


# Service Manual

## ***HSD311PRO DVD PLAYER***

### **PRODUCT SAFETY NOTICE**

Many electrical and mechanical parts in this chassis have special safety characteristics. These safety characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by  in the schematic diagram and the parts list.

Before replacing any of these components, read the parts list in this manual carefully.

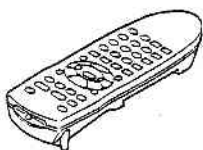
The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire or other hazards.

**Note:** There is different part in this manual as compared with a usual one because we use OEM factory's data.

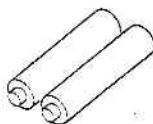
On Circuit description , Lubrication and Abbreviation of Logo , please refer to DV-303 service manual

## Accessories

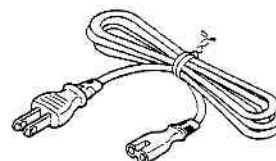
Remote control unit



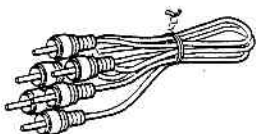
Batteries



AC cord



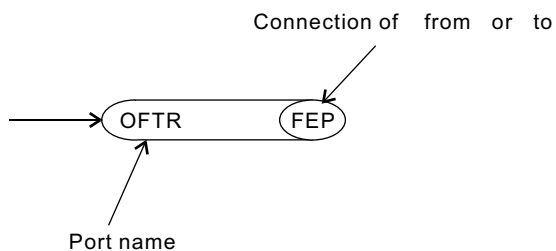
Video/audio cable



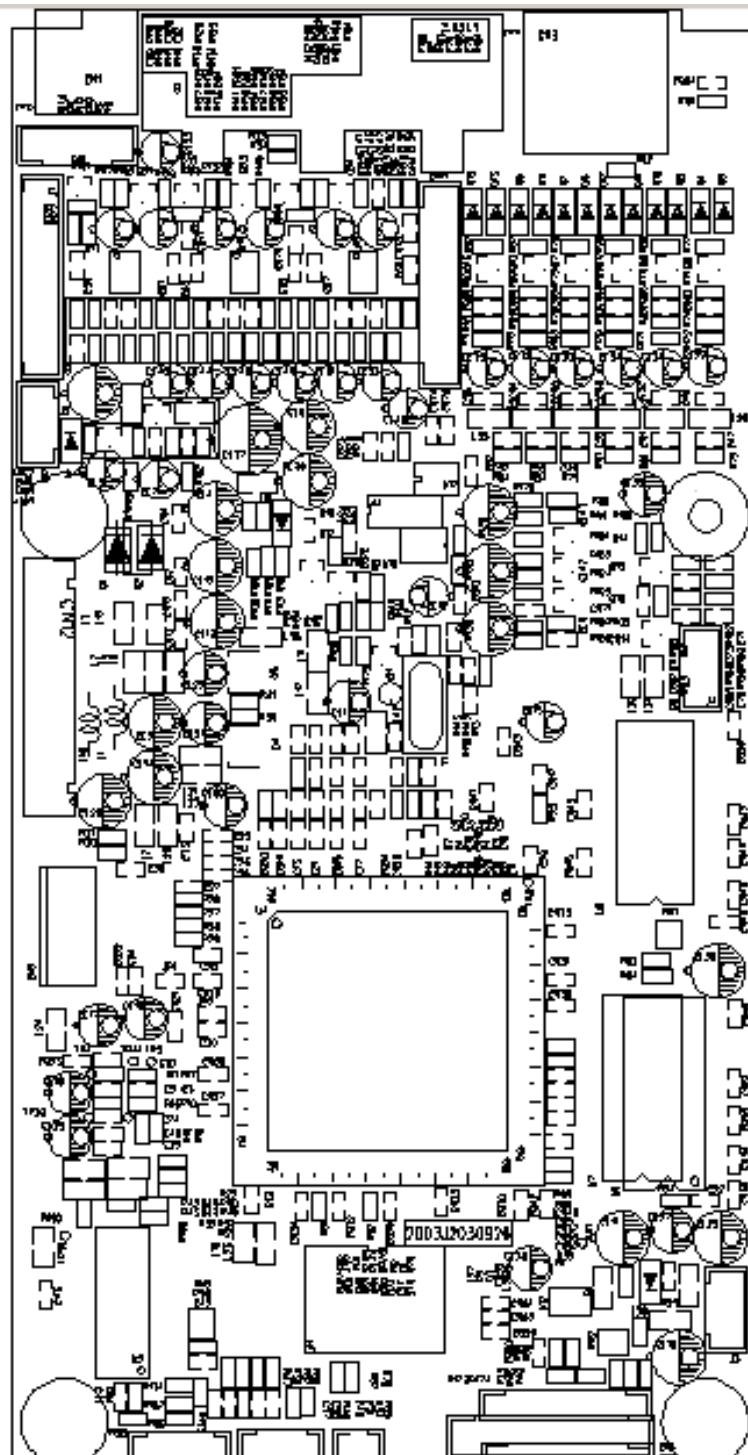
Digital cord

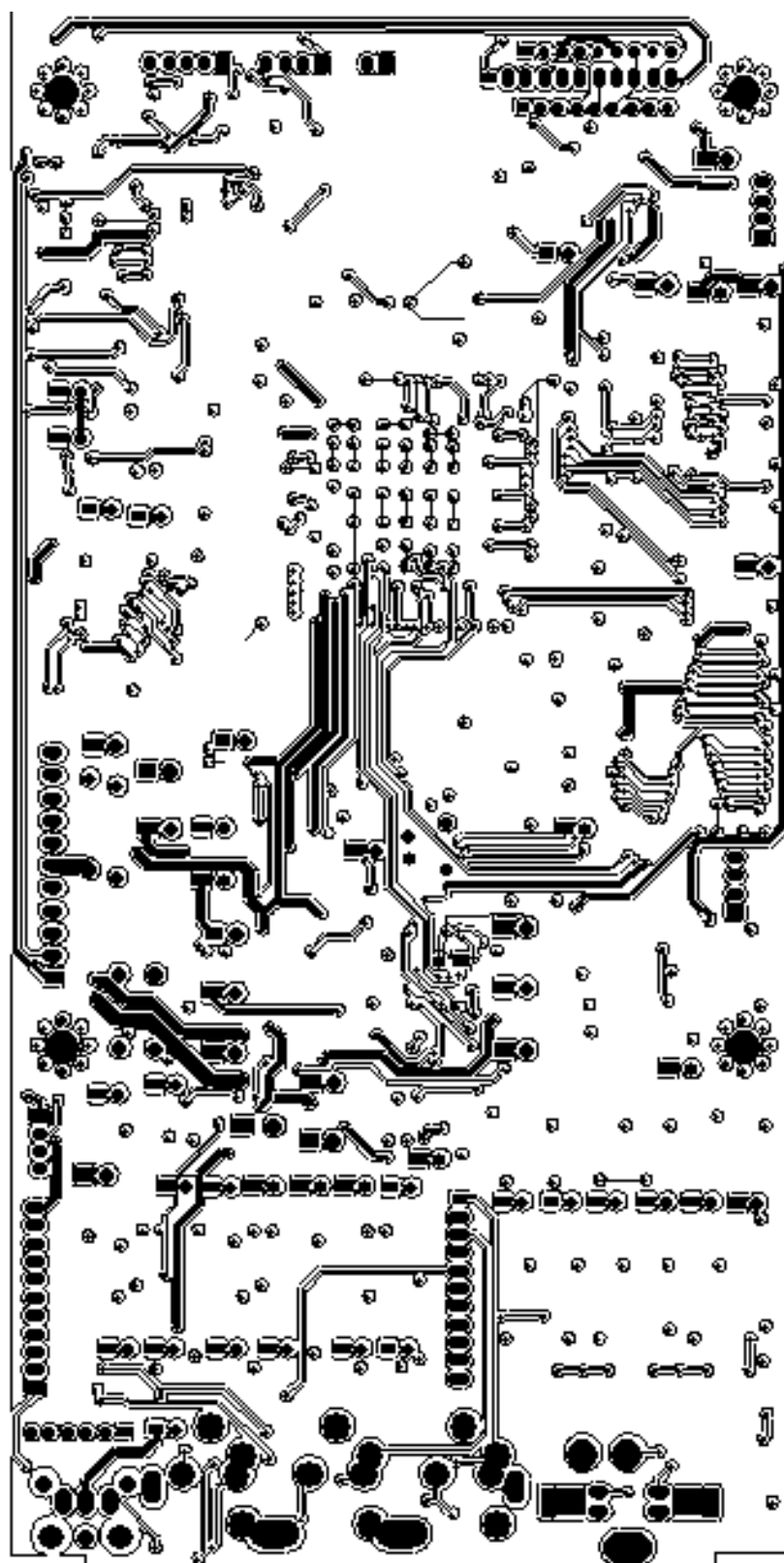


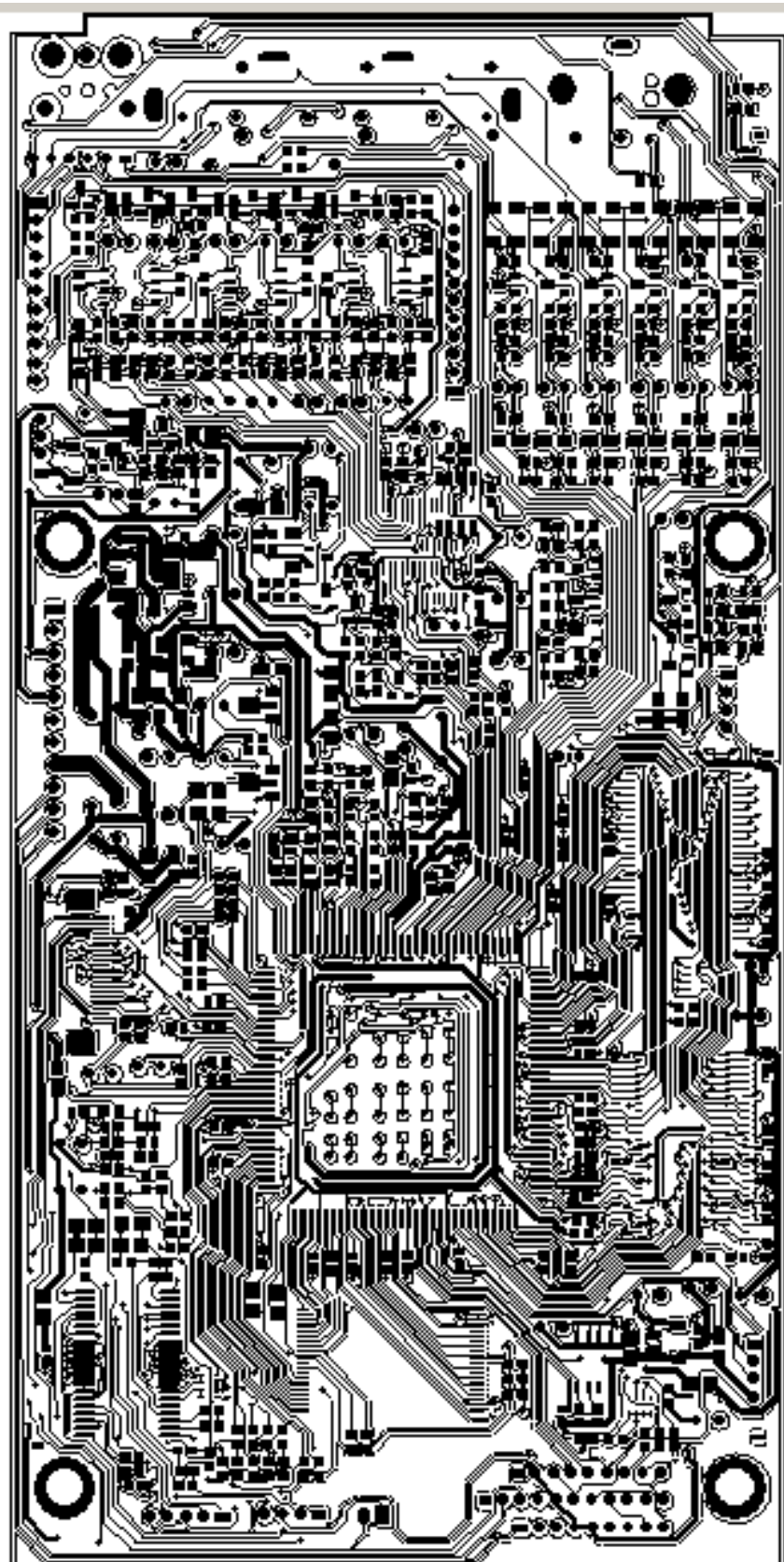
## How to read the schematic diagram



\*There are some destinations in this schematic.



