

Service
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Service Manual

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3141 785 33150

1.0 TECHNICAL SPECIFICATION

General

Dimensions (W x H x D): 210 x 178 x 39mm
 Bear Unit Weight: 719.3g +/- 5%
 Power supply: Input: 100-240V AC, 50/60Hz
 0.3A
 Output: DC 9V 1.0A
 9W
 Power consumption: 9W
 Operating temp. & RH: -10 ~ +50degC / 40-90%
 Video System: NTSC / PAL / AUTO
 Audio System: NTSC / PAL / AUTO
 Output voltage 1kHz: 2+/-0.2V
 THD 20-20kHz (%): < /=3%
 Dynamic range: > /=70dB
 Signal/Noise ratio: > /=70dB
 Frequency response (20-20kHz): +/-1dB
 Channel Separation 1kHz: > =60dB
 Channel Balance 1kHz: < 2dB

Playback disc type: DVD, Picture-CD, SVCD, Video CD, MP3-CD, CD-R/CD-RW, WMA-CD, DVD-R, DVD-RW, DVD+R, DVD+RW
 Video Playback Format: DVD / VCD / JPEG
 Audio Playback Format: CD/MP3, MP3-DVD, WMA
 Disc Diameter: 12cm

Pixel specification

Max. 2 bright-dot & max. 3 dark-dots

Current consumption

DC-IN SUPPLY (9V)	
Battery Charging Current	450 +/- 50mA
BATT. SUPPLY	
Power Off	
Playback with TFT on	
Playback without TFT on	
Playback time	

Headphone out (headphone output load 2x16 ohm)

Maximum output power: 1.5mW
 Frequency response: +/-1dB
 SNR (A-wght): >70dB
 THD (0.2-20kHz): 1%
 Left-Right Channel Separation: > /=50dB
 Left-Right Channel Balance: < /=1dB

Supported disc type

Video Playback Formats:



Audio Playback Formats:



Factory Service Mode (FSM)

To check the software version and change region code of your DVD Portable

1. Power ON the DVD player and open the DVD door
2. Press the "SETUP" button on remote control, then select the "Preference MENU"
3. Press the remote button in the sequence as 9 -> 6 -> 5 -> 3
4. The LCD display showed the existing region code. Press ▲ (navigation up) or ▼ (navigation down) repeatedly to select the number from 0 to 6.
5. Refer below table for your region code setting

Region Code	Region
1	USA
2	EUROPE
3	ASIA PACIFIC
4	AUSTRALIA, NEW ZEALAND, LATAM
5	RUSSIA, INDIA
6	CHINA

Select "0" setting = Region Free (confidential)

1.0 TECHNICAL SPECIFICATION

Procedure on how to upgrade the software of the DVD Portable

For the best performance of your DVD Portable. Check www.philips.com/support for latest software upgrades available.

A) By CD-ROM

1. Download the "PHILIPS.BIN" file from the Philips support site
2. Unzip the file and then burn it into a CD-ROM to make a disc for upgrade
3. CD-ROM disc name must be "PHILIPS" (otherwise it will not be recognized as a disc for upgrade)
4. Power on the Portable DVD Player with AC/DC adaptor
5. Play CD-ROM for firmware upgrade

Warning: Do not unplug the AC adaptor during firmware upgrade to prevent flash corrupt of the set!!

6. Once upgrade is completed, the player will restart automatically and observed PHILIPS LOGO on the screen.
7. Open the DVD door to remove the disc

2.0 SAFETY INSTRUCTIONS

GB WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

F ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation. Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfilez le bracelet serti d'une résistance de sécurité. Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

D WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD). Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren. Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes. Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

ESD



NL WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD). Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat. Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

I AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD). La loro longevità potrebbe essere fortemente ridotta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza. Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

GB

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

NL

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

F

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisés les pièces de rechange identiques à celles spécifiées.

D

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

I

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

"After servicing and before returning set to customer perform a leakage current measurement test from all exposed metal parts to earth ground to assure no shock hazard exist. The leakage current must not exceed 0.5mA."



GB Warning !

Invisible laser radiation when open.
Avoid direct exposure to beam.

S Varning !

Osynlig laserstrålning när apparaten är öppnad och spärrar är urkopplad. Beträkta ej strålen.

SF Varoitus !

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alltiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

DK Advarse !

Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

2.1 ESD PROTECTION

- レンズには絶対に触れないでください。
- DO NOT TOUCH THE LENS.
- LINSE NICHT BRÜHREN.
- NE PAS TOUCHER LA LENTILLE.

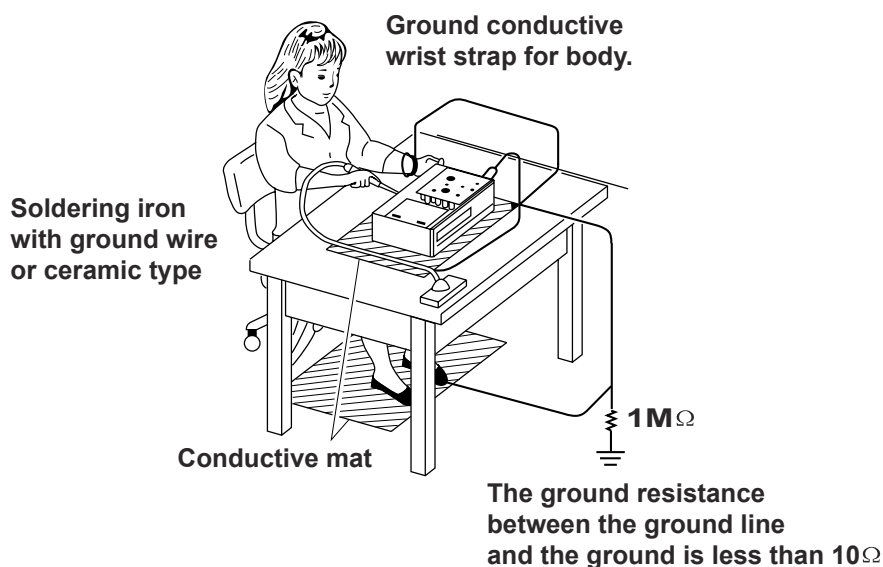
When the power supply is being turned on, you may not remove this laser cautions label. If it removes, radiation of laser may be received.

PREPARATION OF SERVICING

Pickup Head consists of a laser diode that is very susceptible to external static electricity.

Although it operates properly after replacement, if it was subject to electrostatic discharge during replacement, its life might be shortened. When replacing, use a conductive mat, soldering iron with ground wire, etc. to protect the laser diode from damage by static electricity.

And also, the LSI and IC are same as above.



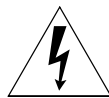
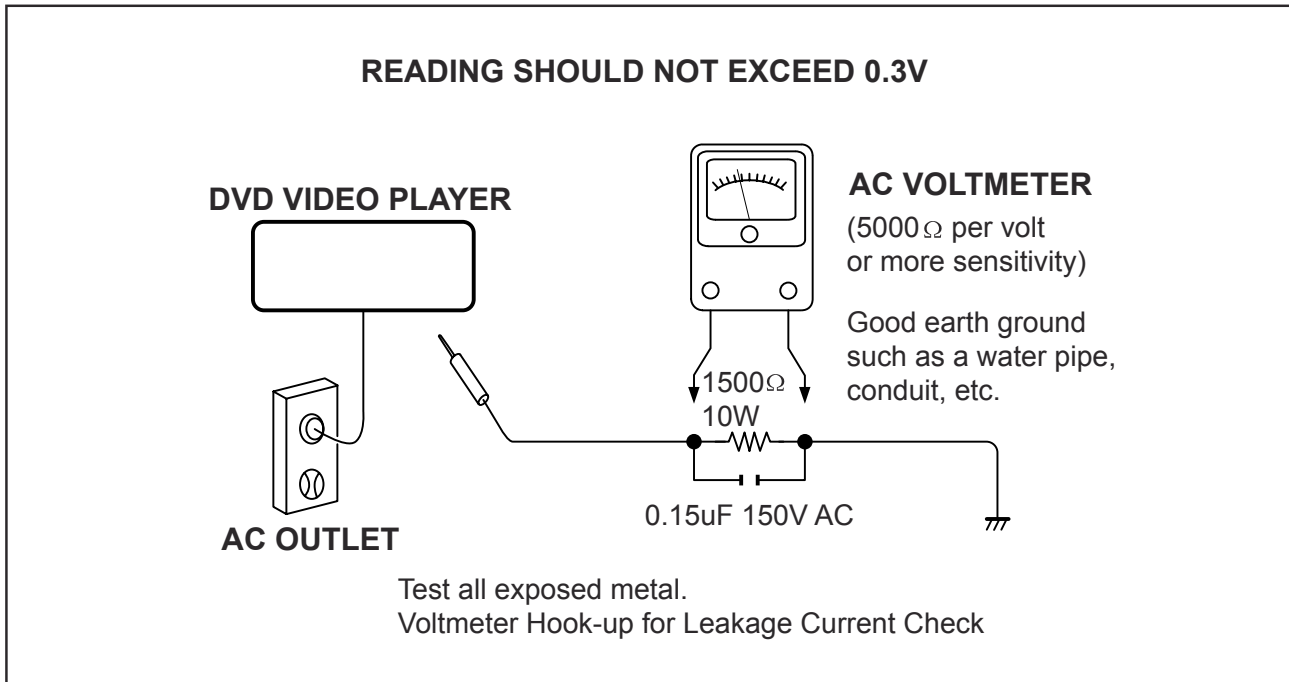
SAFTY NOTICE

SAFTY PRECAUTIONS

LEAKAGE CURRENT CHECK

Plug the AC line cord directly into a 120V AC outlet (do not use an isolation transformer for this check). Use an AC voltmeter, having 5000Ω per volt or more sensitivity. Connect a 1500Ω 10W resistor, paralleled by a $0.15\mu\text{F}$ 150V AC capacitor between a known good earth ground (water pipe, conduit, etc.) and all exposed metal parts of cabinet (antennas, handle bracket, metal cabinet screwheads, metal overlays, control shafts, etc.).

Measure the AC voltage across the 1500Ω resistor. The test must be conducted with the AC switch on and then repeated with the AC switch off. The AC voltage indicated by the meter may not exceed 0.3V. A reading exceeding 0.3V indicates that a dangerous potential exists, the fault must be located and corrected. Repeat the above test with the DVD VIDEO PLAYER power plug reversed. NEVER RETURN A DVD VIDEO PLAYER TO THE CUSTOMER WITHOUT TAKING NECESSARY CORRECTIVE ACTION.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

2.2 SAFETY INSTRUCTIONS

Battery Handling Guideline

Since the battery is packed in soft package, to ensure its better performance, it's very important to carefully handle the battery

2.2.1 Soft Aluminium foil

The soft aluminum packing foil is very easily damaged by sharp edge parts such as Ni-tabs, pins and needles.

