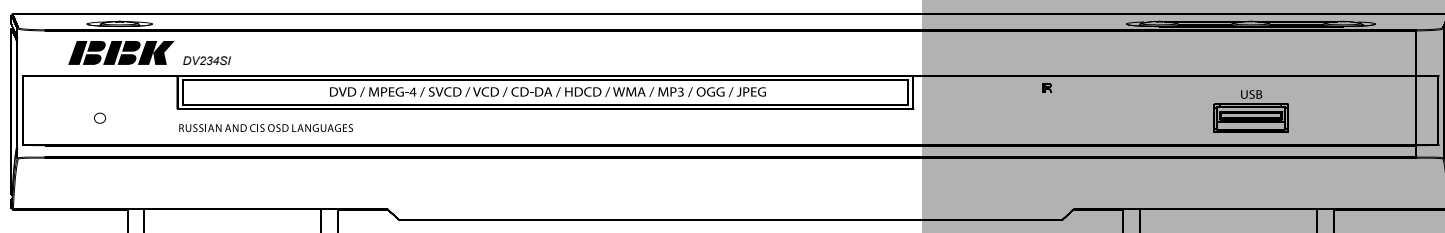


IBBK

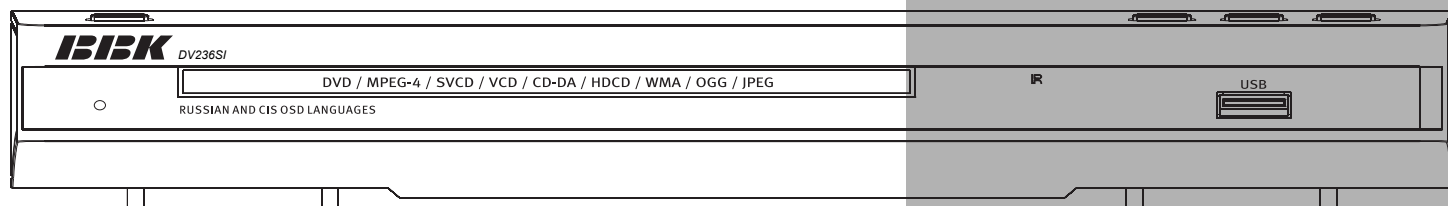
DV254SI(RU)

DV256SI(RU)

service manual



Ver SI10.22.(1_A)



Ver SI10.23.(A)



Fig.1.Delay of central channel=0



Fig.2.Small area Delay of central channel=L=(or

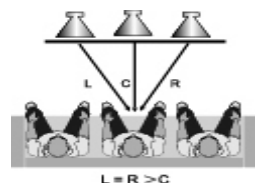
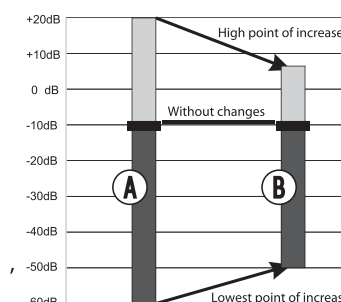


Fig.3.Small area Delay of central channel=0
L=R>C

"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.

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 is in the progressive scan mode while your TV set does not support this mode.	1. Make proper connection. 2. Correct the setting 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: SET UP>Image>TV scan. 2.Readjust the color system of your TV set
Discs cannot be read	1. Disc not inserted. 2.Disc inserted incorrectly. 3.Condensate on the DVD player's laser head.	1.Insert the disc. 2.Install the disc with the label side facing up. 3.Switch the 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 player'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.

2.5.3 Specification

Supported formats	DVD-Video, Super VCD, VCD, MPEG-4, 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(two microphone inputs for(DV611SI,DV624SI,DV626SI ,DV628SI models.one microphone inputs for DV214&216SI&DV118SI)		
Outputs	Audio outputs	Analog outputs:	2.0CH output.
		Digital outputs :	Coaxial audio out
	Video outputs:	S-Video output, RGB/SCART output, Composite output	
Video characteristics	Signal swing of composite video output:		1.0Vp-p(75 Ω)
	Signal swing of S-Video output:		1.0Vp-p(75 Ω)
	Signal swing of component video output:		C:0.286Vp-p(75 Ω) 1.0Vp-p(75 Ω)
			Cb/Cr:0.7Vp-p(75 Ω)
Audio characteristics	Frequency:		20-20000 Hz(± 1 db)
	Signal-to-noise ration:		> 100 db
Voltage range	~110-250V, 50/60 Hz		
Temperature requirement	5-35°C		
Moisture requirement	15-75%(not condensate)		

Model	Dimensions(mm)	Weight(kg)	Power consumption(watt)
DV234	260×208×38	1.3	14
DV236	260×208×38	1.3	14

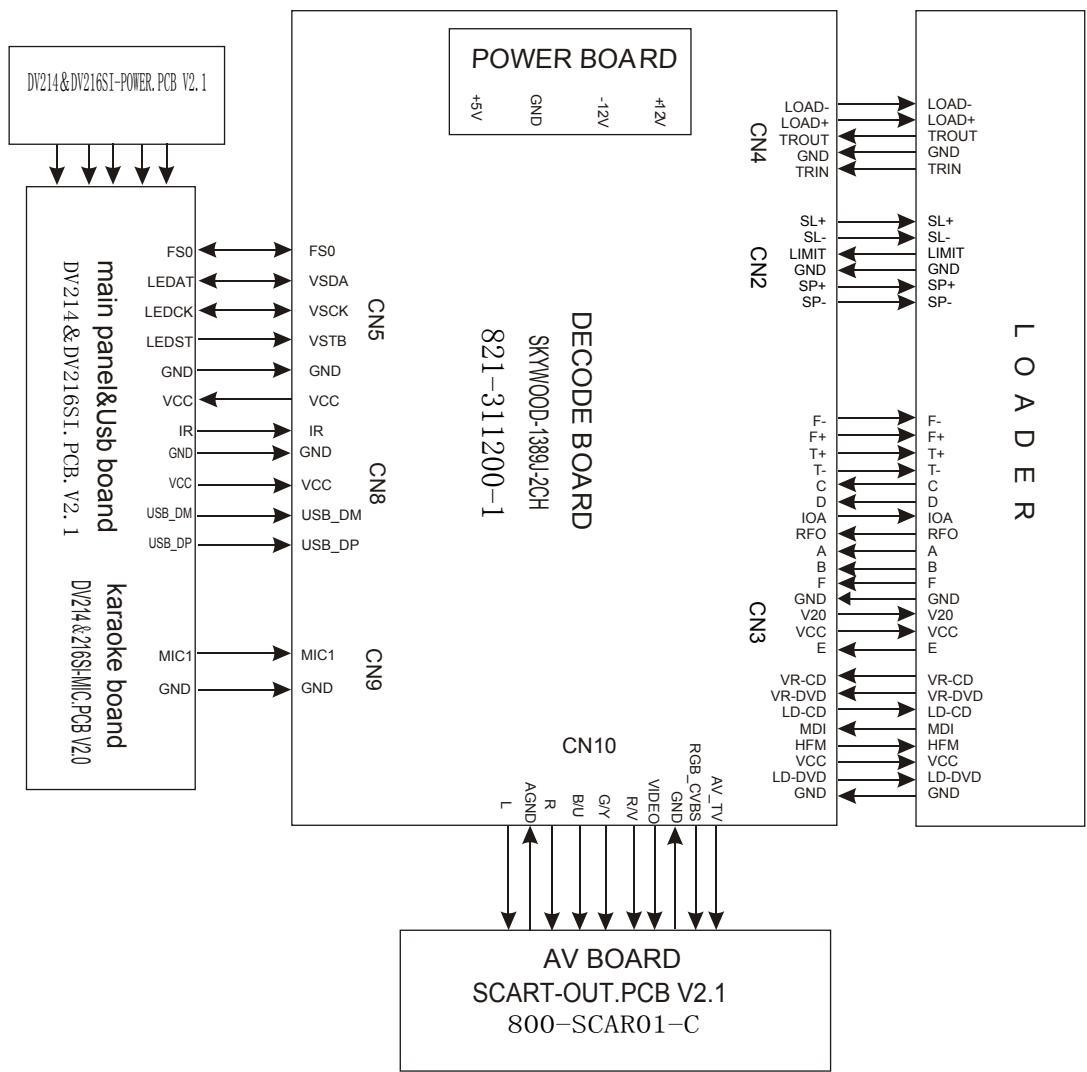
#We improve quality of our production permanently, that's why specification can change without notification.

#Some discs, recorded in any supported format on any compatible device, can't playback or can playback incorrect over peculiarity of their record.