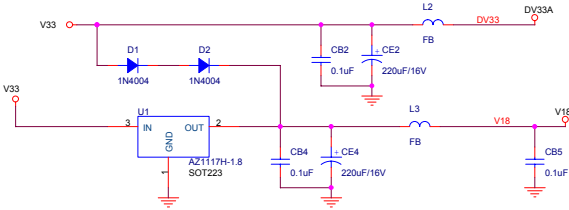
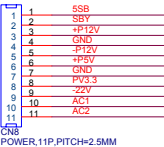




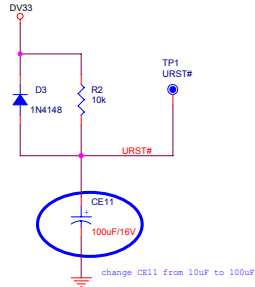
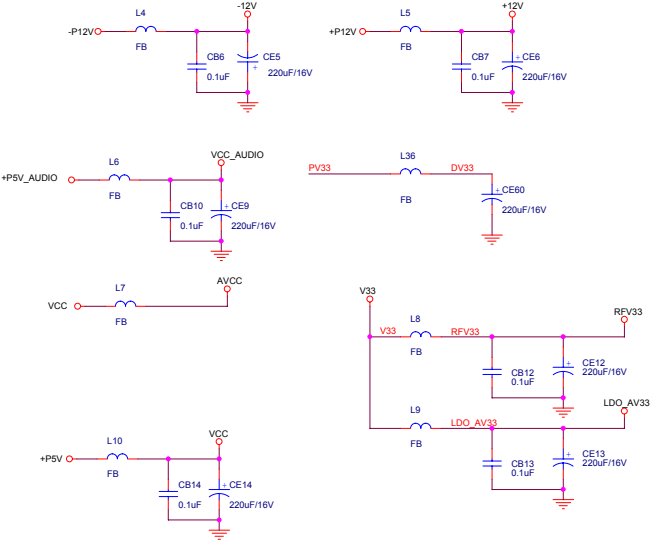
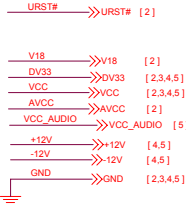
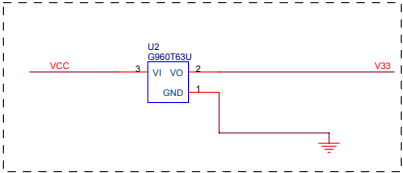
MT1389E (LQFP256) DVD Demo Board for 1200 PUH

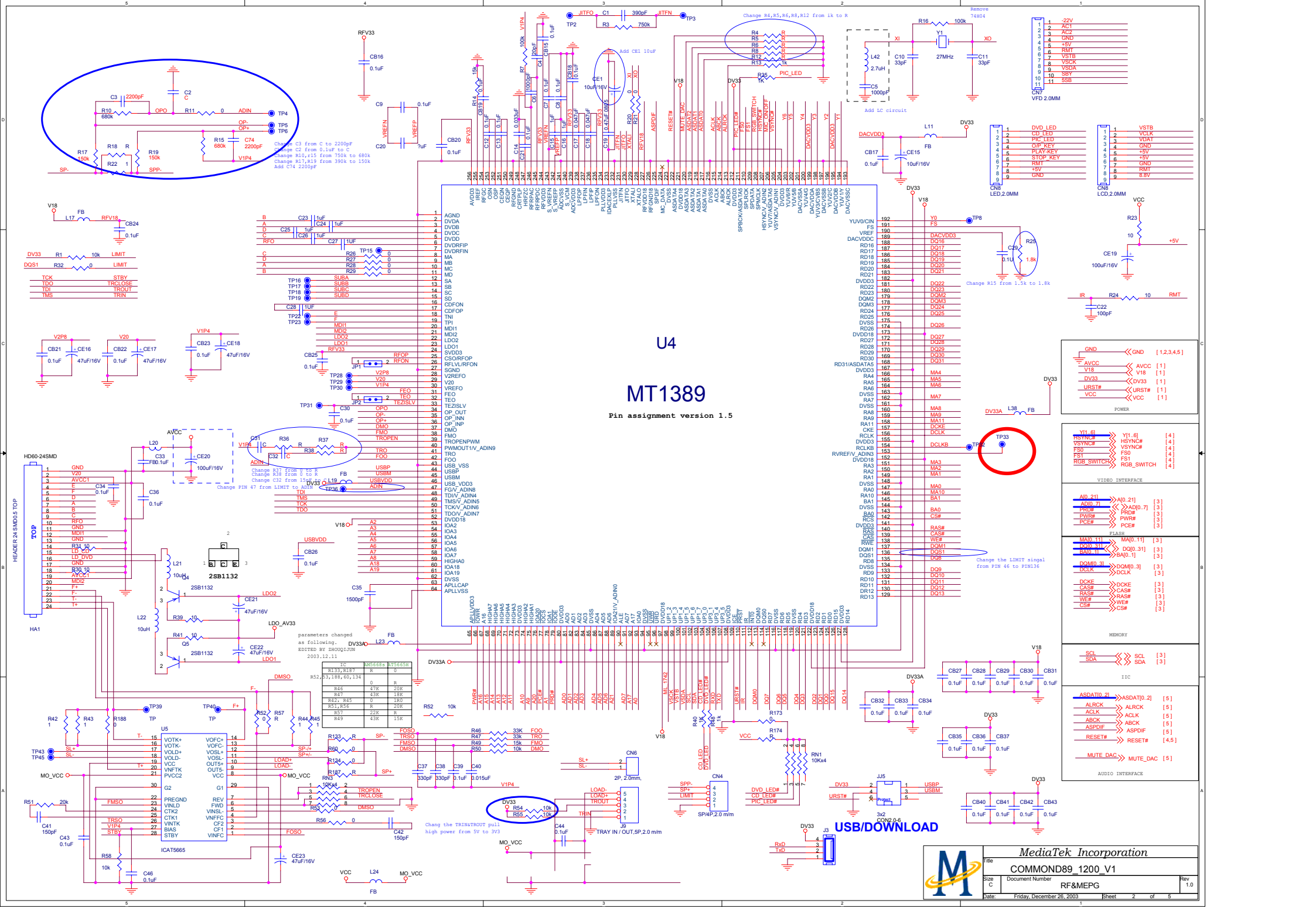
- 1 INDEX & POWER, RESET
- 2 RF, SERVO & MPEG - MT1389E
- 3 MEMORY - SDRAM, FLASH/EEPROM
- 4 VIDEO OUT
- 5 AUDIO DAC WMA8746&WMA8720 AND AUDIO OUT