- Don't strike battery with any sharp edge parts
- Trim your nail or wear glove before taking battery
- Clean worktable to make sure no any sharp particle



2.2.2 Sealed edge

Sealing edge is very flimsy

- Don't bend or fold sealing edge



2.2.3 Folding edge

The folding edge is form in battery process and passed all hermetic test.

- Don't open or deform folding edge



2.2.4 Tabs

The battery tabs are not so stubborn especially for aluminum tab.

- Don't bend tab



2.2.5 Mechanical shock

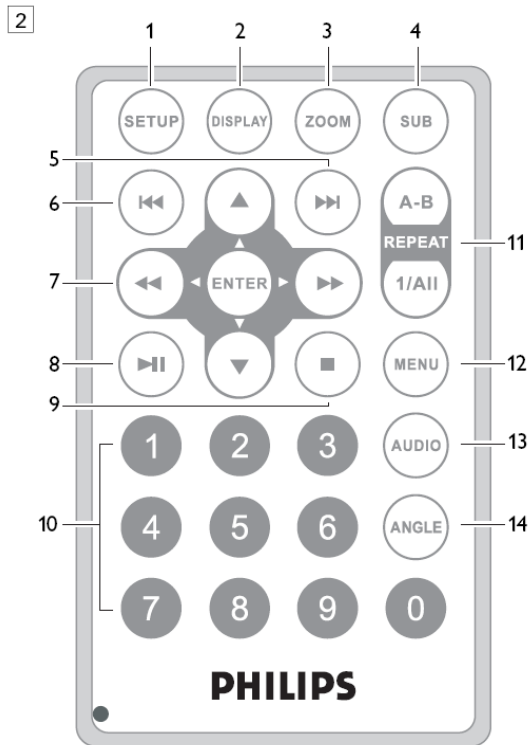
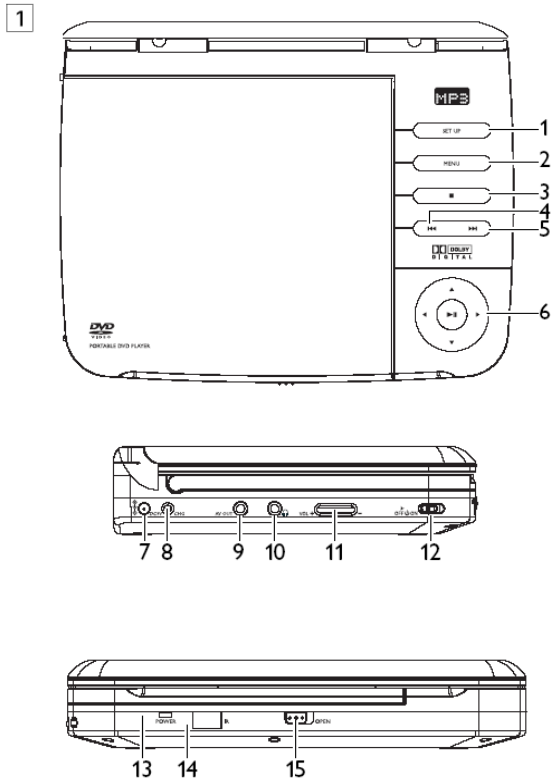
- Don't Fall, hit, bend battery body



2.2.6 Short

Short terminals of battery is strictly prohibited, it may damage battery.

3.0 INSTRUCTION FOR USE



Main unit controls (see figure 1)

- ① **SETUP**Switch the aspect ratio between 16:9 or 4:3.
- ② **MENU**Display the MENU page.
- ③ ■Stop playback
- ④ ◀Skip to the previous chapter, track or title
- ⑤ ▶Skip to the next chapter, track or title
- ⑥ ▲, ▼, ◀, ▶Navigate in a menu.
.....(◀/▶) search backward/forward in a disc at different speeds.
- ▶||Start or interrupt playback.
.....Confirm a selection.

Left of player (see figure 1)

- ⑦ **DC 9V**Power supply socket.
- ⑧ **CHG**Charge indicator.
- ⑨ **AV OUT**Audio/Video output jack.
- ⑩Headphone jack
- ⑪ **VOL**Volume control.
- ⑫ **OFF ON**Switch the power on/off.






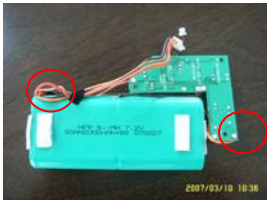
Front of player (see figure 1)

- ⑬ **POWER**Power indicator
- ⑭ **IR**Remote sensor
- ⑮ **OPEN**Open the disc door to insert or remove disc

Remote controls (see figure 2)

- ① **SETUP**Enter or exit the system menu.
- ② **DISPLAY**Display information on TFT during playback.
- ③ **ZOOM**Enlarge or reduce a picture or active image on the TFT.
- ④ **SUB**Select a subtitle language.
- ⑤ ◀Skip to the previous chapter, track or title.
- ⑥ ▶Skip to the next chapter, track or title.
- ⑦ ▲, ▼, ◀, ▶Navigate in a menu.
.....(◀/▶) search backward/forward in a disc at different speeds.
- ENTER**Confirm a selection.
- ⑧ ▶||Start or interrupt playback.
- ⑨ ■Stop playback
- ⑩ **0-9**Numeric Keypad
- ⑪ **REPEAT 1/ALL**Repeat a chapter/track/title.
- A-B**Repeat playback of a specific section on a disc.
- ⑫ **MENU**Enter or exit the disc contents menu.
- ⑬ **AUDIO**Select an audio language when playing a DVD disc or select an audio mode (Stereo, Mono-Left or Mono-Right) when playing a VCD/CD disc.
- ⑭ **ANGLE**Select DVD camera angle

4.0 MECHANICAL INSTRUCTION

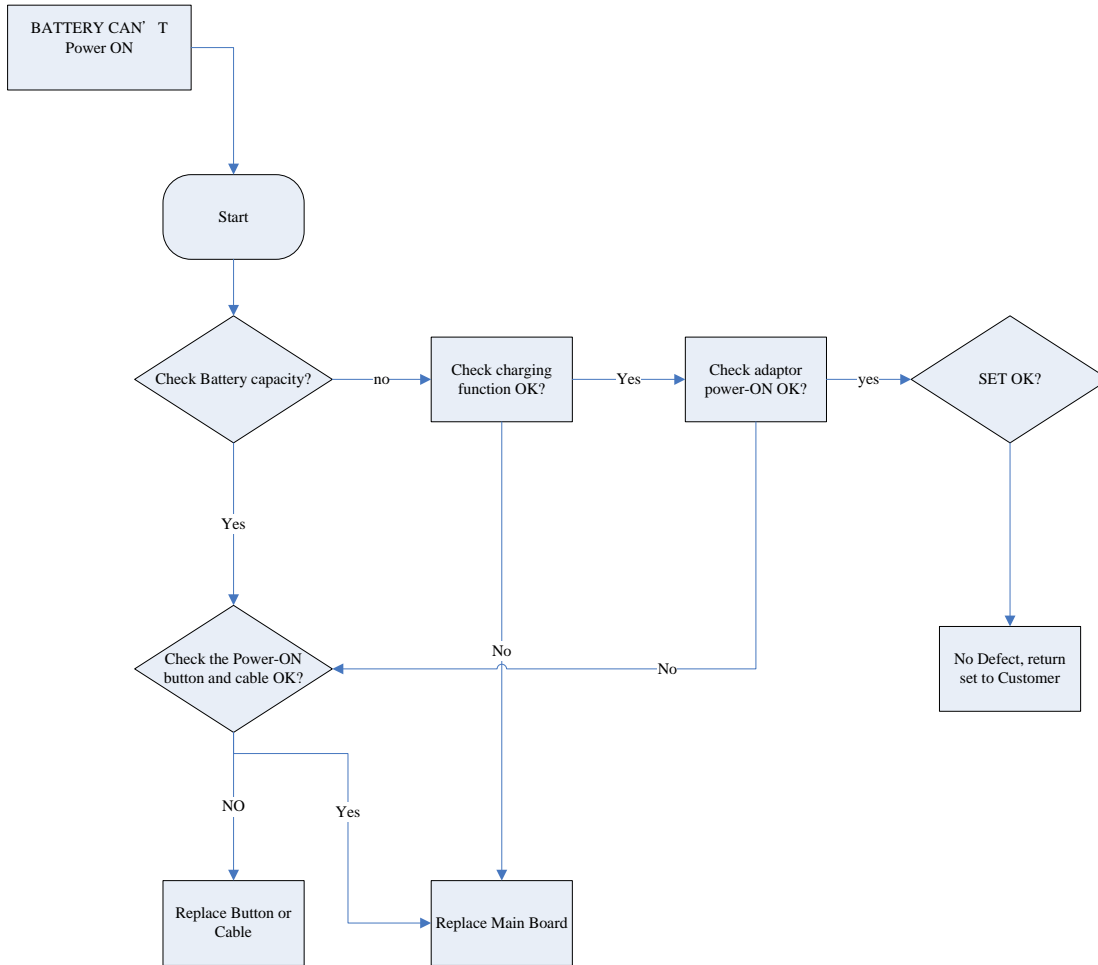
	<p>1. Remove 8pcs of screws on the side of bottom cabinet.</p>
	<p>2. up-plug all the wire connector from main board, The wire connectors are for: DVD loader, battery board and TFT driver board, and speaker.</p>
 	<p>3. up-plug the FFC from DVD driver, then you can take out the DVD Driver.</p> <p>Remove all the screws on the main board, then take the main board from bottom cabinet.</p>
	<p>4. Remove the flex cable on the bottom side.</p>
	<p>5. Remove all the screws on the buttery board, then take out the buttery with buttery board.</p>

4.0 MECHANICAL INSTRUCTION

	<p>6. Remove 6pcs screws from key board.</p>
	<p>7. Remove 6pcs of screws on the display frame. Carefully open the display frame with the catches by screwdriver.(There are six catches as shown in the pictures) Then you can see next picture.</p>
 	<p>8. To remove the TFT, de-soldering the wire connected between TFT and TFT board first. (Please note the wire location as shown in picture during re-assembly) And up pulg wire connector from TFT board and TFT driver. Take out the TFT board from cabinet using eradicator.</p> 
 	<p>9. To remove the hinge, remove the screws on the hinge.</p>