Chapter Three Block Diagram

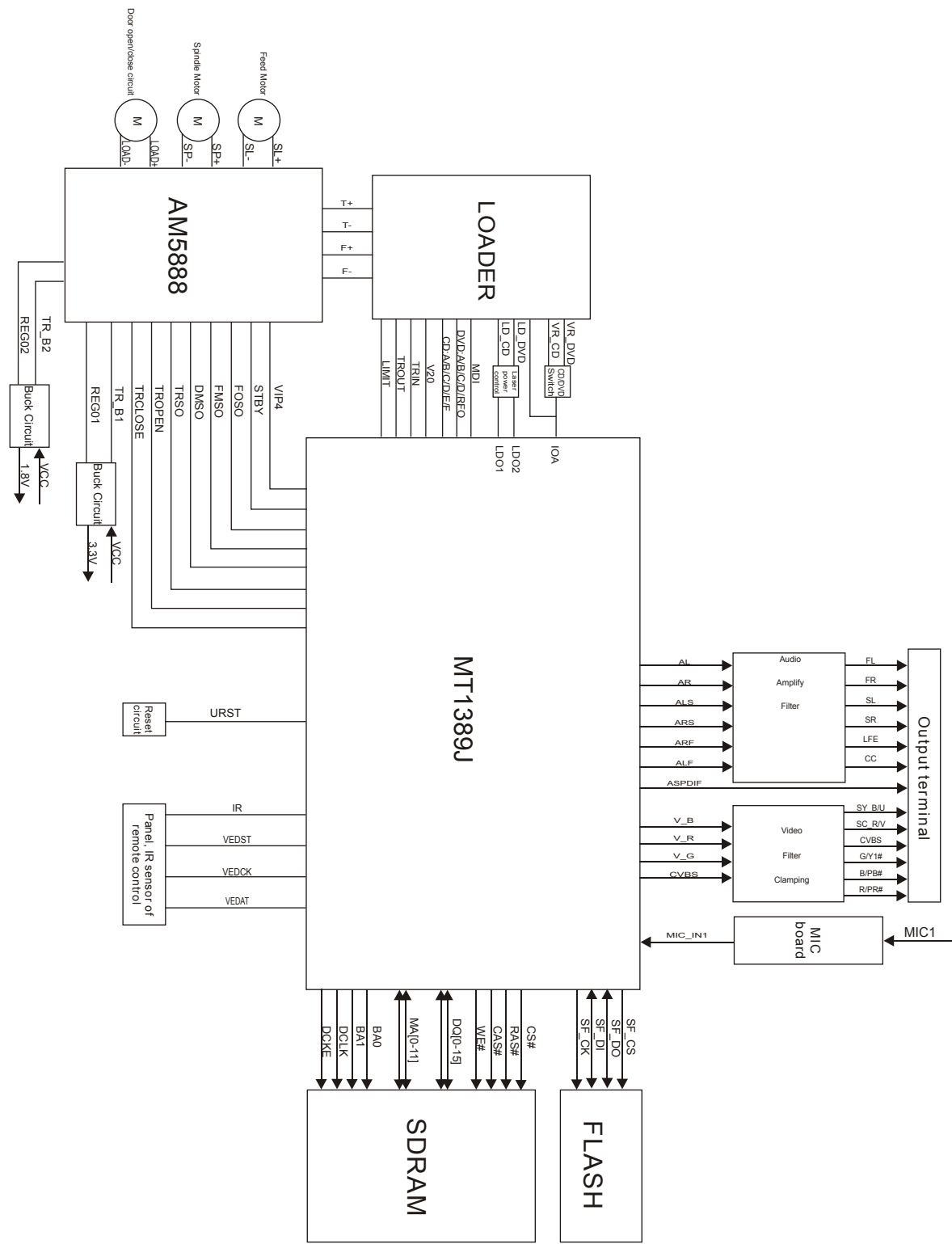
3.1 OVERALL WIRING DIAGRAM FOR PLAYER

Overall wiring diagram of player is shown in figure 3.1.1.



3.2 BLOCK DIAGRAM FOR PLAYER

Block diagram for player is shown in figure 3.2.1.



Chapter Four

Block Diagram of Unit Circuit

4.1 Servo Circuit

Servo system of this machine adopts SANYO 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 4.1.1.

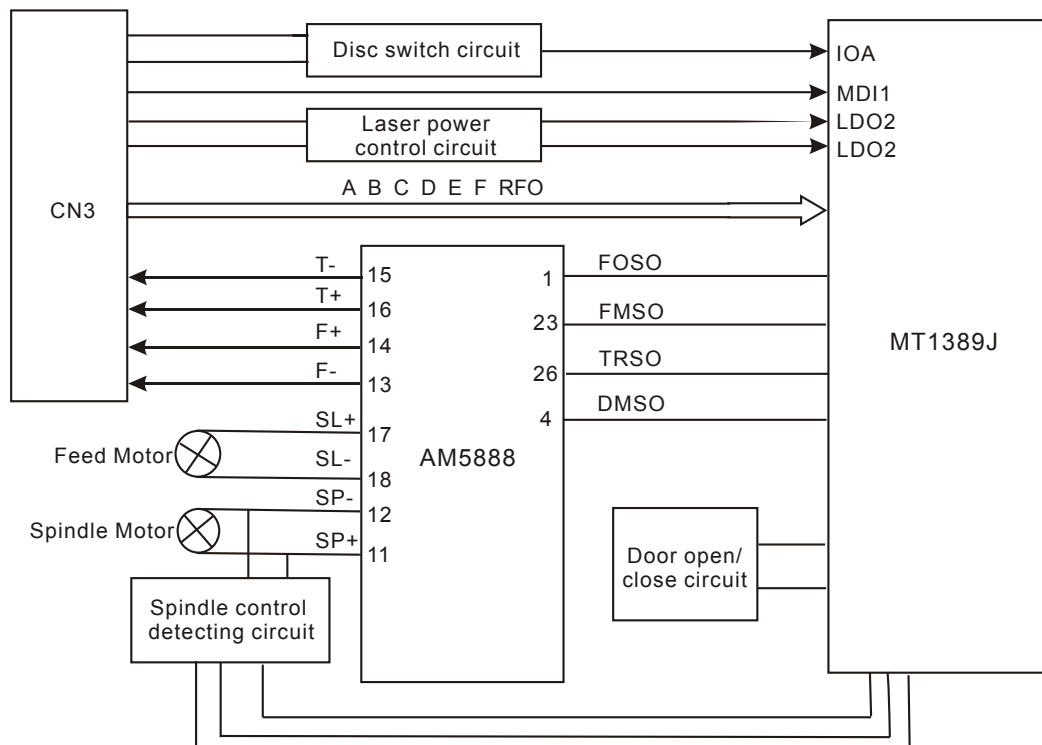


Figure 4.1.1 Block diagram of servo circuit

4.2 Decode Circuit

Decode circuit is mainly composed of MT1389J, SDRAM and FLASH. Block diagram of circuit is shown in figure 4.2.1.

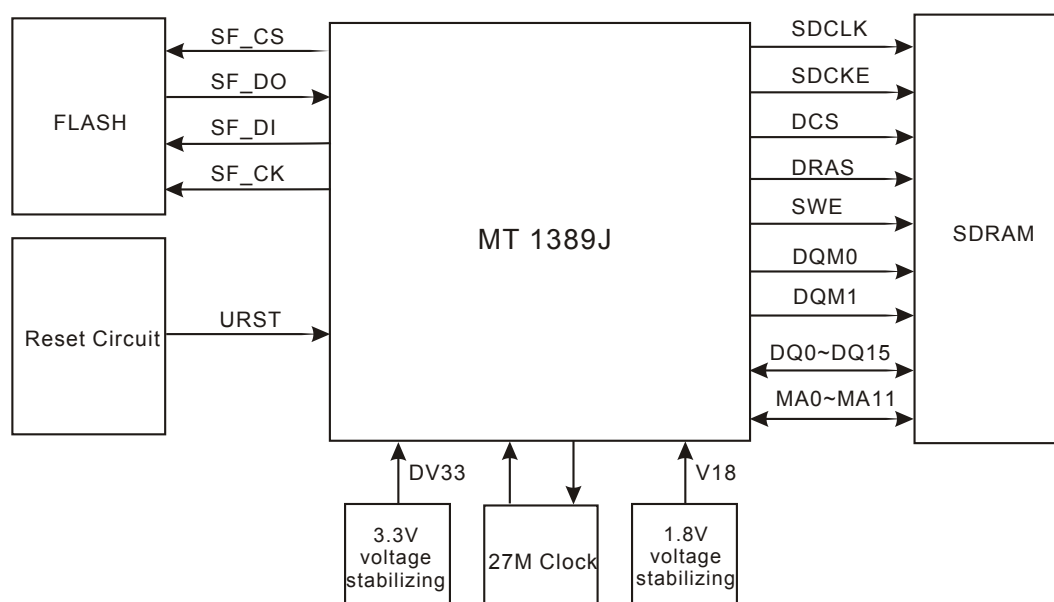


Figure 4.2.1 Block diagram of decode circuit

4.3 Video Circuit

MT1389J has video D/A converter circuit and video output has R/B/G, Y/Pb/Pr, Y/Cb/Cr, CVBS and Y/C output modes, in which R/B/G, Y/Pb/Pr, Y/Cb/Cr and Y/C can not output at the same time and need to be switched via software. CVBS is a separate output mode; four channel video signal is outputted to AV board by MT1389 after video filtering and clamping. Block diagram of video signal process is shown in figure 4.3.1.