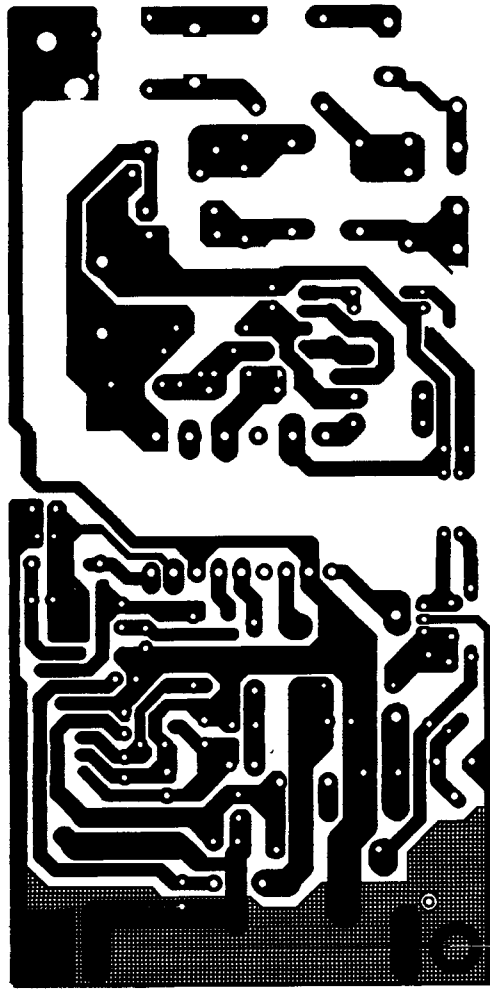
NAME	TYPE	DEVICE
VCC	Digital 5V	SUPPLY
DV33	Digital 3.3V	MT1389E
RFV33	Servo 3.3V	MT1389E
LDO_AV33	Laser Diode 3.3V	
AVCC	RF 5V	PICKUP HEADER
V18	Digital 1.8V	MT1389E
SD33	Digital 3.3V	SDRAM
+12V	Audio +12V	OP AMP.
-12V	Audio -12V	OP AMP.
AVDD	Audio 5V	Audio DAC
DVDD	Audio 5V	Audio DAC

