660,TC662
0260491	CD	CD11K 35V680U±20% 13×20 5	TC700,TC701,TC698,TC699
0390168	INDUCTOR	100UH±10% 0410 SHAPED 12.5mm	L502
0210083	METAL POLYESTER FILM CAPACITOR	CL21X 63V 105±5% 7.5	C702,C703,C706,C707
0210165	METAL POLYESTER FILM CAPACITOR	CL23X 63V 474±5% 5	C704,C705
0410238	VERTICAL SCREEN SHIELD FILTERING INDUCTOR	10uH ±20% 10A 5mm	L508~L514,L516
05700039	DIODE	1N4001 BELT	VD1,VD2,VD5
07800329	TRIODE	9014C BELT	V504
07801389	TRIODE	8050D BELT	V500,V900,V507
07803199	TRIODE	SS8550 TO-92 BELT	V1,V2,V4
07801519	TRIODE	8550D BELT	V505 ①
07800309	TRIODE	8550C BELT	V505 ①
1090077	ELECTRO-OPTIC TRANSFORMER	1792	XC102 ②
1090098	ELECTRO-OPTIC TRANSFORMER	HK179A	XC102 ②
0960171	CRYSTAL OSCILLATOR	13.50MHZ 49-S	Y501
0960020	CRYSTAL OSCILLATOR	27.00MHz 49-S	X1
0960226	CRYSTAL OSCILLATOR	4.332MHz 49-s	Y500
1910158	TERMINAL SOCKET	4-8.4-13	XC103
1910194	TERMINAL SOCKET	4-8.4-13/PB-08B	XC104
1910195	TERMINAL SOCKET	AVG-2-07 BLACK	XC102
1860059	SCART SOCKET	111	XC801

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
1910159	TERMINAL SOCKET	CS TERMINAL D02	XC800
1940033	CABLE SOCKET	11P 1.25mm DUAL RANK STRAIGHT INSERT	XS501
1940024	SOCKET	5P 2.0mm	XS201
1940005	SOCKET	6P 2.0mm	XS202,XS106
1940001	SOCKET	2P 2.5mm	XS110
2100004	CONNENTION CORDS	Φ0.6 SHAPED 10mm	VD510
2100006	CONNENTION CORDS	Φ0.6 SHAPED 12.5mm	R521
2122735	FLAT CABLE	4P450 2.5 T2 WITH NEEDLE, TOGETHER DIRECTION 20#	XP101
2150333	FLAT CABLE	8P230 2.0 T2 4PB WITH NEEDLE, TOGETHER DIRECTION	XP105
1990025	EXTERNAL SOURCES SOCKET	6PZ-7	XC100
2122818	FLAT CABLE	8-6/2P350/70 2.5/2.0 T3 WITH NEEDLE, TOGETHER DIRECTION	XP104
3580259	RADIATOR	2100SI(RU)	POWER AMPLIFIER IC
4000861	SELF-TAPPING SCREW	PT 3×25H WHITE NICKEL LENGTH9	2PCS FOR FAN/HEAT RADIATOR
4210294	MACHINE-TAPPING SCREW	BM 3×9 WHITE NICKEL	3PCS FOR PCB/HEAT RADIATOR
4490001	SPRING PAD	Φ3	
4450012	BOLT PAD	Φ3×7.2×0.5	
1280110	SMALL FAN FOR HEAT RADIATION	4020M12F ND4 LINE LONG60 WITHOUT NUT	INSTALL ONTO HEAT RADIATOR
5233174	RUBBER SPACER	9×9×1 SINGLE-FACED WITH GLUE IN REAR SIDE,CENTER HOLE Φ3	STICK ONTO SCREW OF PCB RADIATOR
5236921	RUBBER SPACER	9×9×1 SINGLE-FACED WITH GLUE IN REAR SIDE CENTER HOLE Φ4.5	STICK ONTO PCB (LOWER COVER AND HEAT RADIATOR SCREW PLACE
5236754	RAPIDNESS BAR PIECE	2100SI SINGLE-FACED WITH GLUE IN REAR SIDE	STICK ONTO FAN/RADIATOR