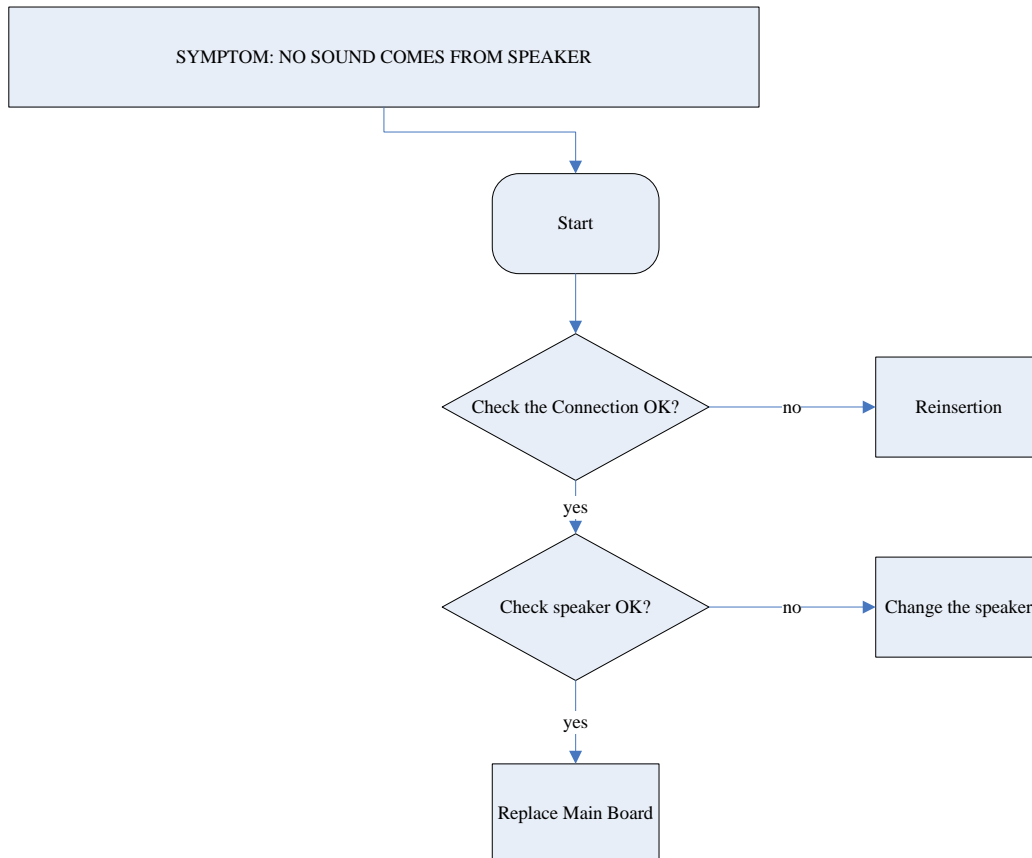
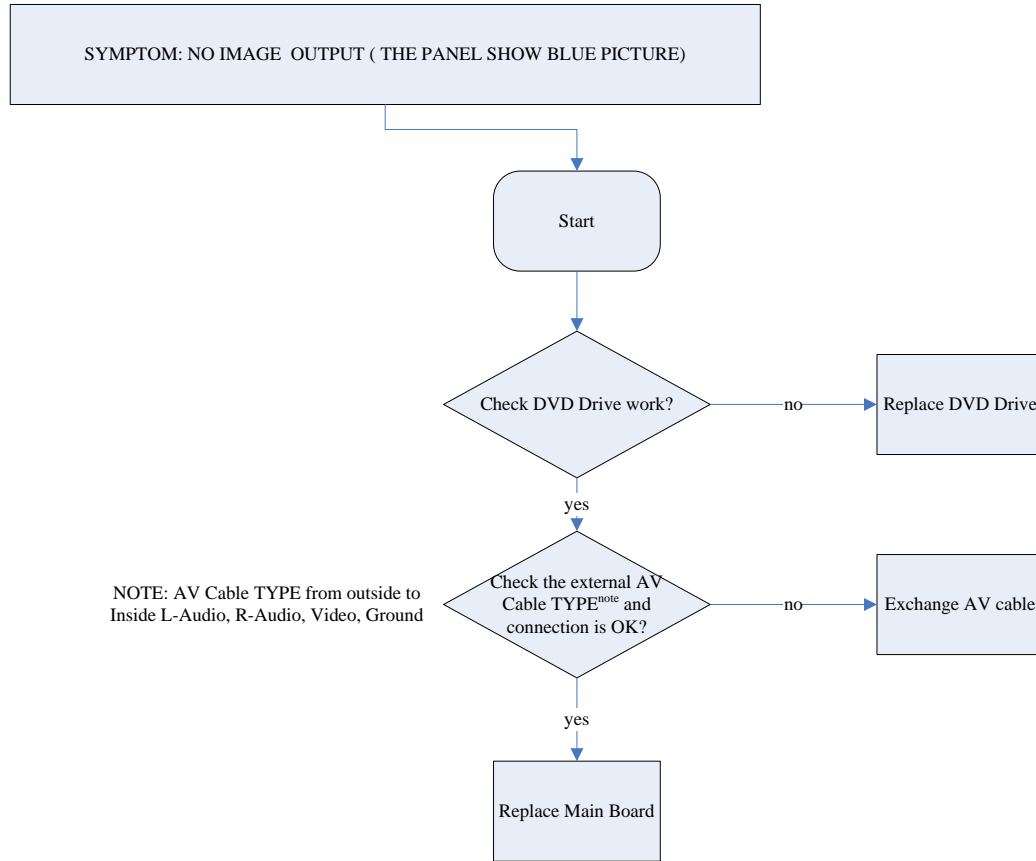
5.0 TROUBLESHOOTING