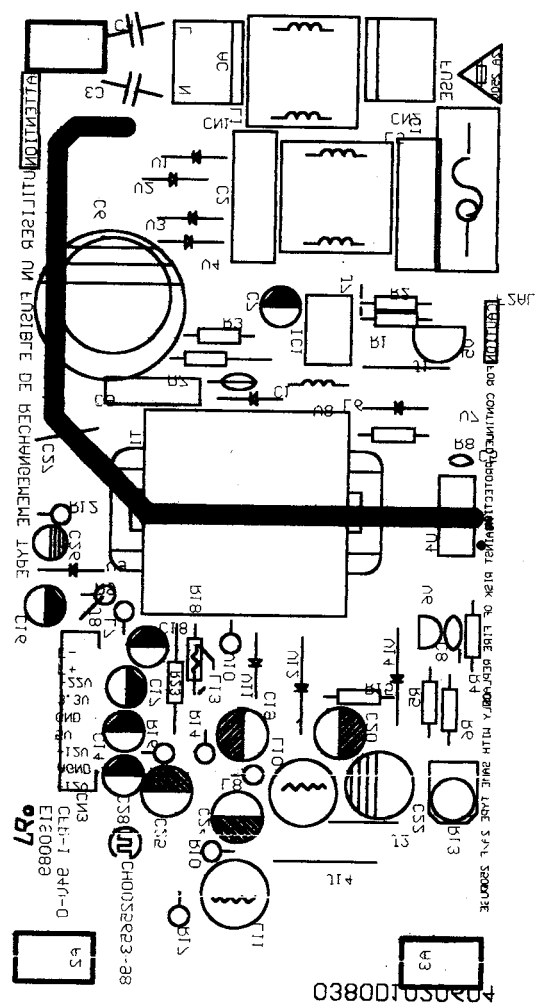


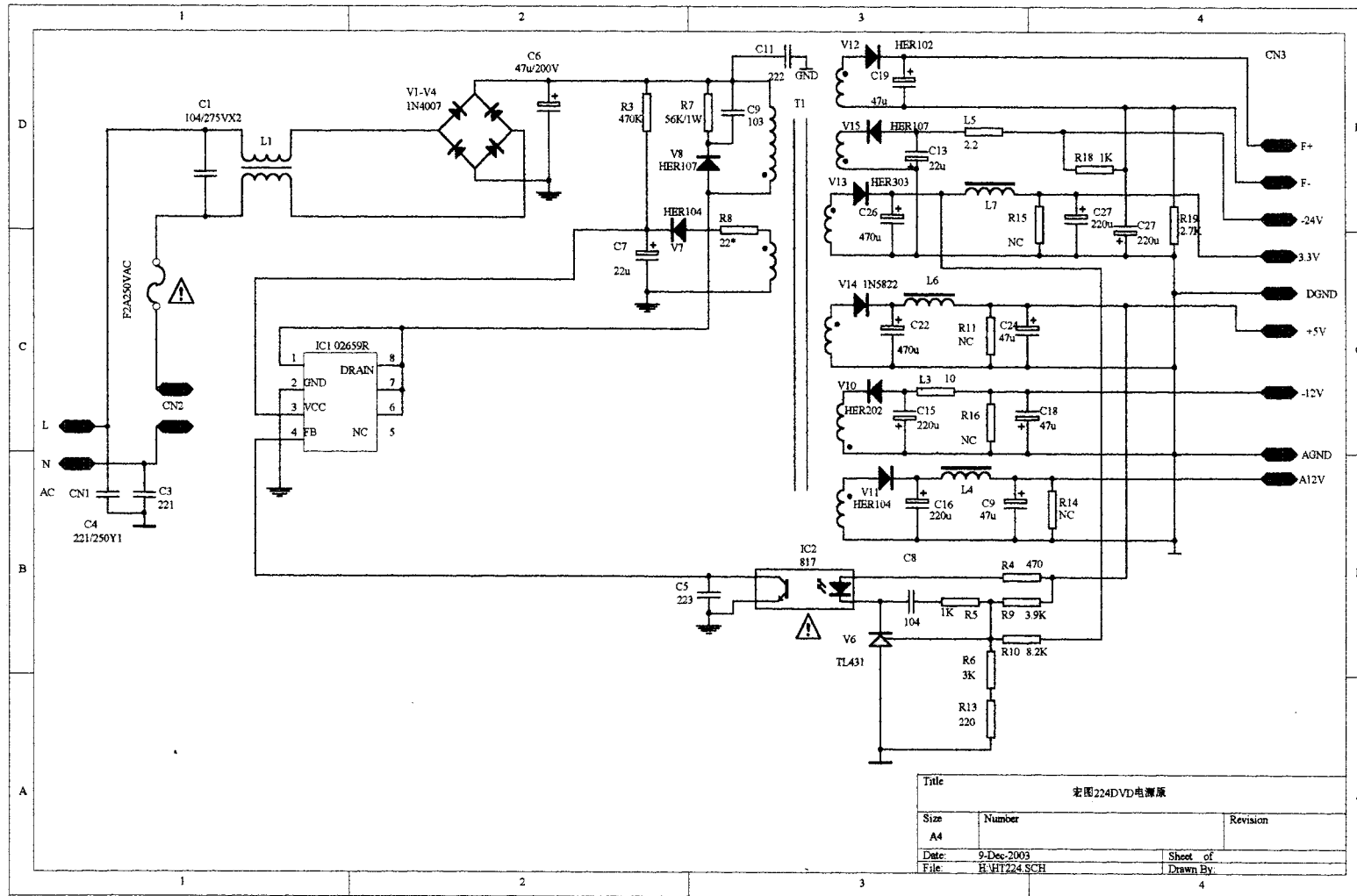
Power ON alive source

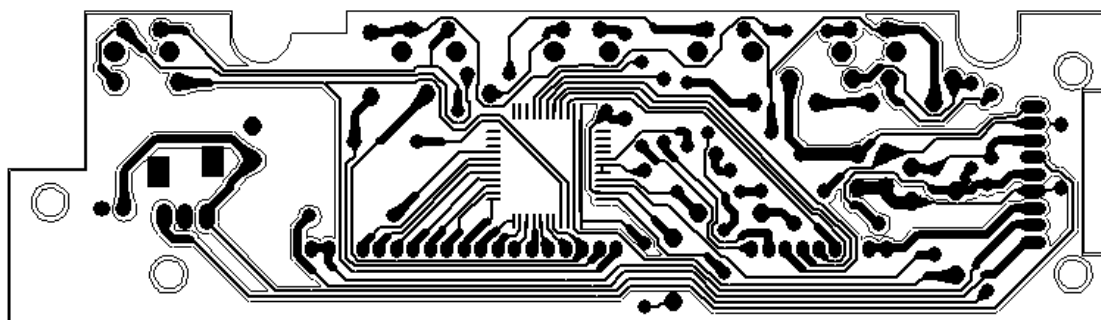


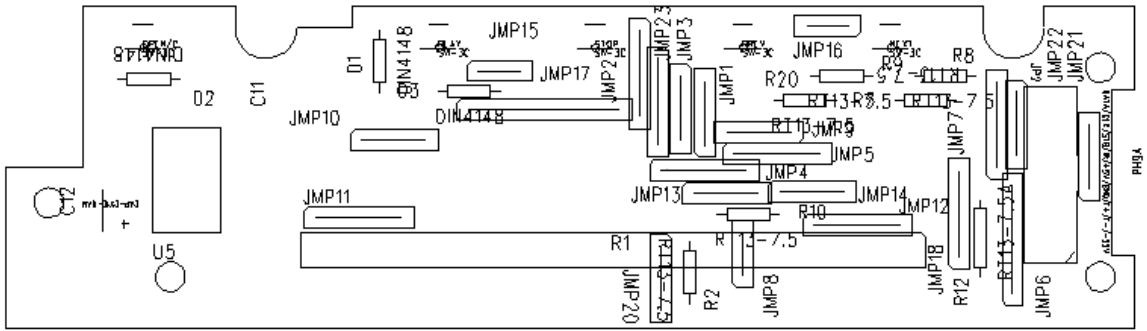


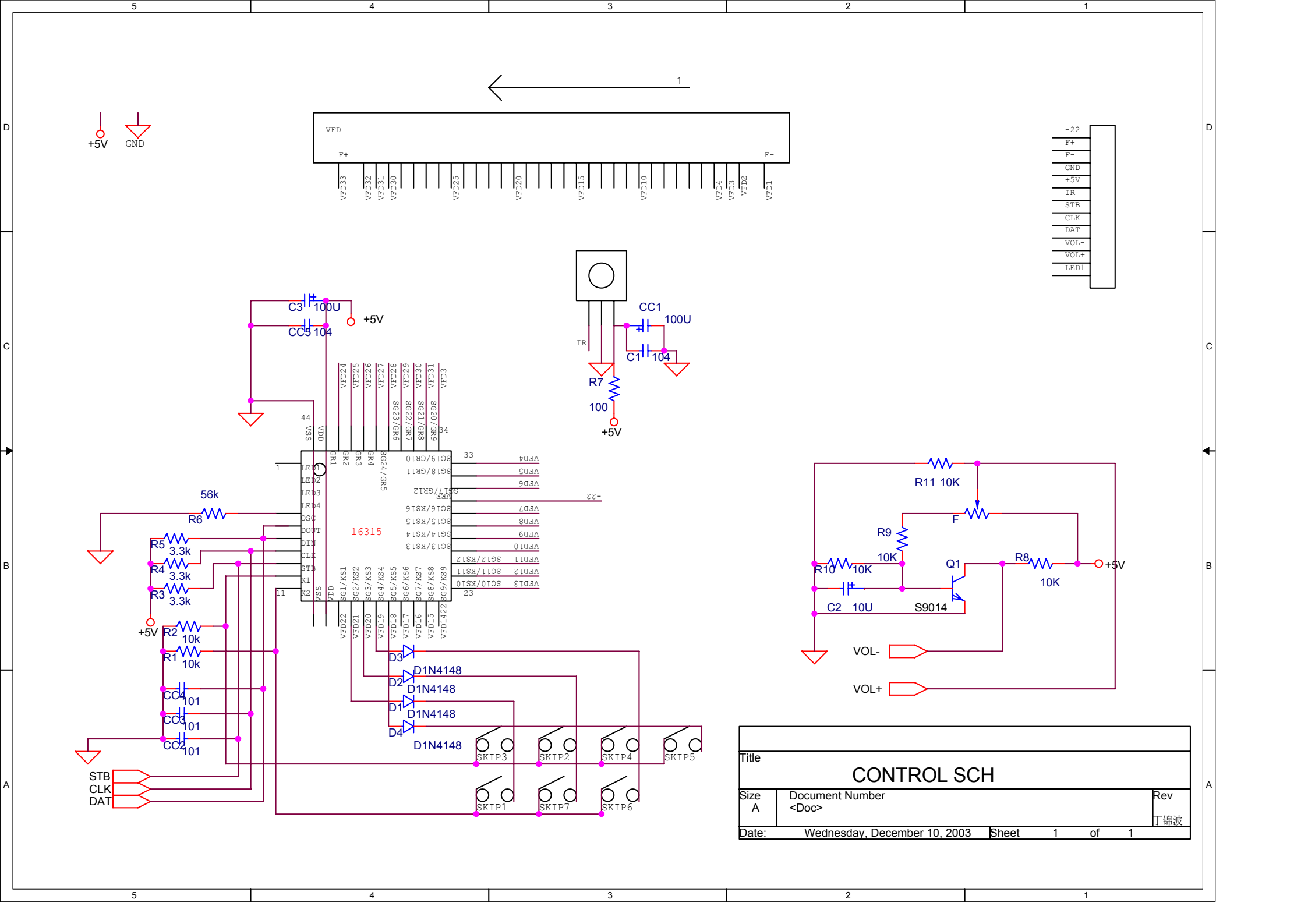












**HSD311PRO**

GBIP3.833.1065MX

L	PART NO.	DESCRIPTION	AMOUNT
1	GBIP2.855.671MX	MAIN BOARD PORTION	1
1	SHD-2502NBL	DVD DRIVE	1
2	GBIP8.070.050		2
1	DX24(B 0.5 250)	24P CABLE	1
1	GBIP2.930.156MX	POWER BOARD PORTION	1
1	GBIP8.078.178	POWER BOARD SUPPORT	1
1	GBIP8.912.014	SCREW	4
1	GBIP4.123.465MX	FRONT-PANNEL PORTION	1
2	GBIP4.021.164MX	CONTROL BOARD	1
3	GBIP4.021.164BH	CONTROL BOARD(RAW)	1
4	GBIP4.021.164CJ	CONTROL BOARD(RAW)	1
5	AD2600020712	PCB	1
5	RT13-100-J	CARBON RESISTANCE	1
5	RT13-10K-J	CARBON RESISTANCE	2
5	RT13-3.3K-J	CARBON RESISTANCE	3
5	RT13-56K-J	CARBON RESISTANCE	1
5	100u/16V	ELECTROLUTE CAPACITANCE	1
5	CC1634-101-10	CAPACITANCE	3
5	CC1634-104-80	CAPACITANCE	1
5	DIN4148	DIODE	3
5	TX5	JACK	5
5	TX7.5	JACK	2
5	TX10	JACK	1
5	TX12.5	JACK	1
5	S4.5*6.5*5	KEY	7
5	AT138B-12	REMOTE	1
4	GBIP6.604.724	9P CABLE	1
4	UPD16315	IC	1
4	4-BT-213GK	VFD	1
4	QT805	GLUE	1.0
4	QT817	GLUE	3.0
4	QT801		2.0
4	QT802		3.0
4	QT803		4.0
4	QT804		0.2
4	Q/GBIP025-91		1
2	GBIP6.647.055	POWER CORD	1
2	QT804		9.0
2	GKB8.081.277	FRONT PANNEL	1
2	GKB8.337.456	POWER KEY	1
2	GKB8.337.455	6 KEYS UNIT	1
2	GKB8.640.083	MIRROR	1
2	GKB8.640.084	DOOR MASK	1
2	GKB8.082.131	DOOR	1
2	845ST2.9*9.5-C	SCREW	9
3	GBIP6.647.046	POWER CORD	1.0
3	STV3	ON-OFF	1.0
2	QT201		80

2	QT306		50
2	QT813	CLEAN CLOTH	2
2	QT310-3	GLUE	200
2	Q/GBIP025-91		1
1	GKB8.639.126		4
1	GBIP6.120.066	BOTTOM-BOARD PORTION	1
2	GKB8.034.249	BOTTOM-BOARD	1
2	GBIP8.078.135		4
2	GBIP8.078.161		3
1	GBIP8.040.303	COVER	1
1	GBIP8.040.541	BACK PANNEL	1
2	GBIP8.040.541A	BACK PANNEL(RAW)	1
2	GBIP8.038.199	COVER SUPPORT	1
1	GBIP8.912.015	SCREW	7
1	845ST2.9*9.5-C	SCREW	4
1	6561M3*6H	SCREW	2