DK1475SI(RU) BLACK

POWER AMPLIFIER BOARD-SMD: 2DK2100SI-1 4940723			
MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0090324	SMD RESISTOR	1/16W 0 Ω ±5% 0402	R1,R2,R3,R4,R5,R6,R7,R60,R97,R98,R99,R100,R101,R102,R103,R104,R105,R106,R107,R108,R109,R110,R111,R112,R113,R114,R115,R129,R550,R555,R556,R557,R558,R559,R560,R563,R564,R565,R568,R901,R131,R74,R833,R834
0090445	SMD RESISTOR	1/16W 1 Ω ±5% 0402	R91,R92

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0090326	SMD RESISTOR	1/16W 10 Ω $\pm$ 5% 0402	R603~R606,R21~R23,R24
0090330	SMD RESISTOR	1/16W 33 Ω $\pm$ 5% 0402	R95,R96
0090333	SMD RESISTOR	1/1647 Ω $\pm$ 5% 0402	R580~R582,R584~R592,R518,R519
0090335	SMD RESISTOR	1/1668 Ω $\pm$ 5% 0402	R827
0090336	SMD RESISTOR	1/1675 Ω $\pm$ 5% 0402	R47,R812~R817
0090342	SMD RESISTOR	1/16W150 Ω $\pm$ 5% 0402	R818,R819
0090001	SMD RESISTOR	1/16W 0 Ω $\pm$ 5% 0603	L87,L501,L819
0090346	SMD RESISTOR	1/16W 220 Ω $\pm$ 5% 0402	R510~R513,R902,R925,R926,R919
0090356	SMD RESISTOR	1/16560 Ω $\pm$ 5% 0402	R45
0090362	SMD RESISTOR	1/16W 1K $\pm$ 5% 0402	R11,R12,R116,R117,R130,R572,R574,R700,R701,R944
0090366	SMD RESISTOR	1/16W 1.5K $\pm$ 5% 0402	R200,R201,R575
0090369	SMD RESISTOR	1/16W 2.2K $\pm$ 5% 0402	R33,R34,R821,R822,R905,R914,R915
0090372	SMD RESISTOR	1/16W 3K $\pm$ 5% 0402	R502,R503
0700199	SMD VOLTAGE REGULATOR DIODE	3.9V $\pm$ 5% 1/2W MINIMELF	VD530
0090377	SMD RESISTOR	1/16W 4.7K $\pm$ 5% 0402	R538~R549,R551,R554,R80,R81,R82,R907,R908,R911,R912,R628,R629
0090378	SMD RESISTOR	1/16W 5.1K $\pm$ 5% 0402	R25,R26,R119~R123
0090383	SMD RESISTOR	1/16W8.2K $\pm$ 5% 0402	R612,R613
0090385	SMD RESISTOR	1/16W 10K $\pm$ 5% 0402	R27~R32,R85~R87,R93,R94,R514~R517,R522,R528,R533,R573,R924,R930,R931,R932,R977,R552,R553
0090387	SMD RESISTOR	1/1612K $\pm$ 5% 0402	R40,R610,R611
0090389	SMD RESISTOR	1/1615K $\pm$ 5% 0402	R41,R42
0090390	SMD RESISTOR	1/16W 18K $\pm$ 5% 0402	R597~R600
0090391	SMD RESISTOR	1/16W 20K $\pm$ 5% 0402	R39
0090392	SMD RESISTOR	1/16W 22K $\pm$ 5% 0402	R614,R615,R904,R909,R916,R917
0090394	SMD RESISTOR	1/16W 27K $\pm$ 5% 0402	R593~R596,R43,R44
0090191	SMD RESISTOR	1/16W 39K $\pm$ 5% 0603	R561
0090026	SMD RESISTOR	1/16W 22K $\pm$ 5% 0603	R673
0090400	SMD RESISTOR	1/16W 47K $\pm$ 5% 0402	R202,R619,R620,R830,R831,R824