SYMPTOM: BATTERY NO POWER



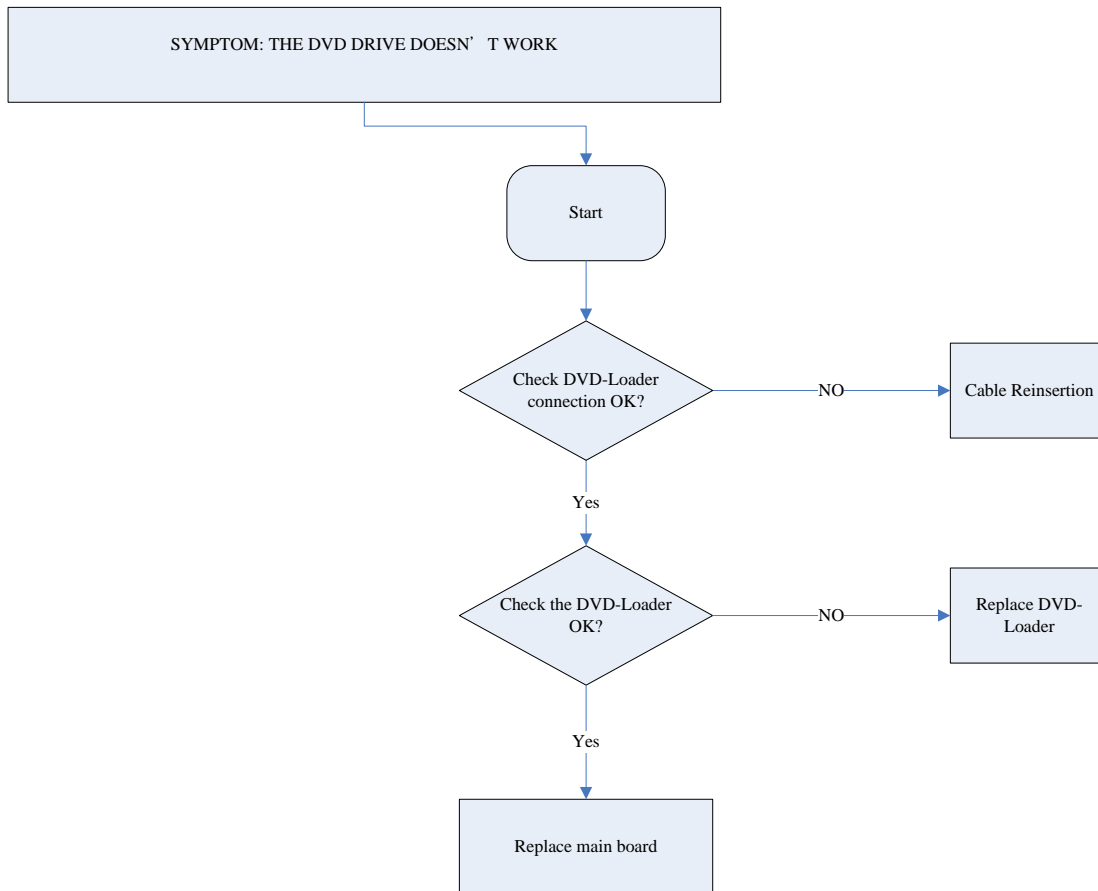
5.0 TROUBLESHOOTING

SYMPTOM: NO IMAGE / NO SOUND



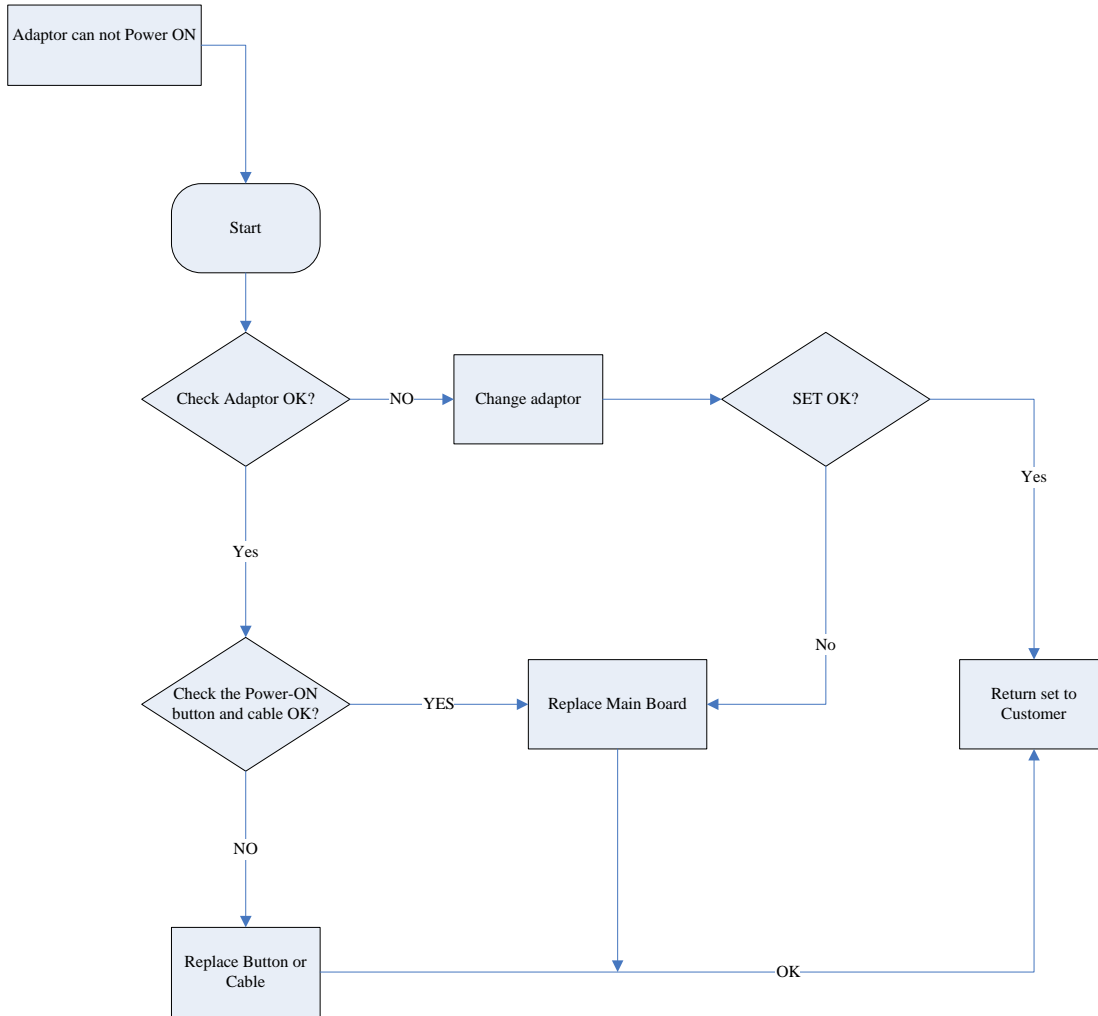
5.0 TROUBLESHOOTING

SYMPTOM: THE DVD DRIVE DOES NOT WORK



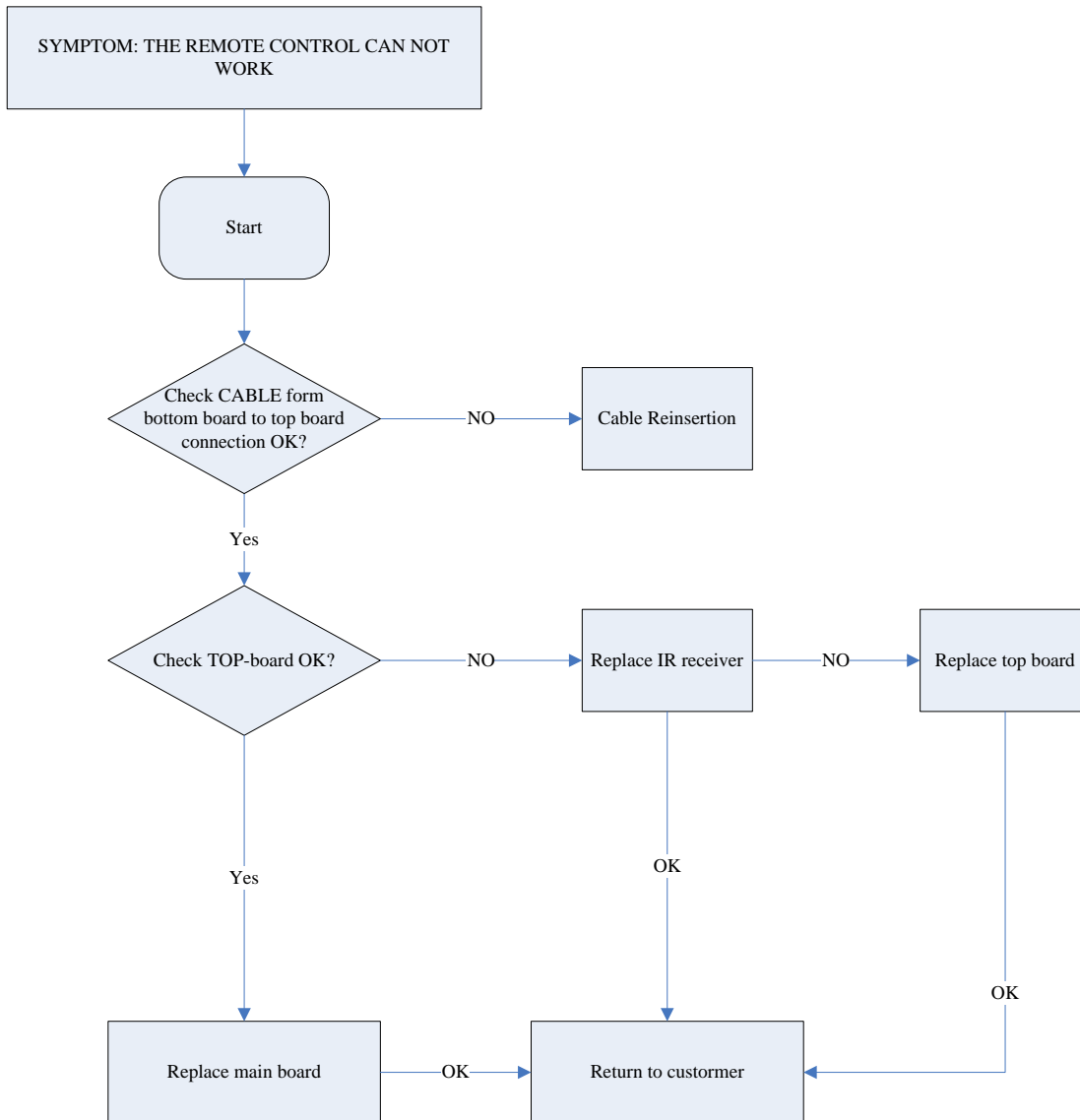
5.0 TROUBLESHOOTING

SYMPTOM: ADAPTOR CANNOT POWER ON



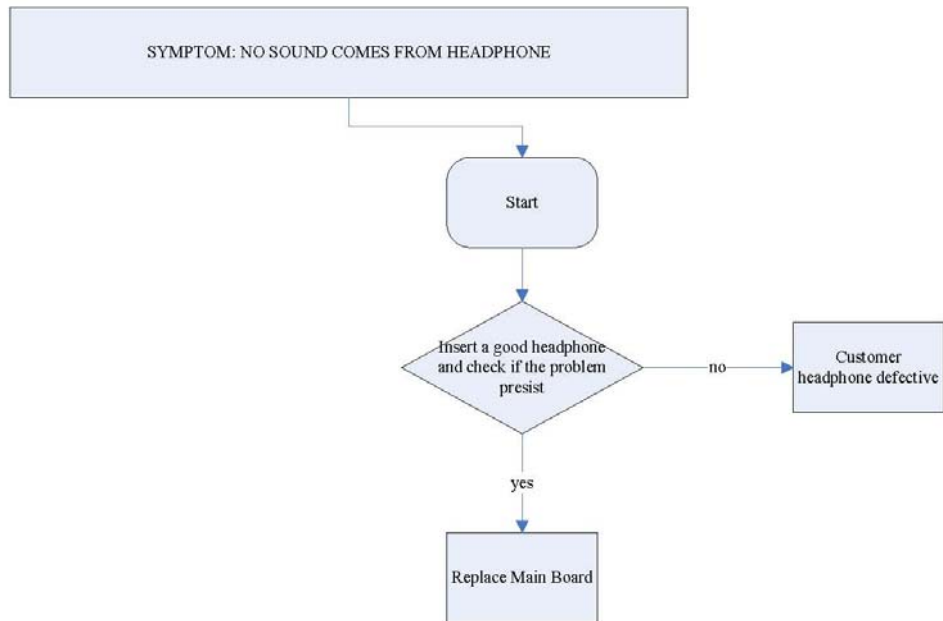
5.0 TROUBLESHOOTING

SYMPTOM: REMOTE CONTROL CANNOT WORK



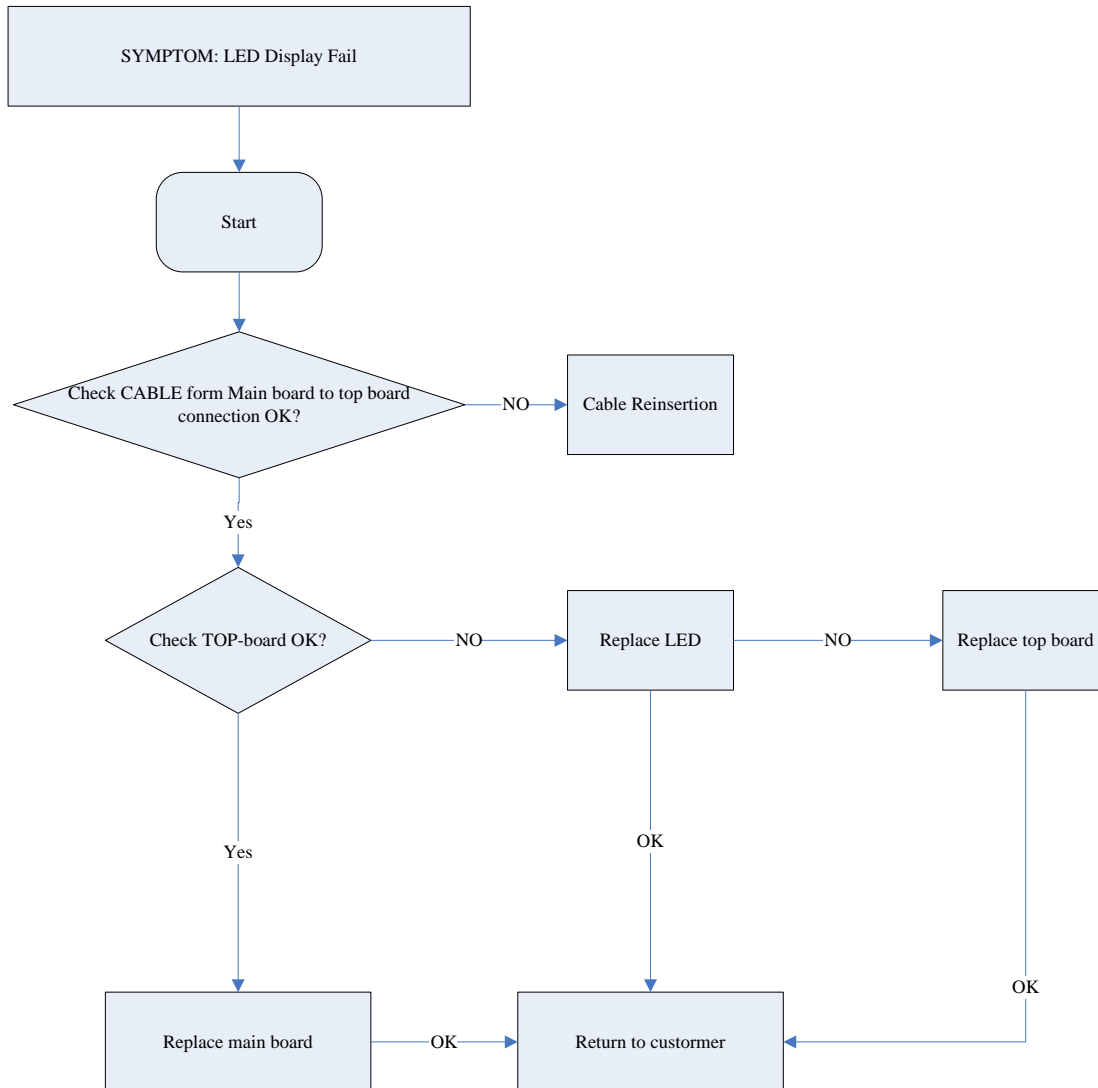
5.0 TROUBLESHOOTING