1	6560M3*8H	SCREW	4
1	6560M3*6H	SCREW	9
1	6560M3*4H	SCREW	6
2	GBIP6.463.000		4
2	GBIP8.369.001		4
2	QT201.7		60
1	GBIP8.817.234		1
1	GBIP8.817.719	DAEWOO LOGO	1
2	GBIP8.817.179		1
1	QT310-3		300
1	QT301		300
1	QT302		220
1	GBIP6.649.379	ACCESSORY PORTION	1
1	GBIP2.018.281WX	REMOTER	1
1	GBIP3.833.1045SS	MANNUL	1
1	GBIP8.840.133	ACCESSORY BAG	1
1	QT401	VIDEO OUTPUT CORD	1
1	QT402	AUDIO OUTPUT CORD	1
1	QT601-1	NO.7 BATTERY	2
1	GBIP8.840.138	UNIT BAG	1
1	GBIP8.846.219		1
1	GBIP8.846.192		2
1	GBIP8.865.1049	PACK BAG	1

## Power board

GBIP2.930.MX

L	DESCRIPTION	PART NO.	AMOUNT	REF.
1	PCB	0380D1020604	1	
2				
3	CARBON RESISTANCE	RT-470K-0.25W-J	1	R3
4	CARBON RESISTANCE	RT-8.2K-0.25W-J	1	R15
5	CARBON RESISTANCE	RT-3.9K-0.25W-J	1	R5
6	CARBON RESISTANCE	RT-2.7K-0.25W-J	2	R6,R12
7	CARBON RESISTANCE	RT-1K-0.25W-J	3	R9,R14,R16
8	CARBON RESISTANCE	RT-910-0.25W-J	1	L13
9	CARBON RESISTANCE	RT-220-0.25W-J	1	R4
10	CARBON RESISTANCE	RT-10-0.25W-J	1	R8
11	CARBON RESISTANCE	RY-56K-2W-J	1	R7
12	CARBON RESISTANCE	RY-100-1W-J	2	R10,R17
13		102	1	R13
14	JACK	15mm	1	J14
15	JACK	12.5mm	1	J1
16	JACK	10mm	1	J2
17	JACK	5mm	1	J7
18	CAPACITANCE	CT81-103-1KV	1	C9
19	CAPACITANCE	CBB-104-63V	1	C8
20	CAPACITANCE	CT81-222-400V(Y1)	1	C27
21	CAPACITANCE	CT81-221-400V(Y1)	2	C3,C4
22	CAPACITANCE	CC1-223-50V	1	C5
23	CAPACITANCE	MPX-104-275V	2	C1,C2
24	CAPACITANCE	CD293-47u-400V	1	C6
25	CAPACITANCE	CD263-10u-50V	1	C26
26	CAPACITANCE	CD263-22u-50V	1	C18
27	CAPACITANCE	CD263-47u-50V	1	C7
28	CAPACITANCE	CD263-220u-10V	2	C14,C17
29	CAPACITANCE	CD263-220u-16V	2	C19,C25
30	CAPACITANCE	CD263-470u-16V	2	C20,C24
31	CAPACITANCE	CD263-47u-16V	2	C16,C28
32	CAPACITANCE	CD263-1000u-16V	1	C22
33	DIODE	1N4007	4	V1,V2,V3,V4
34	DIODE	1N5822	1	V14
35	DIODE	HER303	1	V12
36	DIODE	HER107	1	V8
37	DIODE	HER104	4	V7,V9,V10,V11
38	IC	KA5L0380	1	IC1
39	IC	TL431	1	V6
40		817	1	U4
41	TRANSFORMER	BCK-D33-02	1	T1
		(GBIP4.700.084C)		