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0090845	PRECISION SMD RESISTOR	1/16W 2.49K±1% 0402	R48
0090395	SMD RESISTOR	1/16W 30K±5% 0402	R509
0090408	SMD RESISTOR	1/16W 100K±5% 0402	R35~R38,R670,R826,R832
0090412	SMD RESISTOR	1/16W 150K±5% 0402	R89,R90
0090417	SMD RESISTOR	1/16W 220K±5% 0402	R616,R617
0090668	PRECISION SMD RESISTOR	1/16W 750K±1% 0402	R46
0090429	SMD RESISTOR	1/16W 680K±5% 0402	R83,R84
0090272	SMD RESISTOR	1/16W 1 Ω ±5% 0603	R203,R641
0090002	SMD RESISTOR	1/16W 2.2 Ω ±5% 0603	R662
0090616	SMD RESISTOR	1/16W 3.3 Ω ±5% 0603	R507,R655,R656,R657,R658,R659,R661, R663,R677,R684,R685,R686,R687,L504
0090106	SMD RESISTOR	1/16W 4.7 Ω ±5% 0603	R8
0090314	SMD RESISTOR	1/16W 5.1 Ω ±5% 0603	R609
0090003	SMD RESISTOR	1/16W 10 Ω ±5% 0603	R601,R602,R9,R10
0090004	SMD RESISTOR	1/16W 22 Ω ±5% 0603	R681
0090239	SMD RESISTOR	1/16W 200 Ω ±5% 0603	R668,R669
0090009	SMD RESISTOR	1/16W 330 Ω ±5% 0603	R927,R928
0090249	SMD RESISTOR	1/16W 510 Ω ±5% 0603	R623~R626
0090014	SMD RESISTOR	1/16W 1K±5% 0603	R576,R823,L91
0090023	SMD RESISTOR	1/16W 10K±5% 0603	POWER AMPLIFIER IC
0090020	SMD RESISTOR	1/16W 5.1K±5% 0603	R630~R637
0090039	SMD RESISTOR	1/10W 10 Ω ±5% 0805	R566,R567,R644,R645,R646,R647,R648, R671,R674, R676
0090046	SMD RESISTOR	1/10W 470 Ω ±5% 0805	R922,R923
0090339	SMD RESISTOR	1/16W 100 Ω ±5% 0402	C6,R825,R936,R836
0310413	SMD CAPACITOR	50V 15P±5% NPO 0402	C607~C610
0310415	SMD CAPACITOR	50V 20P±5% NPO 0402	C816~C827,C57,C846
0310420	SMD CAPACITOR	50V 33P±5% NPO 0402	C48,C49
0310424	SMD CAPACITOR	50V 47P±5% NPO 0402	C829~C840,C80~C83
0310426	SMD CAPACITOR	50V 82P±5% NPO 0402	C633,C634

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0310432	SMD CAPACITOR	50V 101±5% NPO 0402	C571~C583,C710~C713,C716,C717,C720,C721
0310721	SMD CAPACITOR	50V 331±5% NPO 0402	C55,C56,C598
0310865	SMD CAPACITOR	16V 681 ±5% NPO 0402	C613~C616
0310392	SMD CAPACITOR	50V 102±10% 7R 0402	C90~C92,C47,C58,C59,C200,C625~C627,C841~C844
0310446	SMD CAPACITOR	50V 152±10% 7R 0402	C635,C636
0310394	SMD CAPACITOR	50V 222±10% 7R 0402	C39
0310454	SMD CAPACITOR	16V 153±10% 7R 0402	C37,C38
0310570	SMD CAPACITOR	16V 333±10% 7R 0402	C50
0310482	SMD CAPACITOR	16V 473±10% 7R 0402	C60,C61
0310737	SMD CAPACITOR	16V 104±10% 7R 0402	C1~C5,C7~C27,C40~C46,C63,C84~C89,C93~C98,C101~C103,C201,C505~C531,C534,C539,C552~C555,C606,C802~C807,C811~C813,C901,C904
0310072	SMD CAPACITOR	50V 103±10% 7R 0603	C664,C667,C684,C685,C639,C665,C666,C675,C676,C677,C678,C680,C681,C682,
0310035	SMD CAPACITOR	50V 333±10% 7R 0805	C541,C543,C547,C689,C691,C694,C695,C696
0310207	SMD CAPACITOR	50V 104 ±20% 7R 0603	C532,C533,C535,C536,C537,C538,C540,C542,C544,C545,C546,C548,C549,C550,C551,C569,C584,C585,C642,C690,C692,C564,C565,C567,C568,C570,C640,C670,C693,C566,C679,C708,C709
0310112	SMD CAPACITOR	16V 224±10% 0603	C697,C845
0310662	SMD CAPACITOR	6.3V 105±10% 5R 0402	C900,C902,C903,C905
0310438	SMD CAPACITOR	50V 561 ±10% 7R 0402	C605
0310857	SMD CAPACITOR	50V 562 ±10% 7R 0402	C62
0310234	SMD CAPACITOR	16V 105 +80%-20% Y5V 0603	C28~C36,C637,C638
0310566	SMD CAPACITOR	10V 225 +80%-20% Y5V 0603	C52,C53,C54
0310169	SMD CAPACITOR	50V 105 +80%-20% 0805	C628,C629,C630,C631,C671,C672,C673,C674
0390087	SMD MAGNETIC BEADS	FC2012V-22107	L500,L80,L11,L12,L8
0090555	SMD RESISTOR	1/40 Ω ±5% 1206	L81
0390095	SMD MAGNETIC BEADS	FC160822105	L7,L9,L10,L14~L18,L82,L88~L90,L92,L93,L505,L507,L801~L810,L19
0390385	SMD INDUCTOR	22uH±10% 2012	L13
0390096	SMD INDUCTOR	1.8uH±10% 1608	L813~L818