SYMPTOM: NO SOUND FROM HEADPHONE



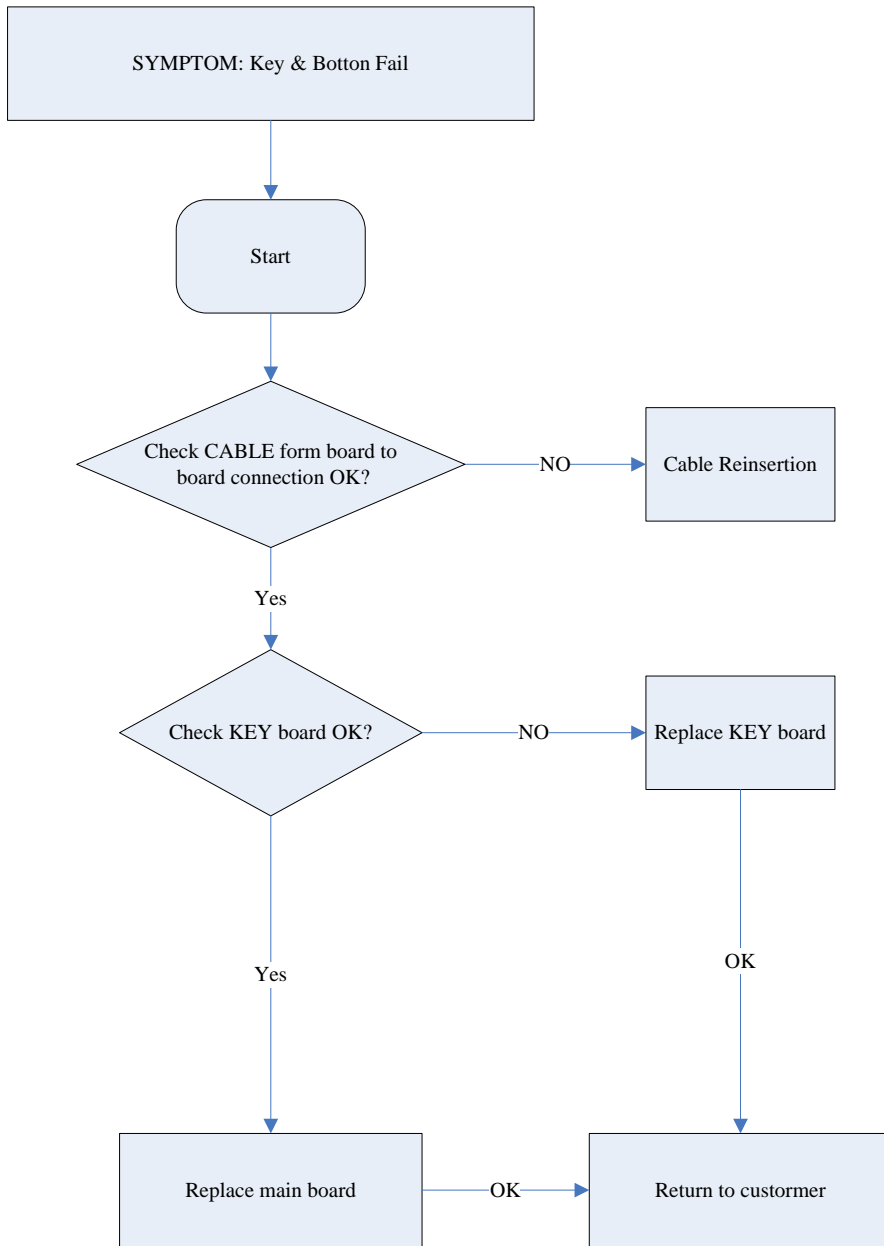
5.0 TROUBLESHOOTING

SYMPTOM: LED DISPLAY FAILURE

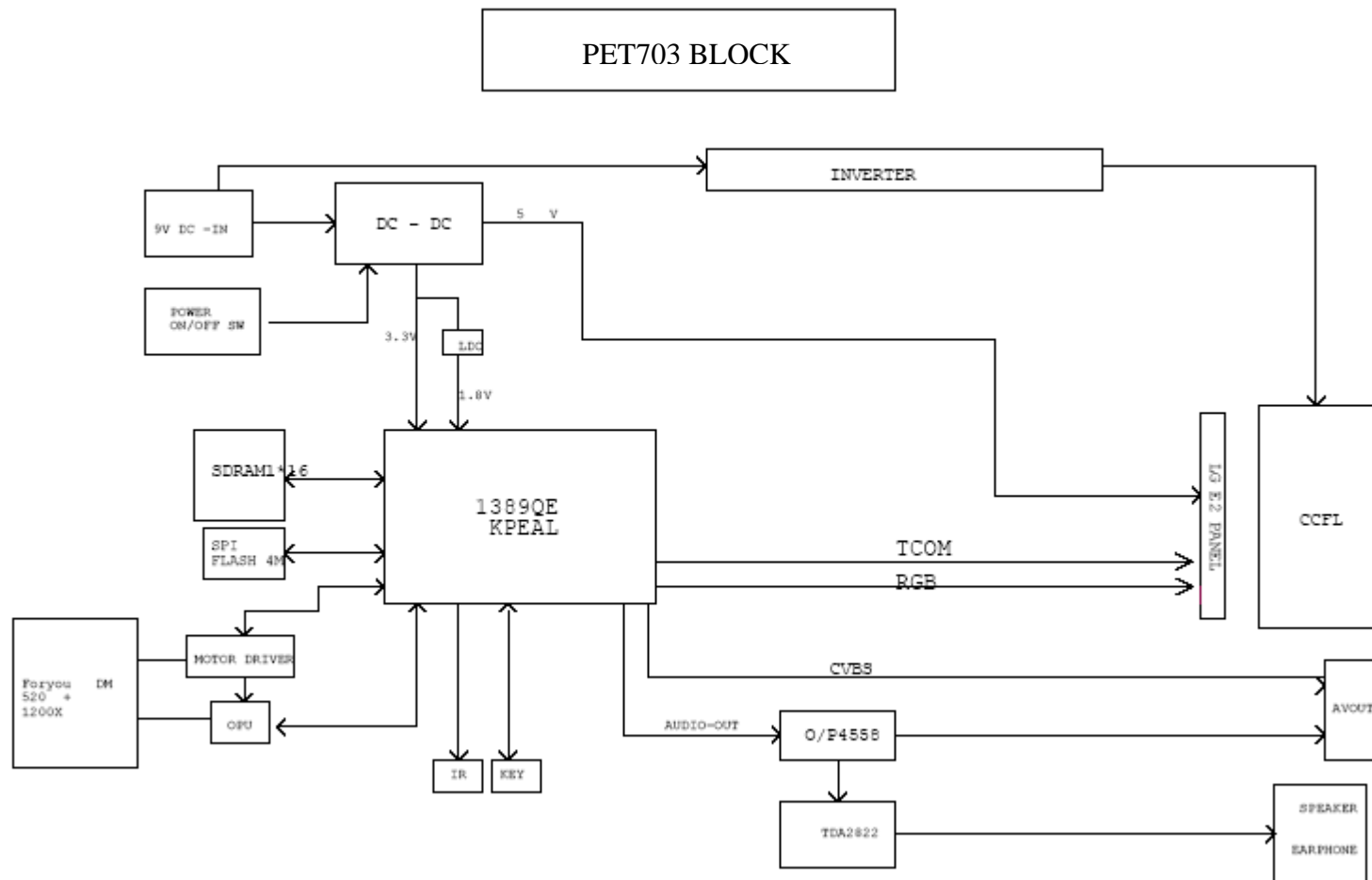


5.0 TROUBLESHOOTING

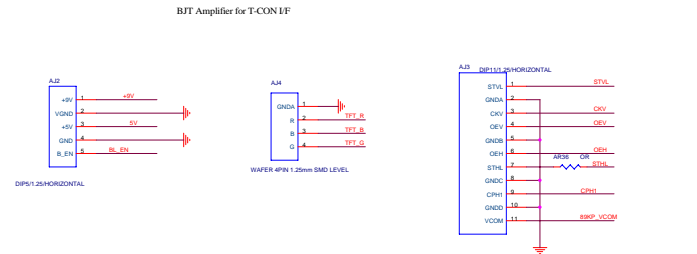
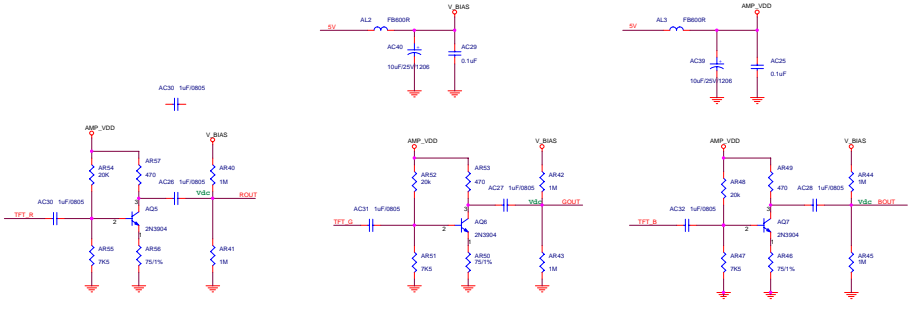
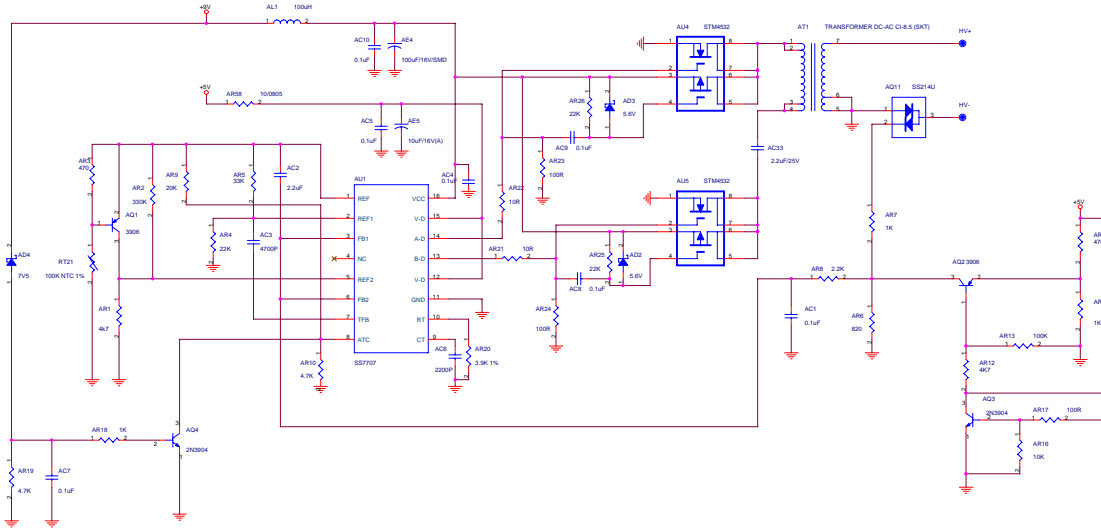
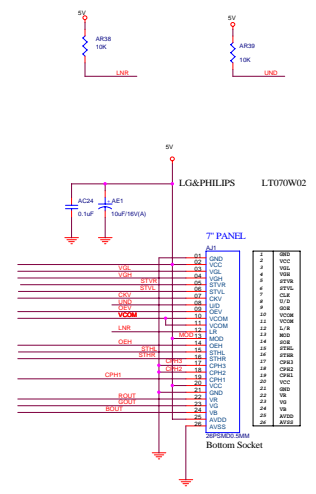
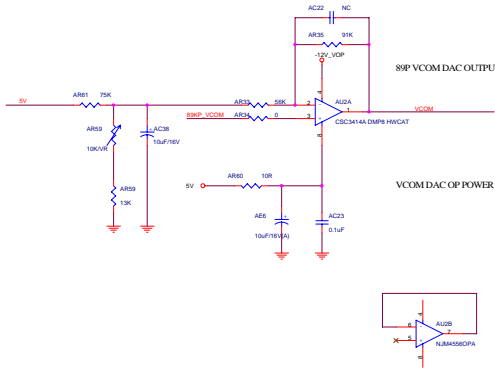
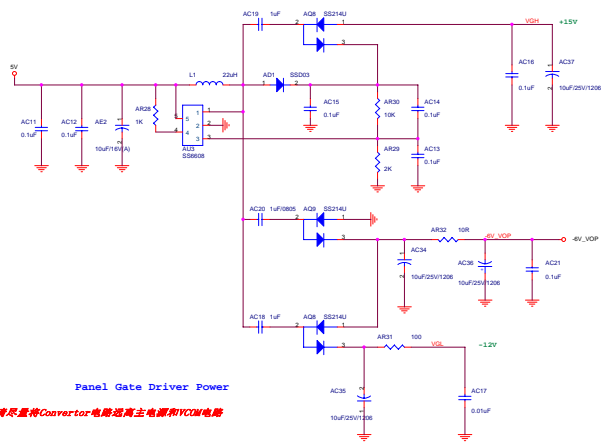
SYMPTOM: KEY & BOTTON FAILURE



6.0 BLOCK DIAGRAM