42	INDUCTANCE	UF10.5( $\varphi$ 0.27)	2	L1,L5	
43	MAGNETISM RESISTANCE		1	L6	
44	INDUCTANCE	5.6uH	2	L7,L8	
45	INDUCTANCE	$\varphi$ 6 $\times$ 20, $\varphi$ 0.8/16.5T	1	L11	
46	INDUCTANCE	$\varphi$ 6 $\times$ 20, $\varphi$ 0.8/10.5T	1	L10	
47	9P CABLE	SD-QJB-E-220	1	CN3	
48		F2A/250V(5 $\times$ 20)	1	FUSE	
49	JACK	VH3A-2	2	CN1,CN2	
50			3		

## TECHNICAL SPECIFICATION

Response frequency:	4Hz - 22 KHz
S/N ratio:	> 98dB
Audio output:	2 V
Video output:	1.0V P-P 75
S-video output:	Y 1.0V P-P C0.28 75
power supply:	100-240V ~ 50/60Hz
power consumption:	20W
Operation temperature:	-30 C To45 C
Measurement:	430 L X 290 W X 48 H mm
Gross weight:	4.2 Kg

# Trouble Shooting

## Trouble Analysis Form before opening player

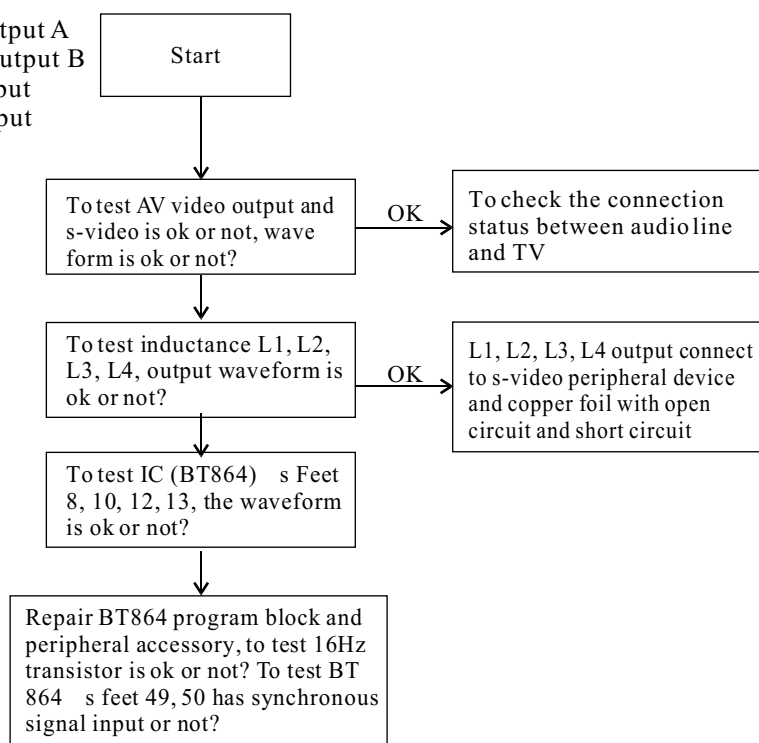
Trouble	Reason	Solution
Signal lamp is not on when power is on.	Power plug does not touch well.	Insert plug into socket well or change a socket
Read slowly or do not read disc, but you can hear the sound of reading disc, about one minute later, bad disc is shown on TV screen	Disc is up-side down; Disc is not clean Disc is hurt Lens is covered by dust	Insert disc correctly; Clean disc Change a disc Clean lens with professional clean disc
Disc is working with picture, but without sound	Audio line is loosen or connect incorrectly TV set or amplifier does not work or their volume is too low	Tighten audio line or connect again Check the status of TV or amplifier turn up the volume.
Disc is working with sound, but without picture	Video line is loosen or connect incorrectly TV's status is not ok	Tighten video line or connect again Check the status of TV
TV can display picture, but no vivid color	TV's mode does not match up with this player	Set the model of TV and player to let them fit
Sensibility of remote control is not well.	Battery is not full; The distance or angle between remote control and TV is out of reach;	Change battery; Change battery; Make sure of the angle within 30°, The distance is within 8 m.
The picture is broken, fragile, jump or with broken sound when disc is playing	Disc is not ok or hurt or untidy; Player shake with the influence of speakers or other things	Clean disc or change it; Isolate speaker from player to avoid shake.
Operation function is abnormal.	Player is bothered by other things; Disc is too bad	Shut off power and restart the player.
Set parental control password and forgot it, how to clear this password?		1. Open the loader; 2. Enter super password "8561"; 3. Enter menu setting; 4. Choose amend password.
Select by accident PAL mode under TV, it causes loose sync, how to switch back to NTSC mode	The two mode are not suitable.	1. Press N/P to shift DVD mode 2. Change the mode of TV.

## Frequent Trouble Analysis after Opening Player

Trouble	Analysis	Solution
Signal lamp is dark or not on, when power is on.	It maybe occur in power supply circuit.	See power examination and reparation procedure
Picture is ok, but the sound is too low or broken or noisy or even without sound	It maybe occur in audio simulative amplify output and mute circuit.	See audio output examination and reparation procedure
Sound is ok, but the picture is without calor or not synchronous with sound or even without picture.	It maybe occur in video output and video program circuit.	See simulative video output examination and reparation procedure
The launch device of remote control is ok, but we can not control the player.	It maybe occur in remote control receive circuit.	See remote control system examination and reparation procedure.
Remote control is useful, but the player's keys are not sensible.	It maybe in front control board program circuit.	See front control board power examination and reparation circuit.