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0390355	SMD INDUCTOR	4.7UH±10% 1608	L1~L6
0700007	SMD DIODE	14148	VD3,VD503,VD504,VD507,VD508, VD512~VD524,VD529 ③
0700001	SMD DIODE	LS4148	VD3,VD503,VD504,VD507,VD508, VD512~VD524,VD529 ③
0700002	SMD DIODE	LL4148	VD3,VD503,VD504,VD507,VD508, VD512~VD524,VD529 ③
0700004	SMD VOLTAGE REGULATOR DIODE	5.1V±5% 1/2W	VD505,VD506,VD4
0700022	SMD VOLTAGE REGULATOR DIODE	6.8V±5% 1/2W	VD502,VD808
0700056	SMD DOUBLE DIODE	MMBD4148SE SO23	VD525~VD528,VD800~VD807
0780353	SMD TRIODE	CES2302 SOT-23	Q6
0780040	SMD TRIODE	3904(100-300) SO23	Q5,V503
0780193	SMD TRIODE	2S3018	Q3,Q4
0780115	SMD TRIODE	2SB1132	Q1,Q2
0780085	SMD TRIODE	8050D	V501,V502,V901,V800,V801,V802,V803
0780129	SMD TRIODE	8550D	V506,V903~V908
0780197	SMD TRIODE	C1815	Q80
0882953	IC	4641632UC60 TSOP	N81 ④
0883532	IC	HY57V641620FTP-7 SOP	N81 ④
0881079	IC	24C04 SOP	N2
0883614	IC	MT1389FE/S QFP	N3
0882802	IC	5888S HSOP	N1
0882352	IC	TLV272 SOP	N503,N504
0882353	IC	C5340 TSSOP	N502
0882515	IC	HE4052BT SOP	N505
0881226	IC	RC4558D SOP	N500,N4
0883389	IC	5142DDV TSSOP	N507,N508
0882350	IC	5508 TQFP	N509
0883562	IC	PCF8575 SOP	N85
0882946	IC	P2579-SN SOP	N501
1940094	CABLE SOCKET	24P 0.5mm SMD SUBMIT MEET WITH CLASP	XS301
1634472	PCB	2 2100SI-1 FR4 D1.2 PX	