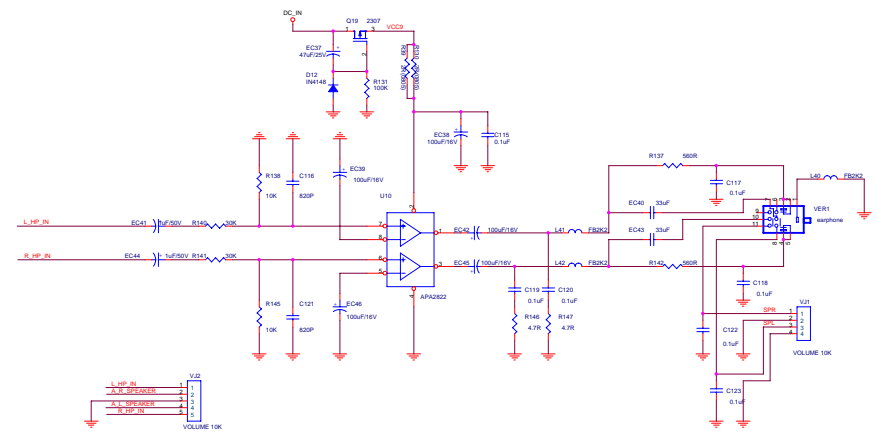
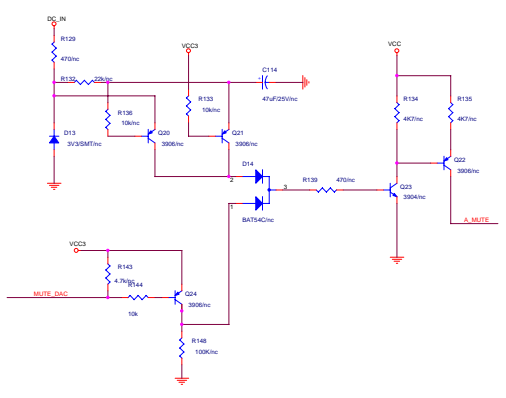
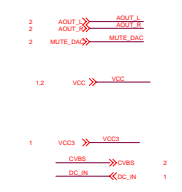
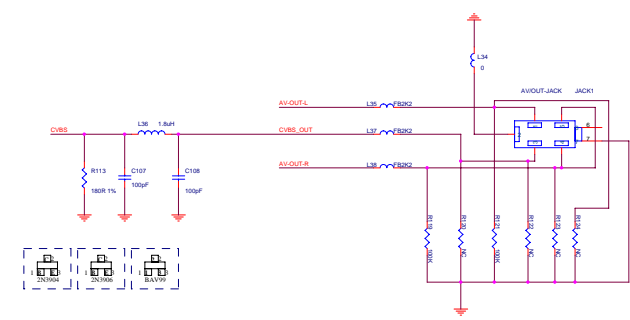
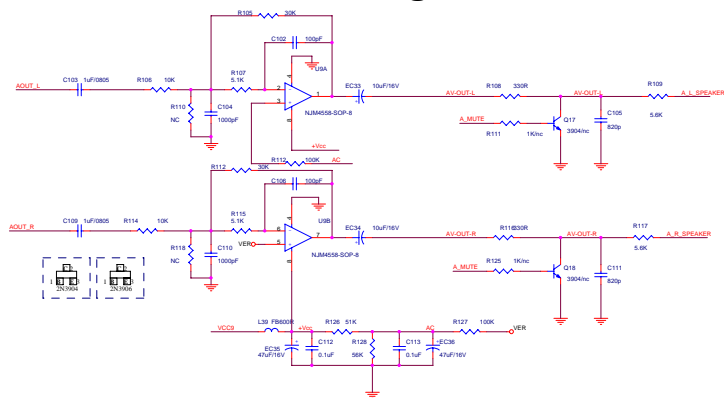


7.0 Electrical Diagram - TFT board



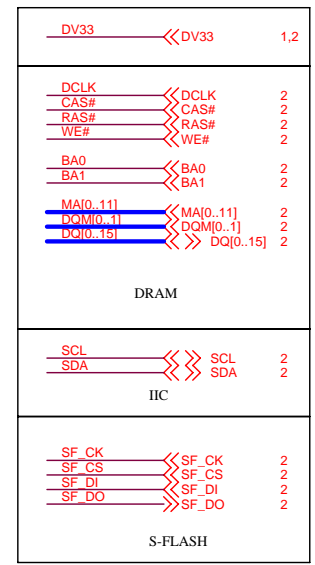
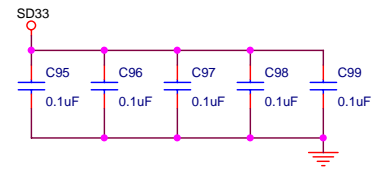
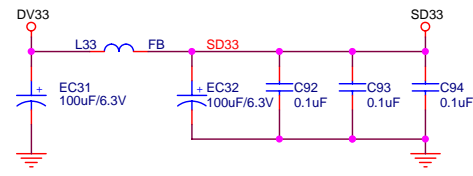
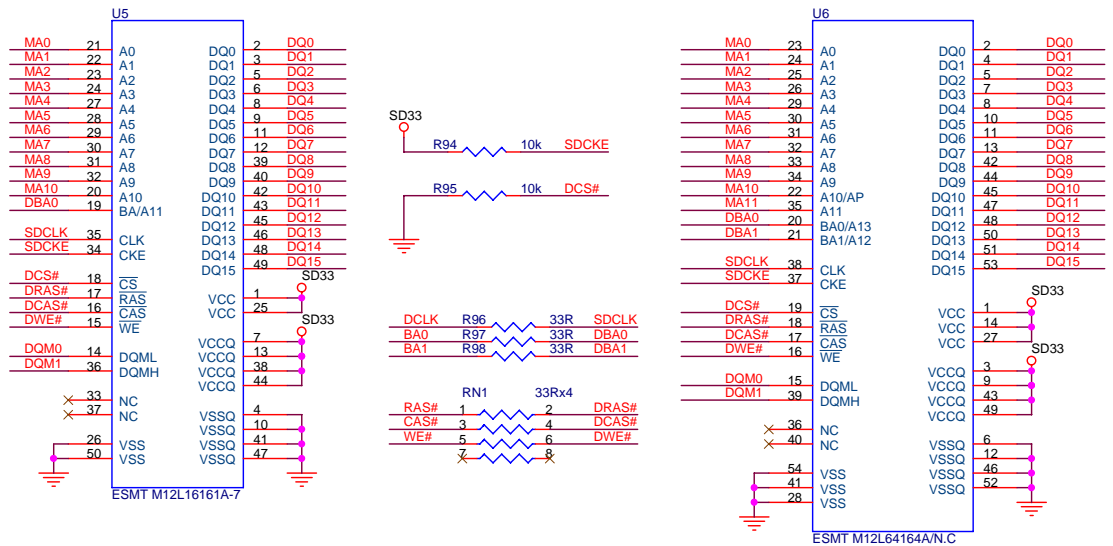
Doc	<Title>	Rev	<Rev>
Doc ID	Document Number	Doc	<Doc>
Doc	Version	Doc	<Version>
Doc	Model	Doc	<Model>