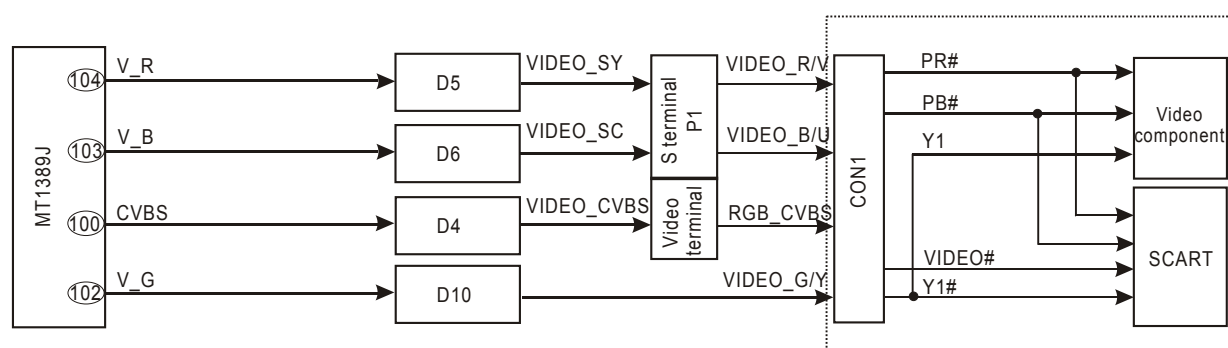


Figure 4.3.1 Block diagram of video signal process

4.4 Audio Circuit

Block diagram for audio circuit is shown in figure 4.4.1:

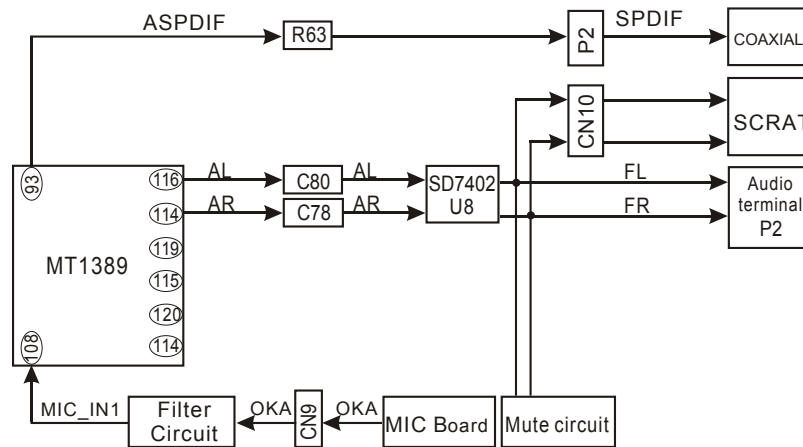


Figure 4.4.1 Block diagram of audio circuit

4.5 Power Circuit

1. Block diagram of power circuit is shown in figure 4.5.1.

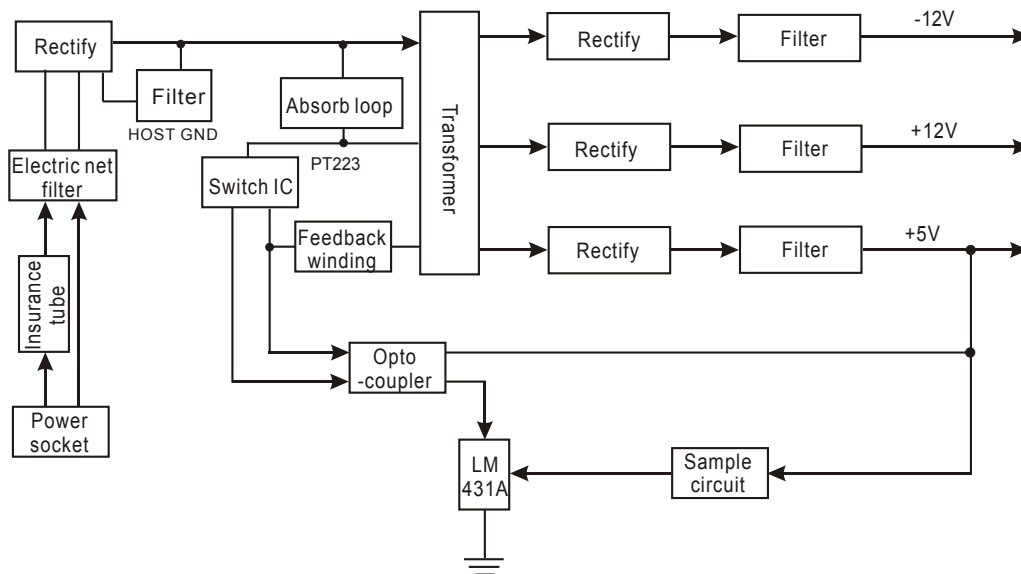
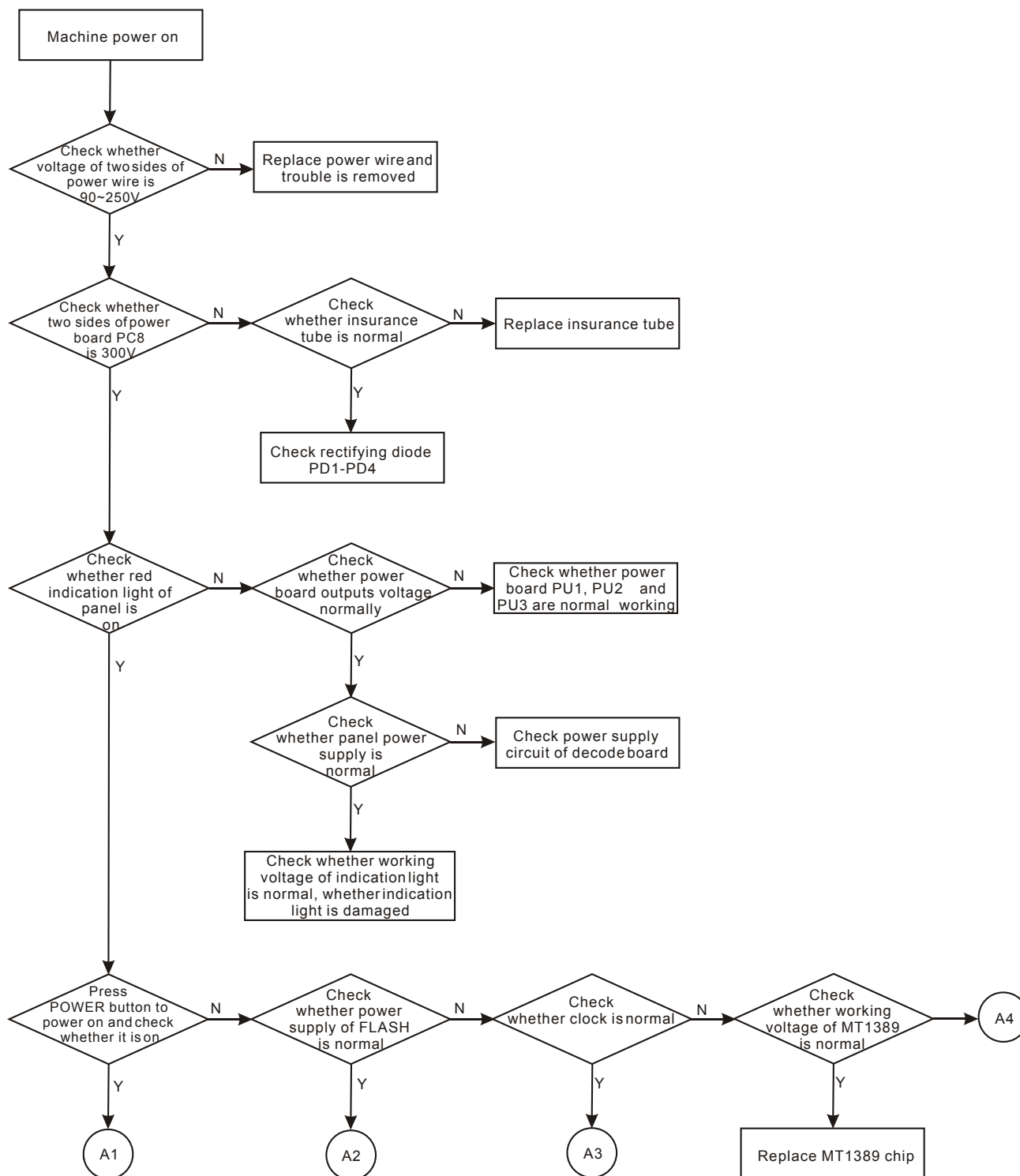
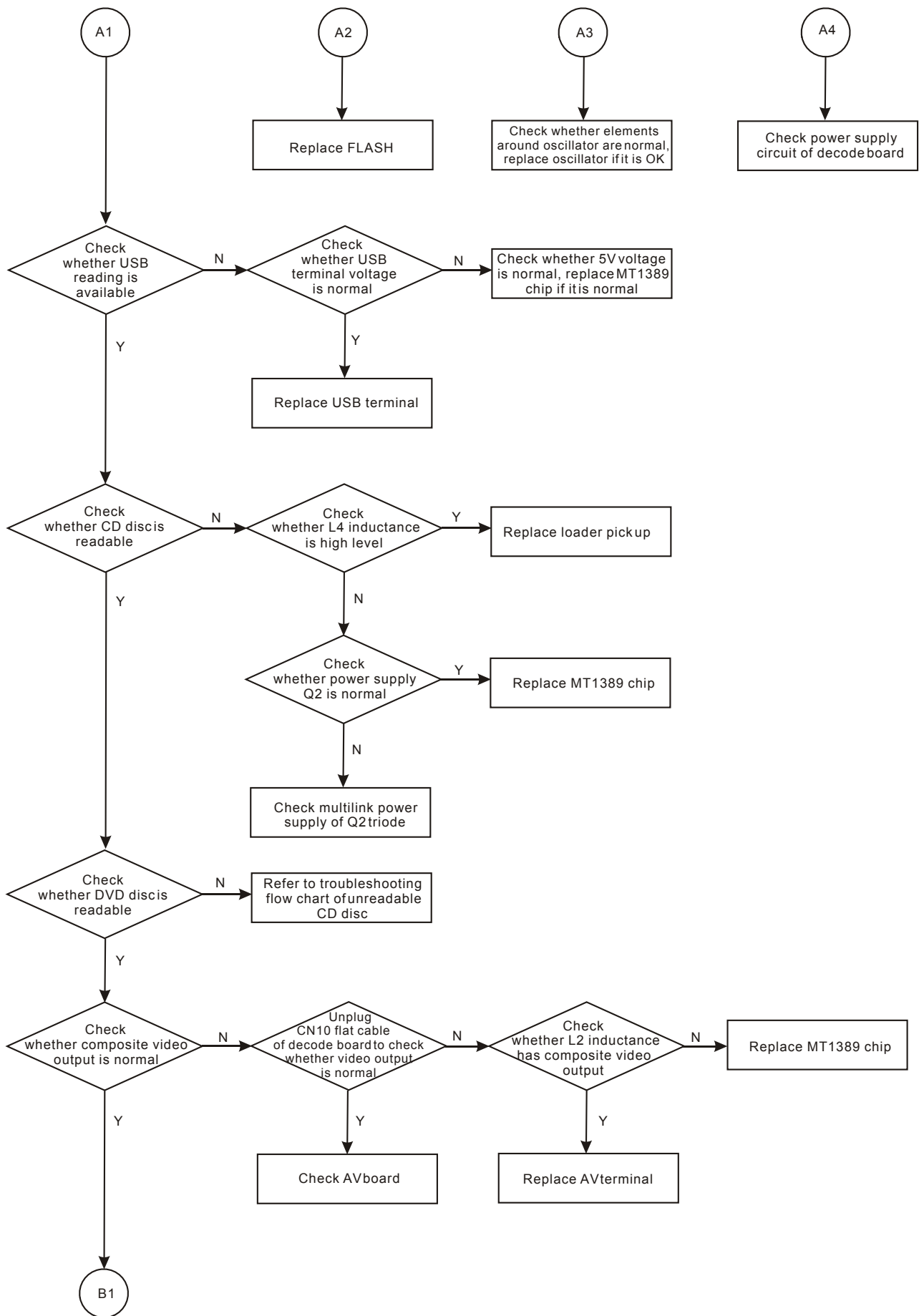