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POWER BOARD: @5DK2100SI-2 4940724			
MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
2100004	CONNENTION CORDS	Φ0.6 SHAPED 10mm	J1,J10,D36,J11,R45,J20,J6,J9,L8
2100003	CONNENTION CORDS	Φ0.6 SHAPED 7.5mm	J3,J4,J7,J8,J2,R10
2100006	CONNENTION CORDS	Φ0.6 SHAPED 12.5mm	R48
0000005	CARBON FILM RESISTOR	1/6W33 Ω ±5%	R4,R40,R14,R23
0000003	CARBON FILM RESISTOR	1/6W10 Ω ±5%	R1,R18,R42
0000002	CARBON FILM RESISTOR	1/6W1 Ω ±5%	R12
0000022	CARBON FILM RESISTOR	1/6W1K±5%	R41,R15,R5,R24
0000011	CARBON FILM RESISTOR	1/6W220 Ω ±5%	R29,R20
0000030	CARBON FILM RESISTOR	1/6W3.3K±5%	R7
0000059	CARBON FILM RESISTOR	1/6W100K±5%	R22
0200182	PORCELAIN CAPACITOR	50V 333±10% 5mm	C25
0000027	CARBON FILM RESISTOR	1/6W2.2K±5%	R30
0000181	CARBON FILM RESISTOR	1/4W220 Ω ±5%	R37
0000195	CARBON FILM RESISTOR	1/4W1K±5%	R33
0010334	METAL FILM RESISTOR	1/61.5K±1%	R17
0010127	METAL FILM RESISTOR	1/618K±1% SHAPED 7.5	R16
0000075	CARBON FILM RESISTOR	1/6W1M Ω ±5%	R19
0000034	CARBON FILM RESISTOR	1/6W4.7K±5%	R34,R39
0000053	CARBON FILM RESISTOR	1/6W51K±5%	R51,R52
0000016	CARBON FILM RESISTOR	1/6W470 Ω ±5%	R9
0000161	CARBON FILM RESISTOR	1/4W3.6 Ω ±5%	R13
0010398	RY	2W75K±5%SHAPED VERTICAL5	R11
0010399	RY	1W0.22 Ω ±5%SHAPED VERTICAL12.5	R2
0010396	RY	1W2.2K±5%SHAPED R15×8	R46,R50
0070007	HIGH VOLTAGE RESISTOR	@1/2680K±5% UL	R8
0010126	METAL FILM RESISTOR	1/64.7K±1% SHAPED 7.5	R27,R31,R32

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0010381	RY	2W100K Ω $\pm$ 5%SHAPED VERTICAL5mm	R6,R21,R38
0200232	PORCELAIN CAPACITOR	500V 101 $\pm$ 10% 5mm	C15,C17,C20,C26
0200205	PORCELAIN CAPACITOR	1000V 102 $\pm$ 20% 5mm	C8
0200039	PORCELAIN CAPACITOR	50V 101 $\pm$ 5% NPO 5mm	C18,C34
0210205	TERYLENE CAPACITOR	630V 102 $\pm$ 5% SHAPED 5MM	C4
0200125	PORCELAIN CAPACITOR	50V 102 +80%-20% 5mm	C2
0200131	PORCELAIN CAPACITOR	50V 103 $\pm$ 10% 5mm	C13
0200138	PORCELAIN CAPACITOR	50V 104 $\pm$ 20% 5mm	C24,C14
0200298	PORCELAIN CAPACITOR	50V 224 $\pm$ 20% 5mm	C12
0200223	PORCELAIN CAPACITOR	1000V 101 +80%-20% 7.5mm	C3
0200224	PORCELAIN CAPACITOR	1000V 103 +80%-20% 7.5mm	C6
0210116	ANTI-JAMMING CAPACITOR	MKP61 2 275VAC 104 $\pm$ 20%15	C29,C31
0200366	CERAMIC CAPACITOR	@C81 400VAC 471 $\pm$ 10% 10 VDE	C32,C33,C19
0260749	CD	EZ 400V220U $\pm$ 20% 30 $\times$ 30 10	C1
0260583	CD	CD11T 16V220U $\pm$ 20%6 $\times$ 12 2.5	C16,C21,C30
0260656	CD	CD288H 16V470U $\pm$ 20% 10 $\times$ 12 5	C23
0260711	CD	CD288H 16V2200U $\pm$ 20%10 $\times$ 25 5	C22
0260670	CD	CD11K 50V2200U $\pm$ 20% 16 $\times$ 35 7.5	C9,C10,C11
0260559	CD	CD11T 50V47u $\pm$ 20%6 $\times$ 12 2.5	C5,C27,C7
0390340	VERTICAL INDUCTOR	10uH $\pm$ 10% 5A 12.5 $\times$ 26.5 10mm	L1
0390052	MAGNETIC BEADS INDUCTOR	FB	L3,L6,L2
0410011	CHOKE COIL	VERTICAL 10UH 2A 5mm	L4
1000010	POWER GRID FILTER	JBL2822 30mH $\pm$ 20%	L7,L11
0460672	SWITCH POWER TRANSFORMER	@BCK-40-0399 150W @SJ	T1
0460673	SWITCH POWER TRANSFORMER	@BCK-28-0934 15W @SJ	T2
0570006	DIODE	1N4148	D6,D11,D37,D8,D23
0570013	DIODE	HER105	D7,D10,D13,D18,D20
0680026	SCHOTTKY DIODE	SR160	D12,D17