7.0 Electrical Diagram - Main board

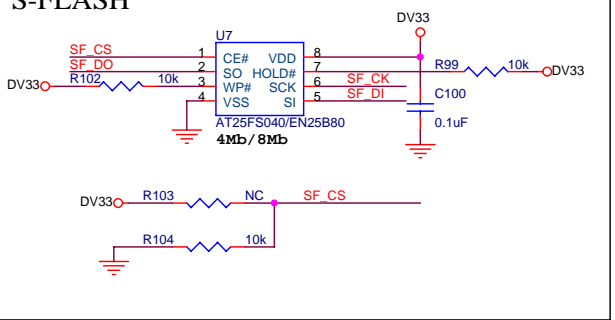


7.0 Electrical Diagram - Main board

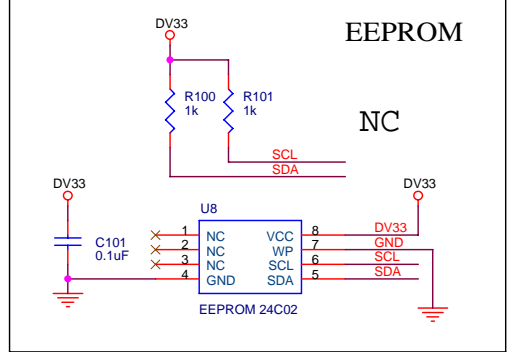
SDRAM (Dual Layout)



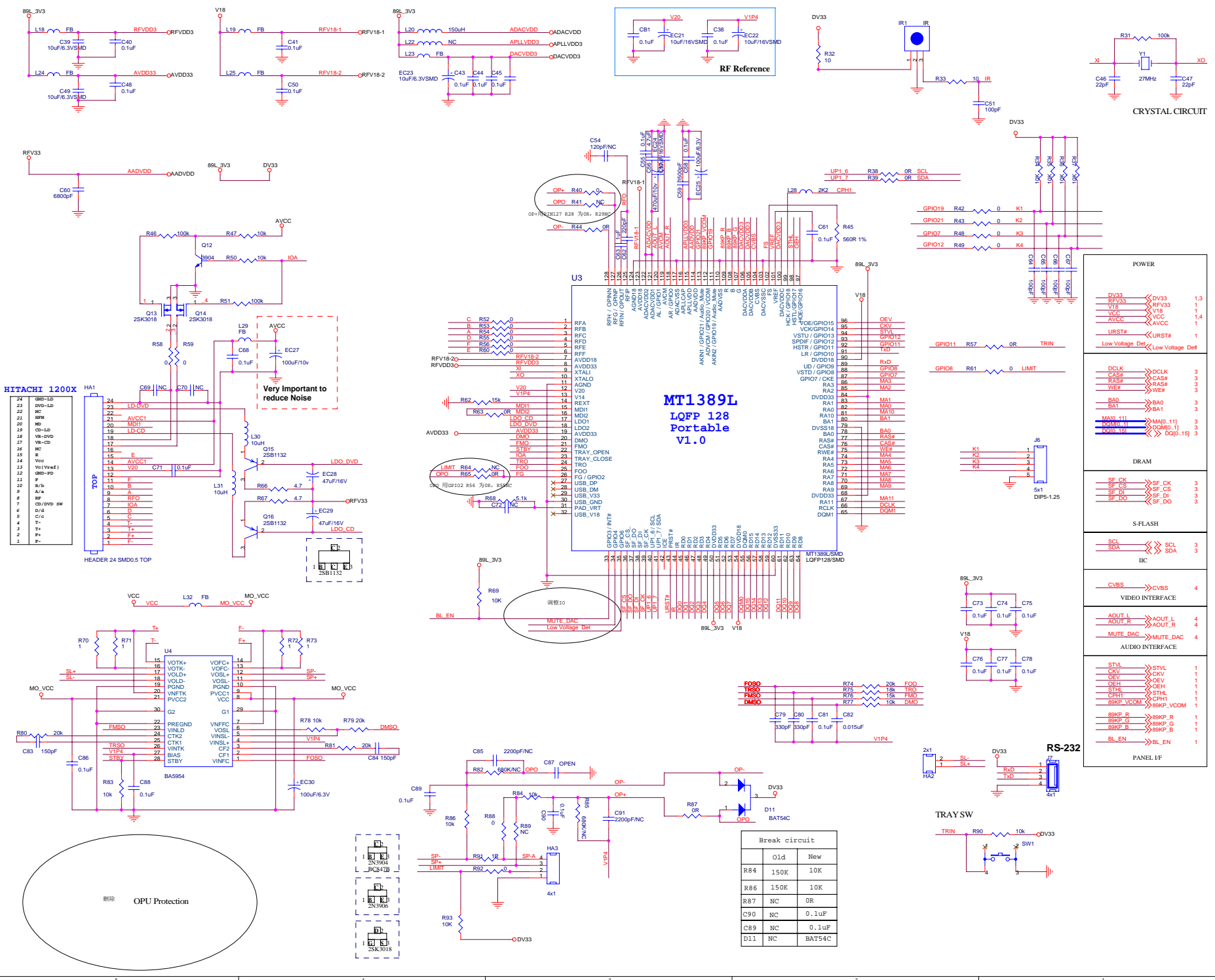
S-FLASH



EEPROM



7.0 Electrical Diagram - Main board



MT1389L
LQFP 128
Portable
V1.0

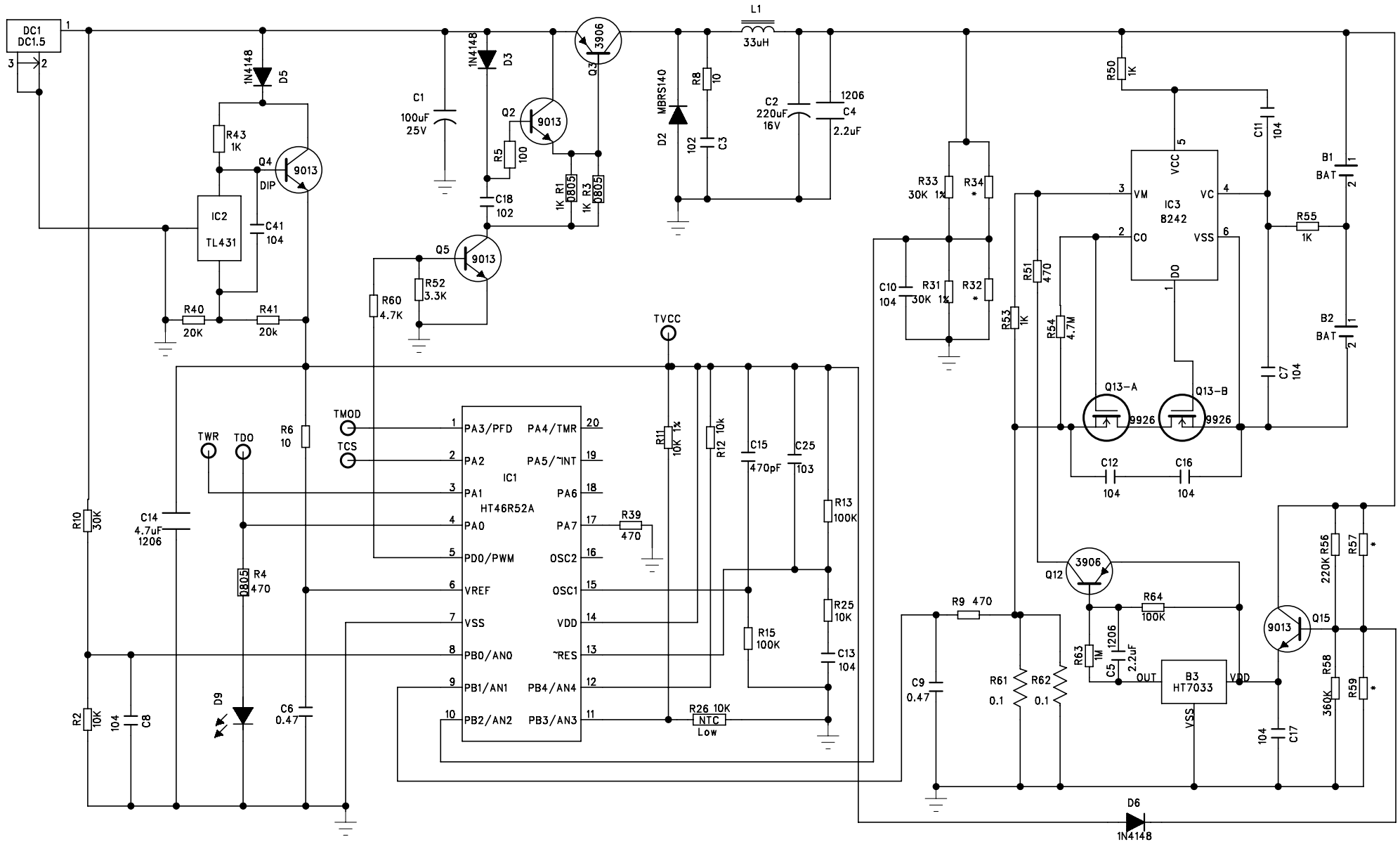
POWER		
DV33	DV33	1,3
RFV33	RFV33	1
V18	V18	1,4
VCC	VCC	1
AVCC	AVCC	1
URST#	URST#	1
Low Voltage Det		
DRAM		
DCLK	DCLK	3
CAS#	CAS#	3
RAS#	RAS#	3
WE#	WE#	3
BA0	BA0	3
BA1	BA1	3
MA0..11	MA0..11	3
QM0..11	QM0..11	3
QM0..12	QM0..12	3
S-FLASH		
SF_CK	SF_CK	3
SF_CS	SF_CS	3
SF_DI	SF_DI	3
SF_DO	SF_DO	3
IIC		
SCL	SCL	3
SDA	SDA	3
VIDEO INTERFACE		
CVBS	CVBS	4
AUDIO INTERFACE		
ADUT_L	ADUT_L	4
ADUT_R	ADUT_R	4
MUTE_DAC	MUTE_DAC	4
AUDIO INTERFACE		
STVL	STVL	1
OEY	OEY	1
OEH	OEH	1
STHL	STHL	1
CPH1	CPH1	1
SRKP_VCOM	SRKP_VCOM	1
SRKP_R	SRKP_R	1
SRKP_G	SRKP_G	1
SRKP_B	SRKP_B	1
BL_EN	BL_EN	1
PANEL I/F		