Figure 4.5.1 Block diagram of power circuit

Chapter Five Troubleshooting Flow Chart



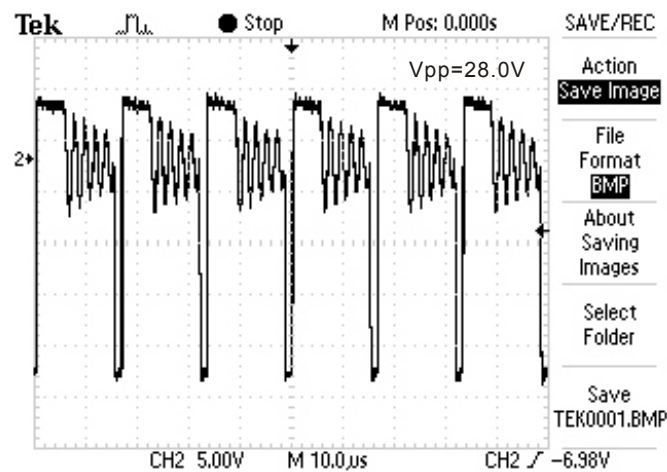




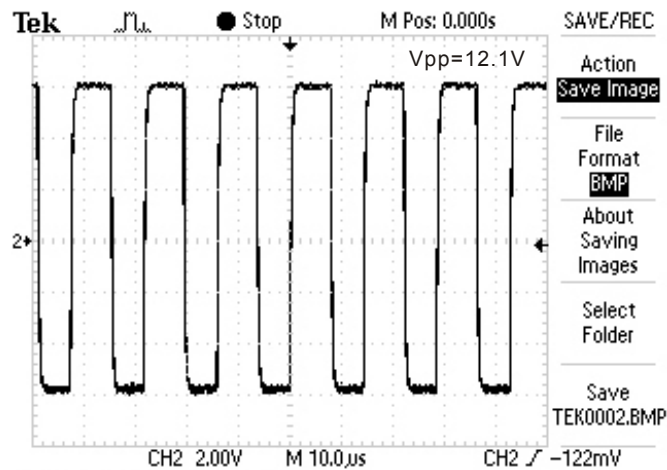
Chapter Six Waveform Diagram

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.

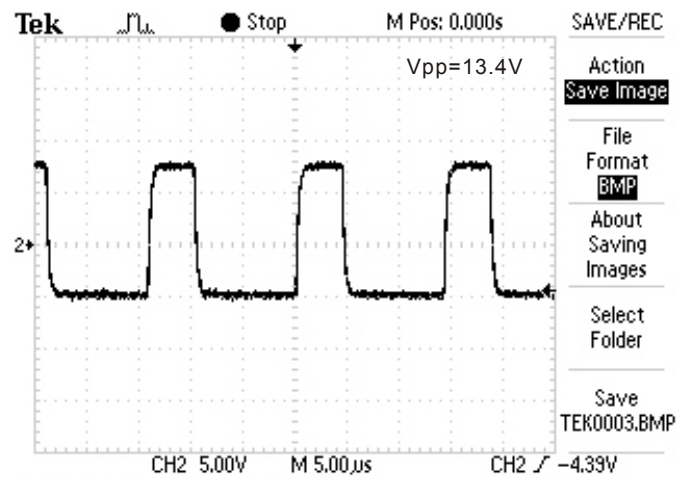
1. Waveform diagram for pulse DC of power board PD5 anode.



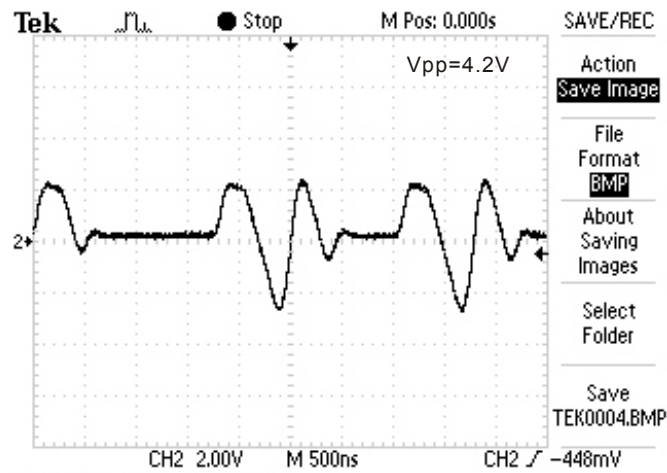
2. Waveform diagram for spindle signal DMO(when spindle has motion).