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0570018	DIODE	HER303 SHAPED R 17.5×8mm	D16
0570076	DIODE	HER803 TO-220AC	D9,D38,D39
0570093	DIODE	HER208 DO-15	D2
0570014	DIODE	HER107	D14,D22
05800069	VOLTAGE REGULATOR DIODE	5.1V±5% 1/2W BELT	D19
0580054	VOLTAGE REGULATOR DIODE	9.1V ±5% 1W	D15
0570032	DIODE	1N5408	D1,D3,D4,D5
0790129	FIELD EFFECT TRANSISTOR	WFW11N90 TO-247	Q1 ⑤
0790132	FIELD EFFECT TRANSISTOR	FQA11N90 TO-3P	Q1 ⑤
0790092	FIELD EFFECT TRANSISTOR	FQP560C TO-220F	Q3
0780023	TRIODE	23904(100-300) TO-92	Q2
0780026	TRIODE	25551	Q7
0690001	CONTROLLABLE SILICON	MCR100-6	Q4
0882462	IC	AZ431AZ-A TO-92	IC2,U8
0883537	IC	MT6305BN/CY QFN	U1
0881480	IC	NCP1200P60 DIP	U2
1030007	PRESS SENSITIVITY RESISTOR	7D 471±10% 5mm	R36
1050002	HEAT SENSITIVITY RESISTOR	NTC SC104MS±20%	R3
1080011	PHOTOELECTRIC COUPLER	HS817	U3,U6,U11
1570243	PCB	@5 2100SI-2 CEM1 D1.6 SX @UL	
1940003	SOCKET	4P 2.5mm	XS101
1940006	SOCKET	6P 2.5mm	XS102
1940009	SOCKET	8P 2.5mm	XS104
1940074	SOCKET	2P 7.92mm	XS2
2300072	FUSE	@T3.15AL 250V 3.6×10 VDE	F1
5230462	MICA PAD	24×20×0.1	BETWEEN Q1 AND HEAT RADIATOR
3580260	HEAT RADIATION BOARD	30×19.8×35 2100 NON-OXIDATION	Q1
3580091	HEAT RADIATION BOARD	11×15×31 9905	SR2,SR3,SR4
2060002	GROUND CHIP	105KB	GND1~3

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REMOTE CONTROL 5471746			
MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
4000453	SELF-TAPPING SCREW	BT 3×8H WHITE NICKEL	FIX U1, D9, D38, D39 HEAT RADIATOR
0310222	SMD CAPACITOR	25V 104±20% 7R 0603	C3 ,C5
0310191	SMD CAPACITOR	50V 30P±5% NPO 0603	C1, C2
0090029	SMD RESISTOR	1/16W 47K±5% 0603	R2
0090233	SMD RESISTOR	1/16W 4.7M Ω ±5% 0603	R3, R4
0090002	SMD RESISTOR	1/16W 2.2 Ω ±5% 0603	R5
0700007	SMD DIODE	14148	VD2
0970008	CERAMIC RESONATOR	2.0MHz	G1
0090008	SMD RESISTOR	1/16W 220 Ω ±5% 0603	R6
0630003	EMISSION PIPE	TSAL6200	LED1
0160217	DIGITAL POTENTIOMETER	EC30P16	RP1
1340190	LIGHT TOUCH SWITCH(FIVE DIRECTION)	SKQUC010	RP2
0780085	SMD TRIODE	8050D	V1
1564473	PCB	81910SI-2	
2100003	CONNETION CORDS	Φ0.6 SHAPED 7.5mm	W1
3031855	SURFACE CASING OF REMOTE CONTROL	RC-073 BLACK	
3041406	BOTTOM CASING OF REMOTE CONTROL	RC-073 BLACK	
3051348	BATTERY CASE DOOR OF REMOTE CONTROL	RC-073 BLACK	
3051349	GLASS OF REMOTE CONTROL	RC-073 MING PURPLE	
3850124	ANODE SPRING	RC026	
3850125	CATHODE SPRING	RC026	
3850126	ANODE/CATHODE SPRING	RC026	
3072572	5-DIRECTION BUTTON	RC-073 GREEN	
3072570	VOLUME KNOB	RC-073 BLACK	
4000179	SELF-TAPPING SCREW	PB 2×8 BLACK	
0890292	PROGRAM CPU	CPU073RU-0	