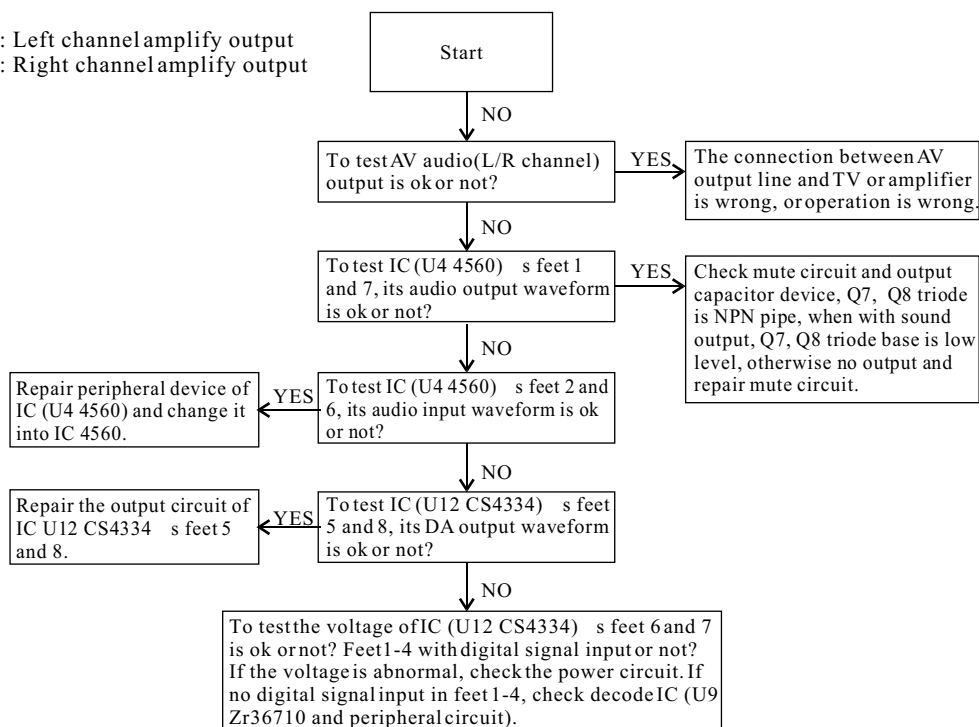
## Examination & Reparation Procedure for Simulative Video

BT864-8: Component Video output A  
BT864-10: Component Video output B  
BT864-12: Chroma Signal Output  
BT864-13 Brighten Signal Output



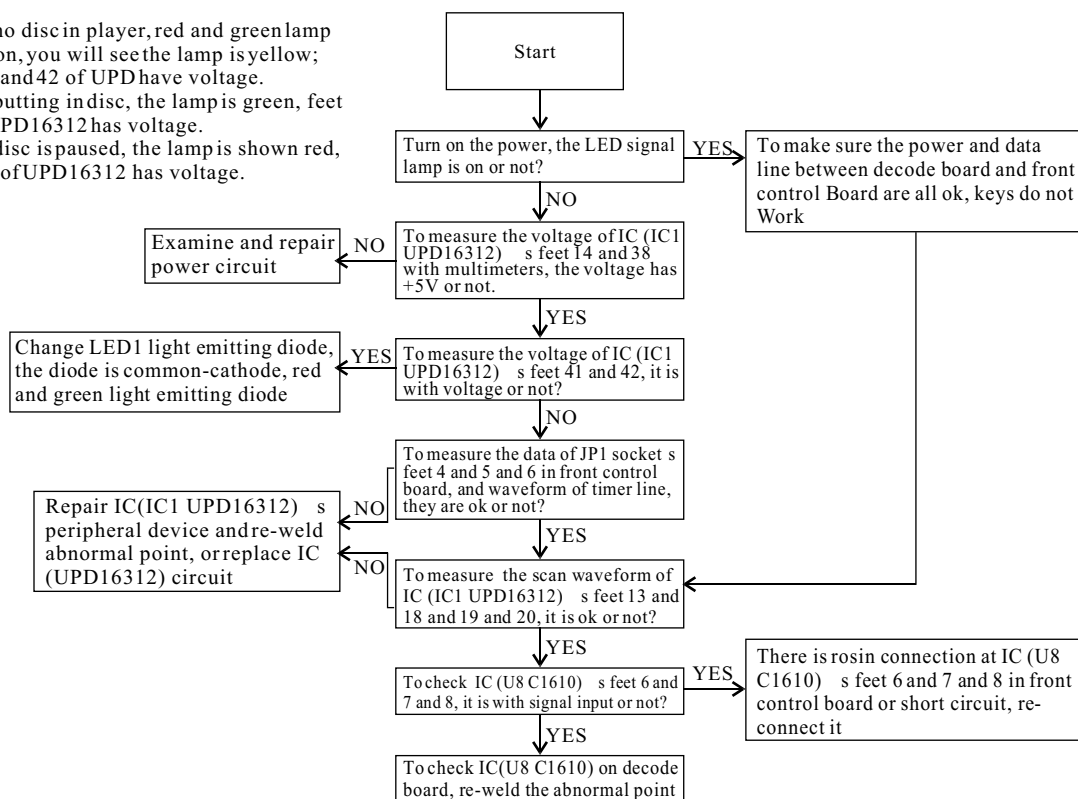
## Examination & Reparation Procedure for Simulative Audio

4560-1: Left channel amplify output  
4560-7: Right channel amplify output

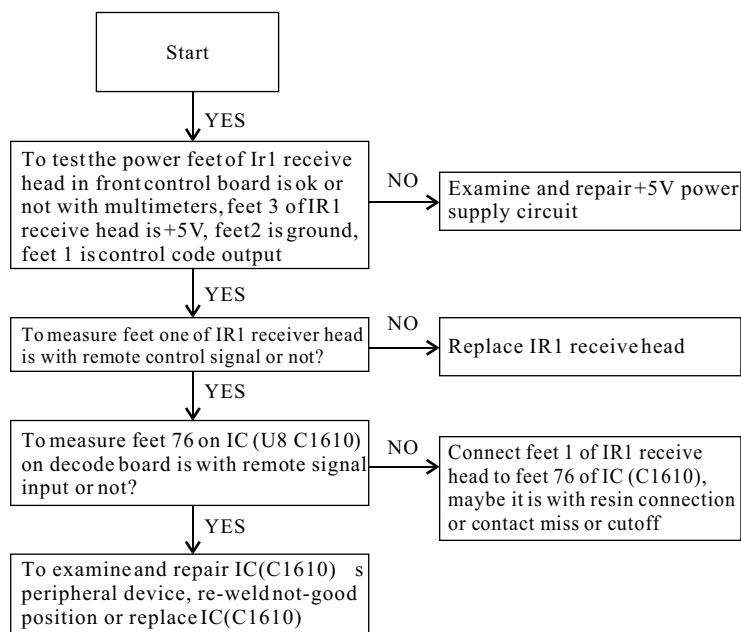


## Examination & Reparation Procedure for Simulative Audio

1. When no disc in player, red and green lamp are all on, you will see the lamp is yellow; feet 41 and 42 of UPD have voltage.
2. When putting in disc, the lamp is green, feet 41 of UPD16312 has voltage.
3. When disc is paused, the lamp is shown red, feet 42 of UPD16312 has voltage.



## Examination & Reparation for Remote Control Receive system



## Examination & Reparation Procedure for Power