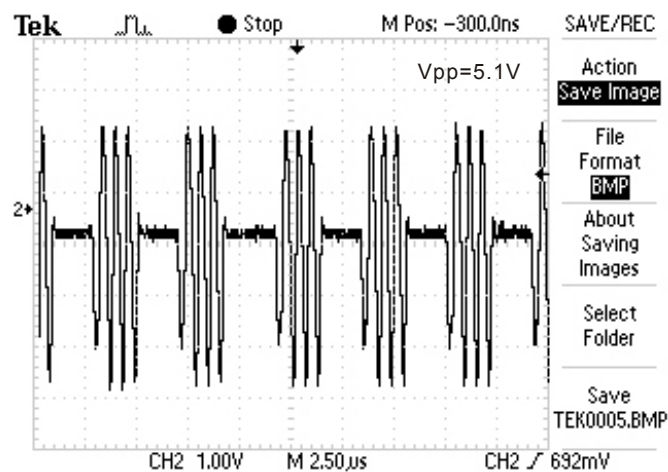
3. Waveform diagram for feed signal FMO(when pick up has feed motion).



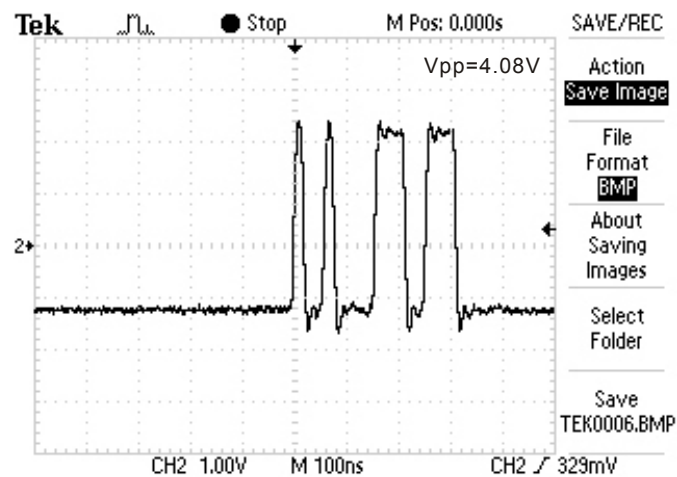
4. Waveform diagram for traction signal TRO(when pick up has traction motion).



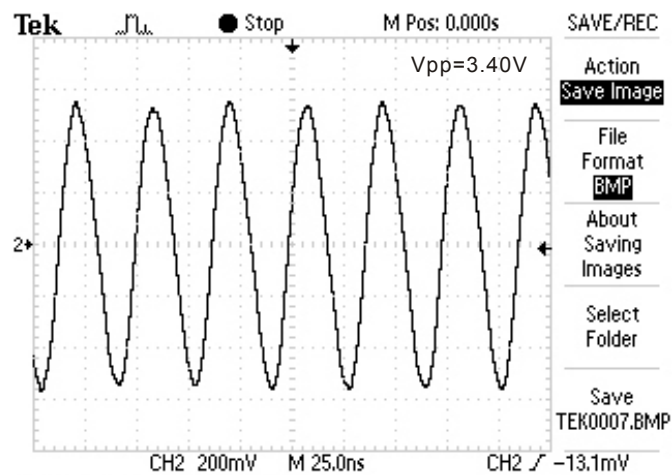
5. Waveform diagram for focus signal FOO(when pick up has focus motion).



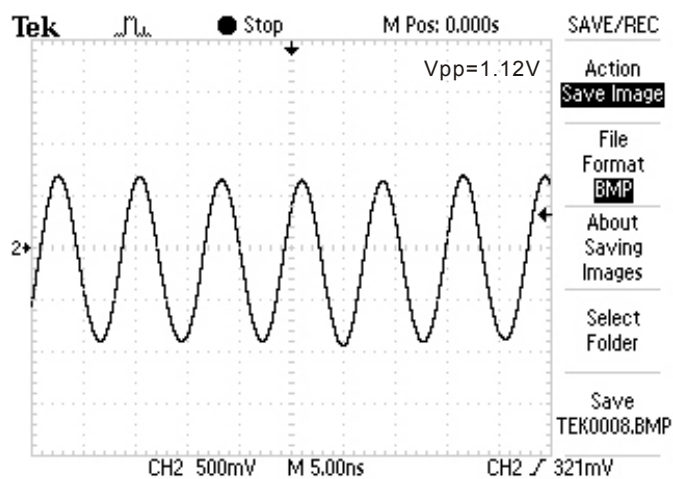
6. Waveform diagram for FLASH chip SF_DI(pin 5 of U6).



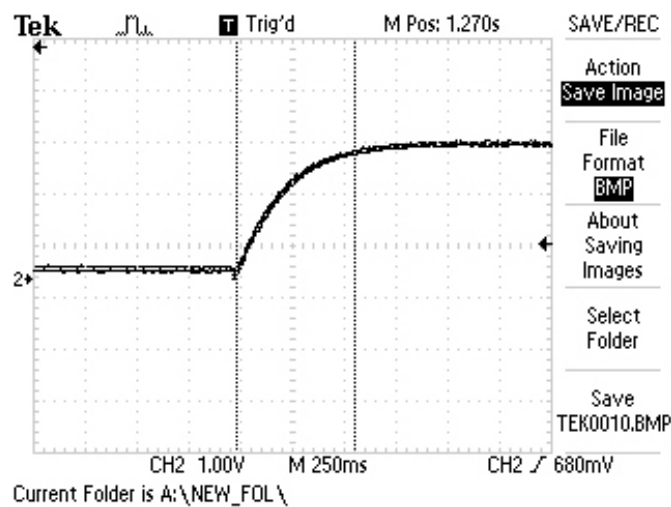
7. Waveform diagram for FLASH chip SF_CK(pin 6 of U6).



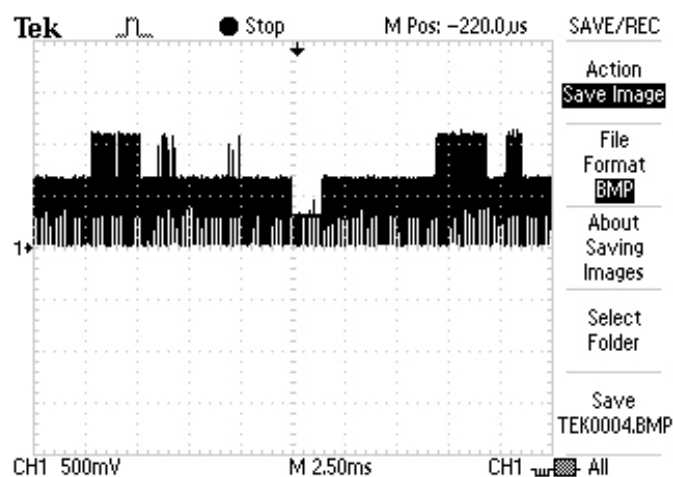
8. Waveform diagram for 27MHz clock (Y1).



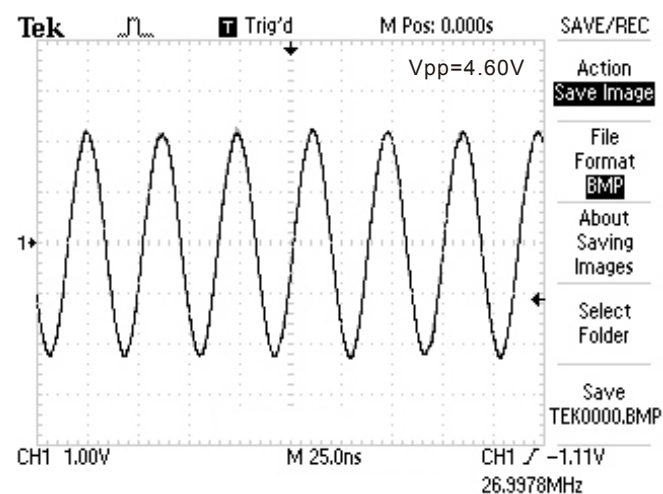
9. Reset signal URST waveform diagram.