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
4631058	CONDUCT GLUE OF REMOTE CONTROL(UPPER)	RC-073	
4631059	CONDUCT GLUE OF REMOTE CONTROL(LOWER)	RC-073	
5071274	PLASTIC BAG FOR ENVIRONMENTAL PROTECTION (WITHOUT HOLE)	85×290×0.05 PE	

DK1475SI(RU) BLACK

SURFACE CONTROL BOARD: 4DK2870HD-0 4940419			
MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0570006	DIODE	1N4148	VD1~VD4
0780025	TRIODE	25401	V101
0000133	CARBON FILM RESISTOR	1/6W4.7K±5% SHAPED 7.5	R101,R115~R119
0000137	CARBON FILM RESISTOR	1/6W10K±5% SHAPED 7.5	R102~R105,R107,R108,R127,R126
0160227	DIGITAL POTENTIOMETER	ED200120-A20-100-G77	RP101
0000142	CARBON FILM RESISTOR	1/6W33K±5% SHAPED 7.5	R114
0000556	CARBON FILM RESISTOR	1/6W47 Ω ±5% SHAPED 7.5	R125
0000122	CARBON FILM RESISTOR	1/6W100 Ω ±5% SHAPED 7.5	R110,R113
0000488	CARBON FILM RESISTOR	1/6W220 Ω ±5% SHAPED 7.5	R120,R122
0000452	CARBON FILM RESISTOR	1/6W150 Ω ±5% SHAPED 7.5	R124
0260076	CD	CD11C 50V22U±20%6×7 2.5	TC112
0260780	CD	CD11C 10V47U±20%4×7 C2.5	TC104~TC106,TC100
0200123	PORCELAIN CAPACITOR	50V 102±10% 5mm	C110,C111
0200138	PORCELAIN CAPACITOR	50V 104±20% 5mm	C101~C103
0200108	PORCELAIN CAPACITOR	50V 221±5% 5mm	C107~C109
0620218	LIGHT-EMITTING DIODE	3B 2PW WHITE ISSUE BLUE	VD106,VD107,VD105
1340064	LIGHT TOUCH RESTORE SWITCH	KFC-06-2WB L3.8	S104~S109,S110
2360021	IR SENSOR	138BV3	N102
2100010	CONNENTION CORDS	Φ 0.6 SHAPED 5mm	J119,J120,J118
2100003	CONNENTION CORDS	Φ 0.6 SHAPED 7.5mm	J101,J107,J110,J113,J115,J116,J121,R109,R111,R112
2100004	CONNENTION CORDS	Φ 0.6 SHAPED 10mm	J102,J103,J105,J106,J108,J109,J111,J112,J114,J117

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0200136	PORCELAIN CAPACITOR	50V 473±20% 5mm	C114,C115
3074849	LED BRACKET	H=5MM LED-5	VD107
0882414	IC	TP6317 LQFP44	N101
1200653	IAY SCREEN	HL-D593	DS101
5236518	SOFT ONGE ACER	14×10×6.5 DOUBLE-FACED,HARD(50 DEGREE)	2PCS FOR DISPLAY SCREEN/SURFACE CONTROL BOARD
5237027	SOFT SPONGE SPACER	7×7×9.5 DOUBLE-FACED,HARD	1PC FOR IR SENSOR/SURFACE CONTROL BOARD
2122733	FLAT CABLE	6P95 2.5/2.0 2PIN, WITH L NEEDLE, TOGETHER DIRECTION SEPARATE CORD	XP102
2122734	FLAT CABLE	6P140 2.0 2PIN, WITH L NEEDLE, TOGETHER DIRECTION SEPARATE CORD	XP106
0010335	METAL OXIDE FILM RESISTOR	1/4W 0.47 Ω ±5% SHAPED 10	R128,R129
1564911	PCB	4 2870HD-0 HB D1.6 SX	

DK1475SI(RU) BLACK

REMOTE CONTROL PROGRAM CPU CPURC073RU-0 0890292			
MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0883034	IC	37544G2AGP LQFP	N1
5156608	SIGN STICKER	CPURC073RU-0	STICK ONTO IC0883034

PROGRAM FLASH ROMDK2100SIRU-0A(16M) 0912036

MATERIAL CODE	MATERIAL NAME	SPECIFICATIONS	LOCATION
0881998	IC	49BV162A 70TI TSOP	N83 ⑥
0881754	IC	29LV160BE-70NC TSOP	N83 ⑥