10. Video signal waveform diagram.

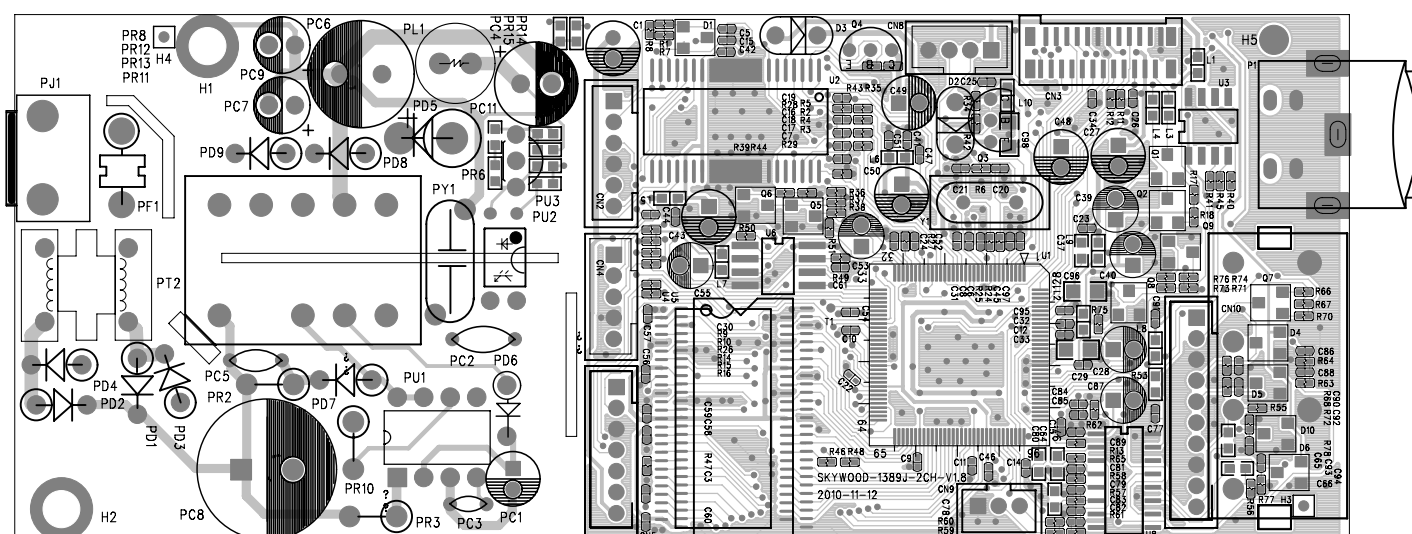


11. 1KHZ audio signal output waveform diagram(it is suggested to use test disc,if not,waveform tested will change at any time,which will affect your judgment).

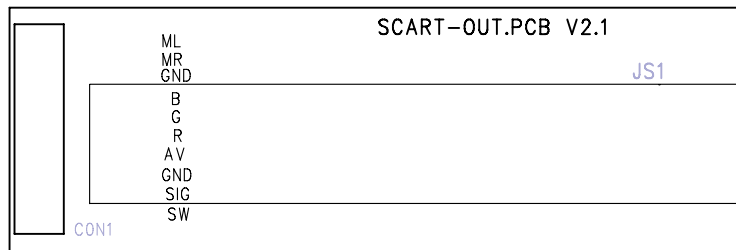


Chapter Seven PCB Board

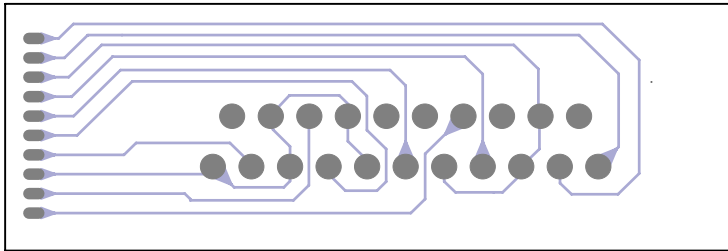
7.1 Surface layer of Decode Board



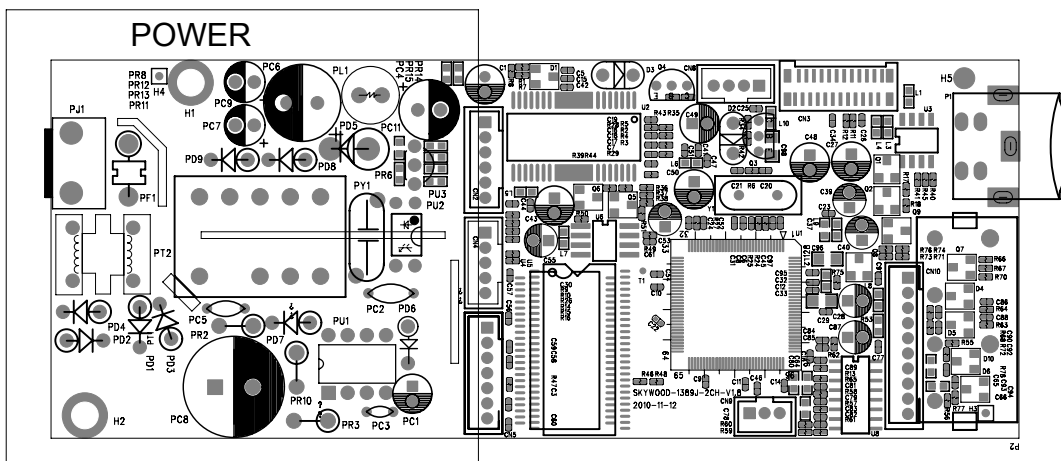
7.2 Surface layer of AV Board



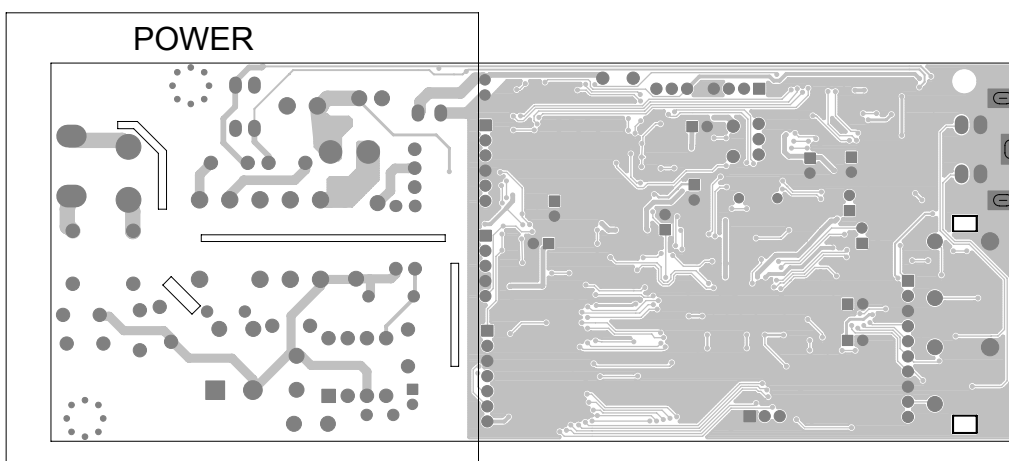
7.3 Bottom layer of AV Board



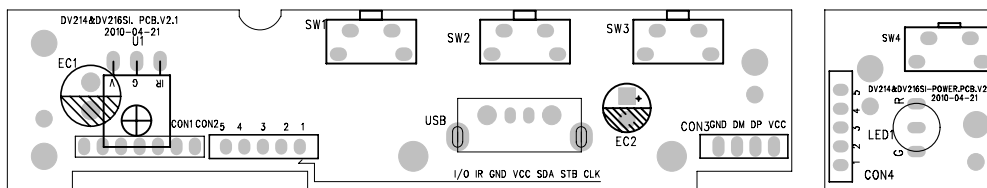
7.4 Surface layer of Power Board



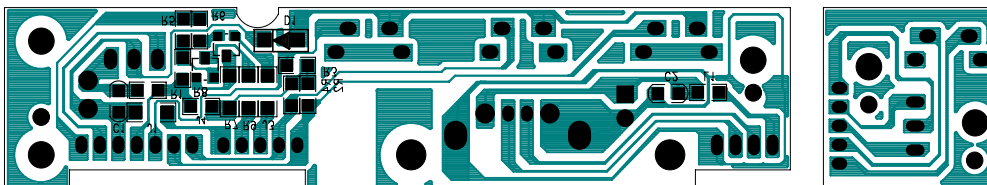
7.5 Bottom layer of Power Board



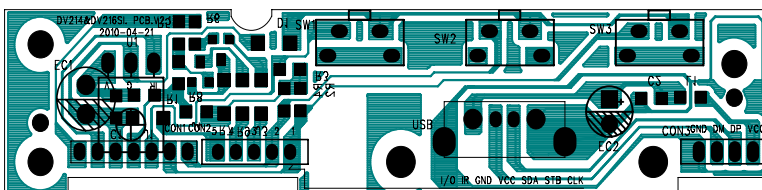
7.6 Surface layer of Main Panel



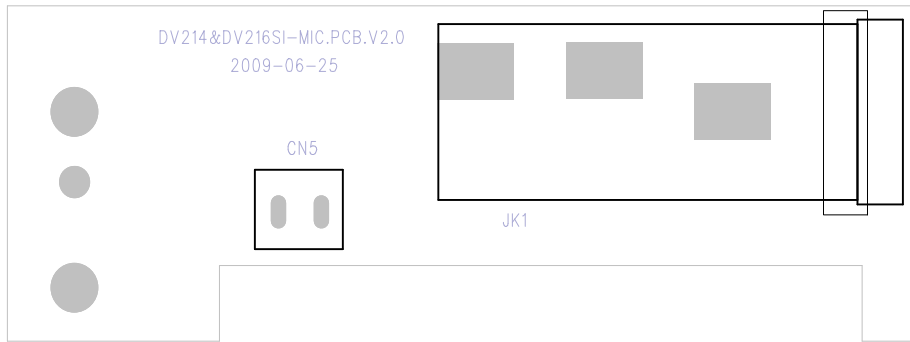
7.7 Bottom layer of Main Panel



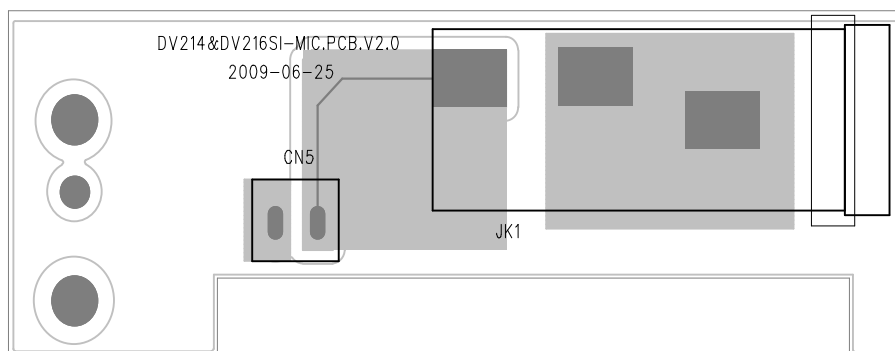
7.8 USB Board



7.9 Surface layer of OK Board



8.0 Bottom layer of OK Board



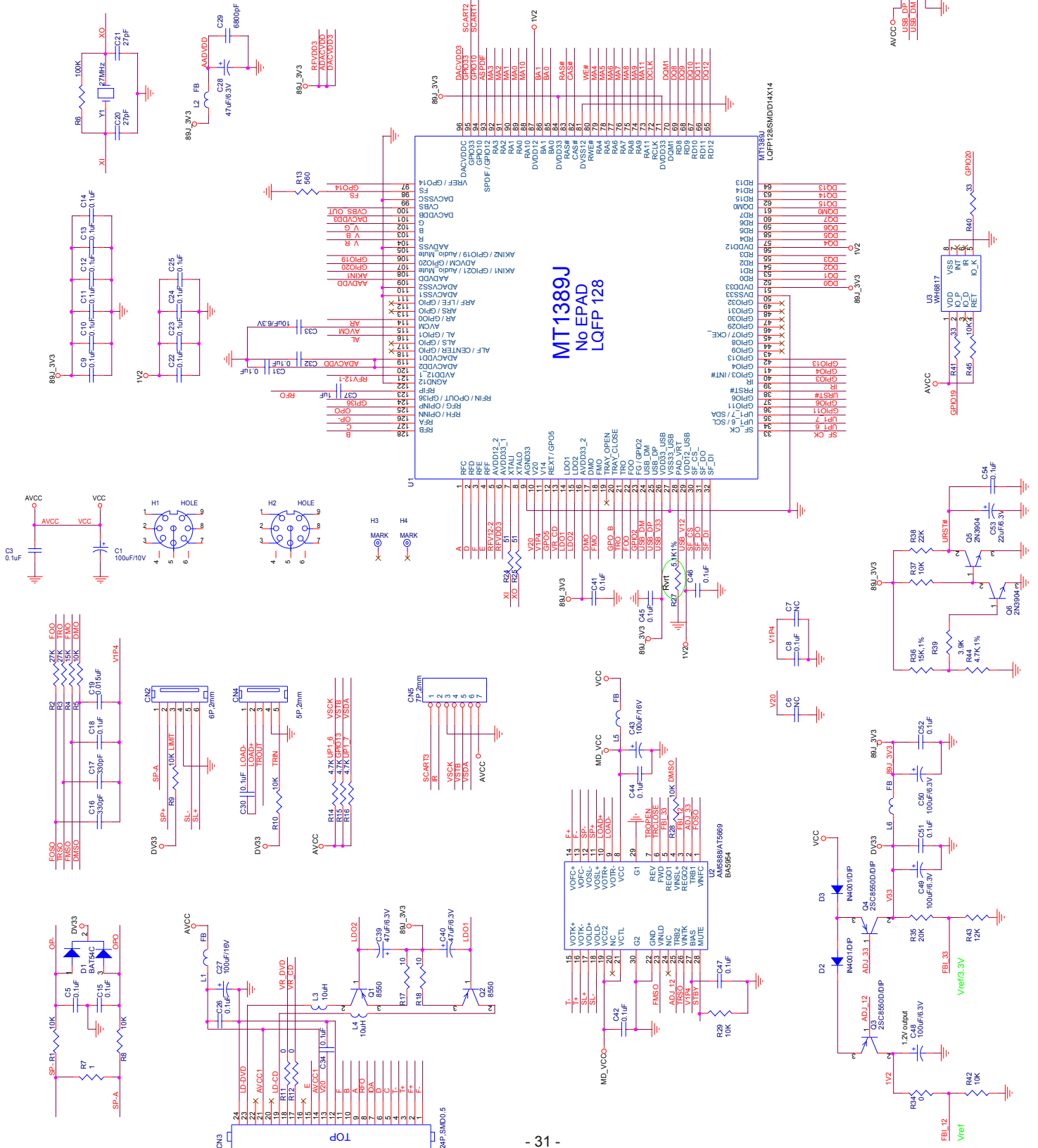
Chapter Eight Circuit Diagram

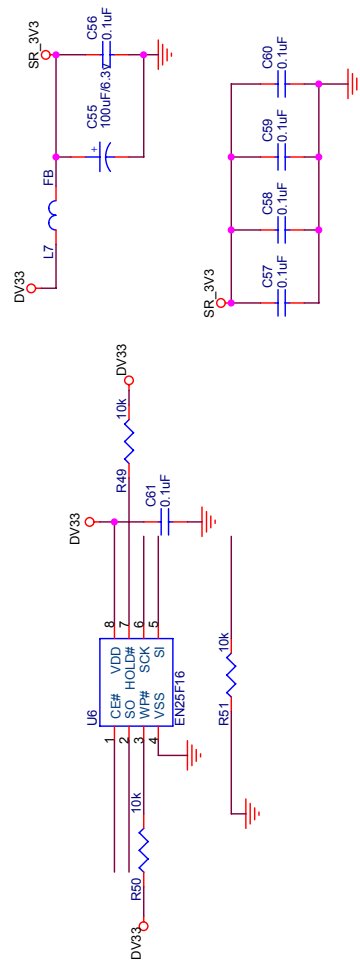
8.1 Decode Board

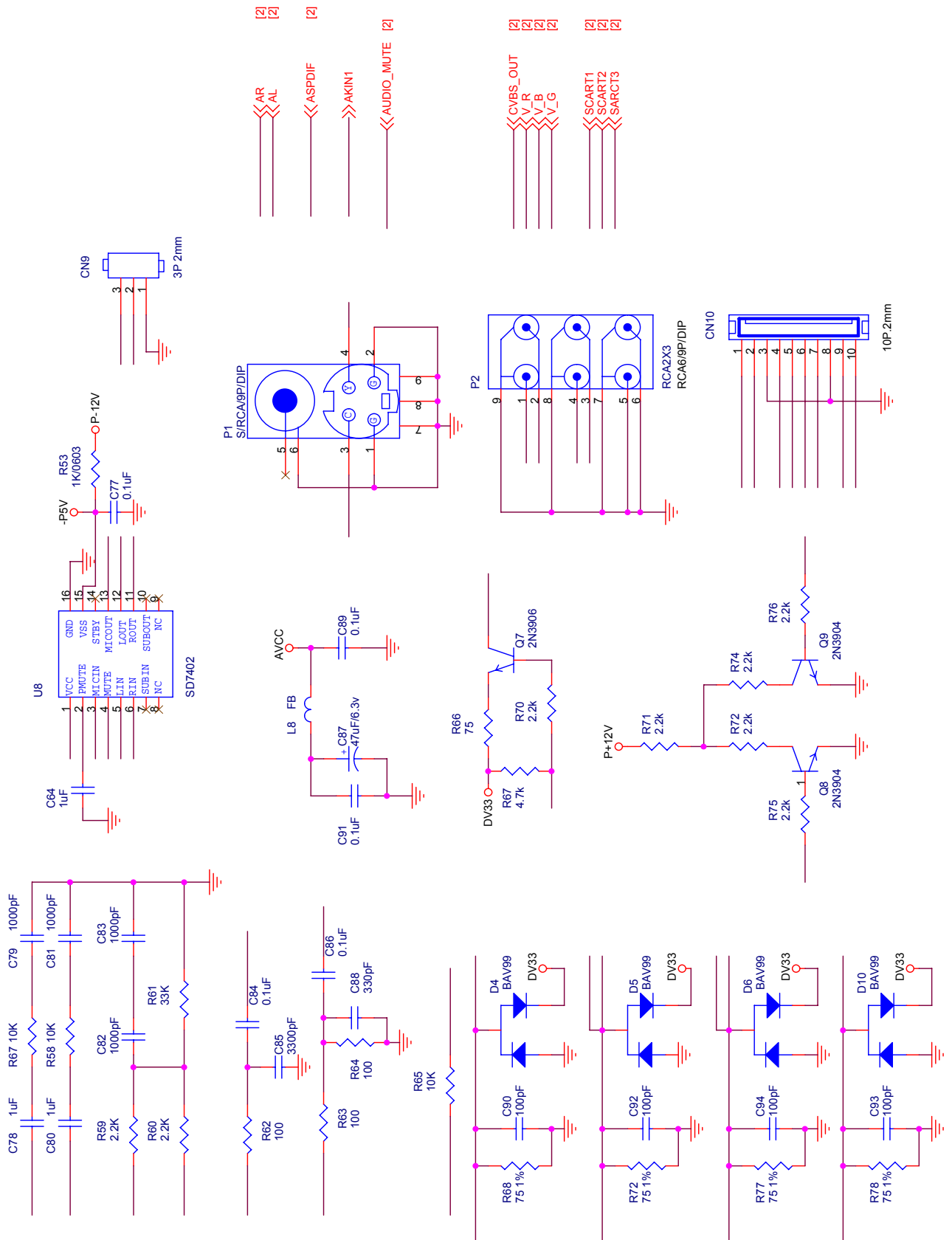
OFF-PAGE CONNECTION

DLCK RASH CASH WE#	DLCK RASH CASH WE#
SF_CK SF_CS SF_DI SF_DO	SF_CK SF_CS SF_DI SF_DO
CVBS_OUT V_R V_B V_G	CVBS_OUT V_R V_B V_G
AR AL SCART1 SCART2 SCART3 AUDIO_MUTE AKIN1	AR AL SCART1 SCART2 SCART3 AUDIO_MUTE AKIN1
ASPDI GPO14	ASPDI AUDIO_MUTE

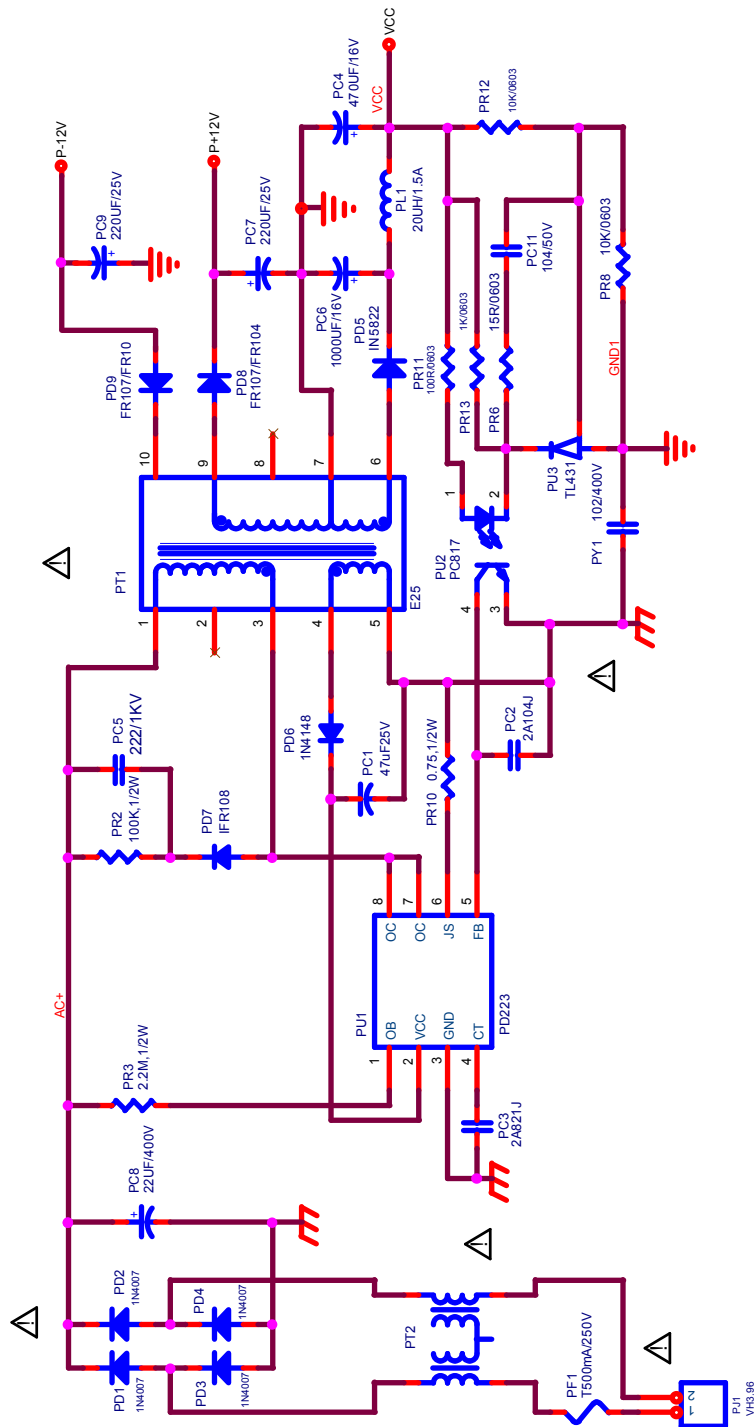
MT1389J
No EPAD
LQFP128



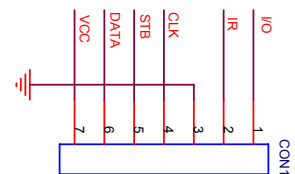
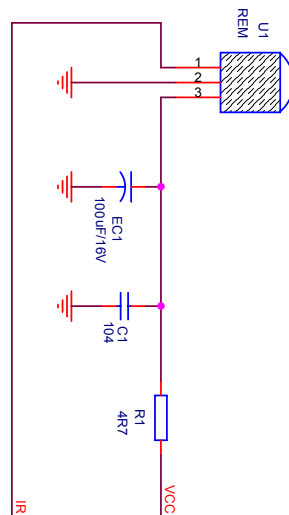
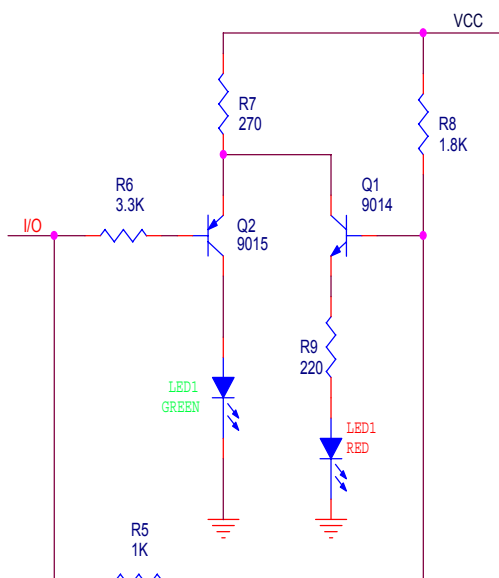
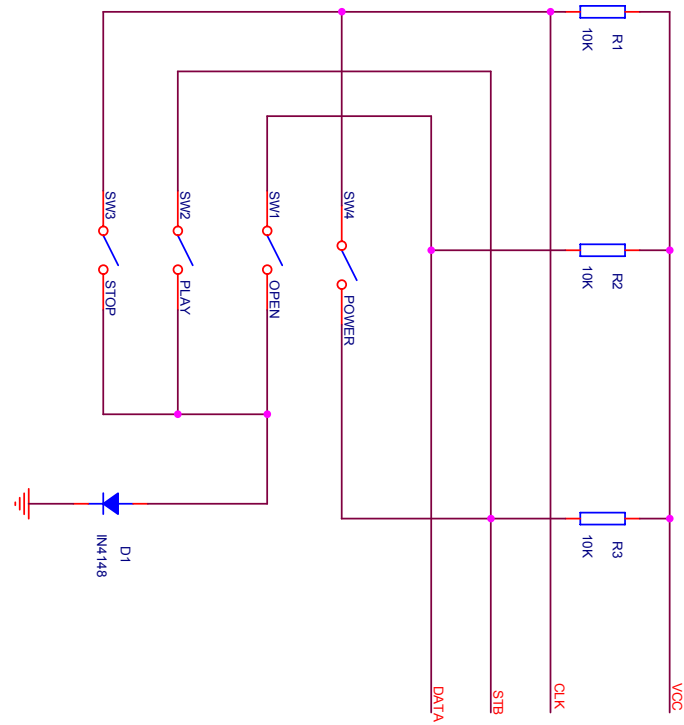




8.2 Power Board



8.3 Main Panel



8.4 USB Board