Break circuit		
R84	150K	10K
R86	150K	10K
R87	NC	OR
C90	NC	0.1uF
C89	NC	0.1uF
D11	NC	BAT54C

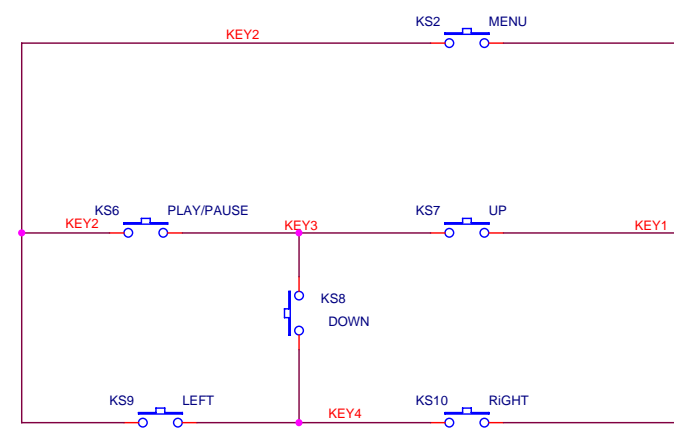
HITACHI 1200X		
24	24	24
23	23	23
22	22	22
21	21	21
20	20	20
19	19	19
18	18	18
17	17	17
16	16	16
15	15	15
14	14	14
13	13	13
12	12	12
11	11	11
10	10	10
9	9	9
8	8	8
7	7	7
6	6	6
5	5	5
4	4	4
3	3	3
2	2	2
1	1	1

删除 OPU Protection

7.0 Electrical Diagram - Charge board

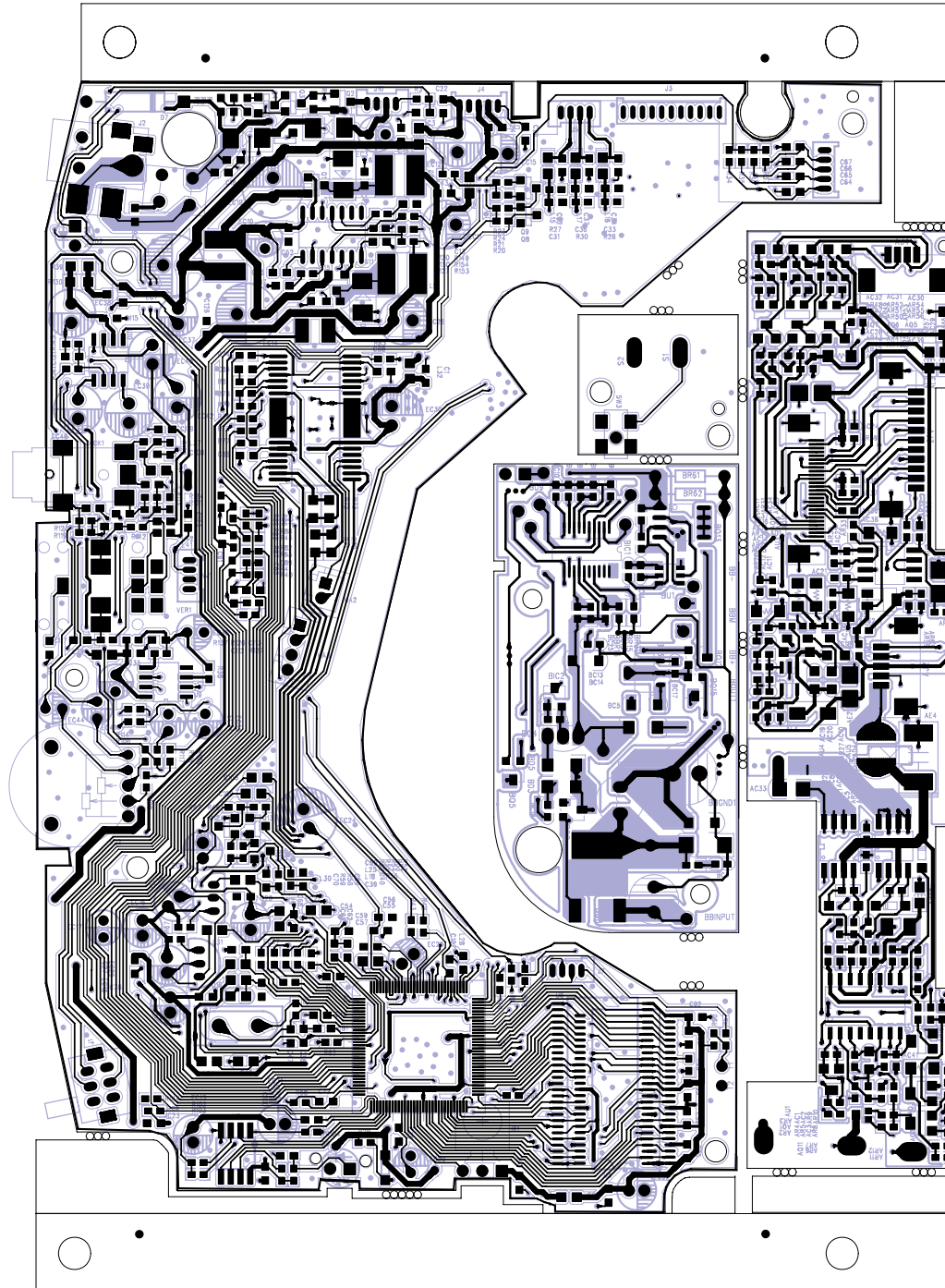


7.0 Electrical Diagram - KEY board

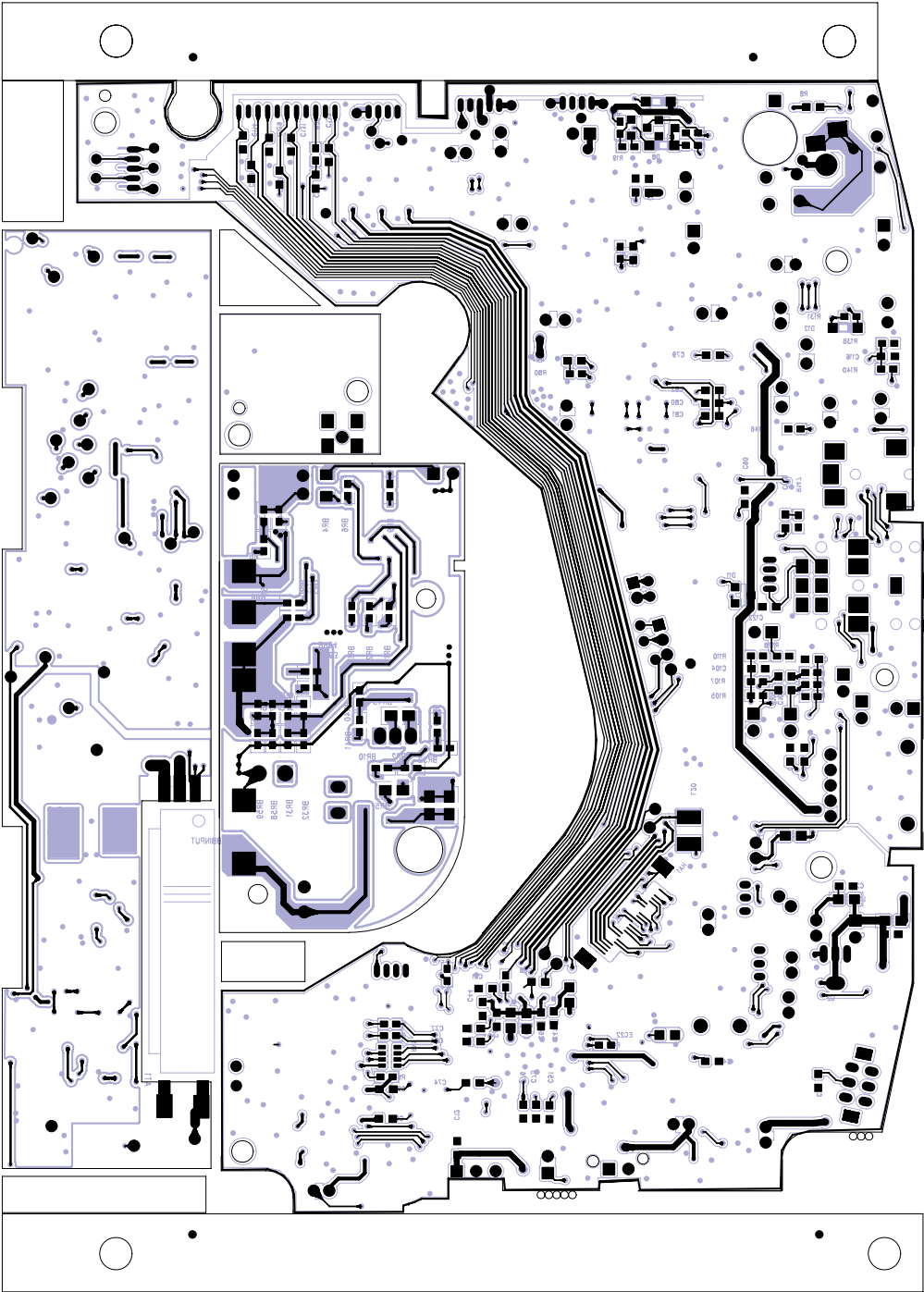


Title		
PET702KEY		
Size	Document Number	Rev
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Date:	Sunday, August 12, 2007	Sheet 1 of 1

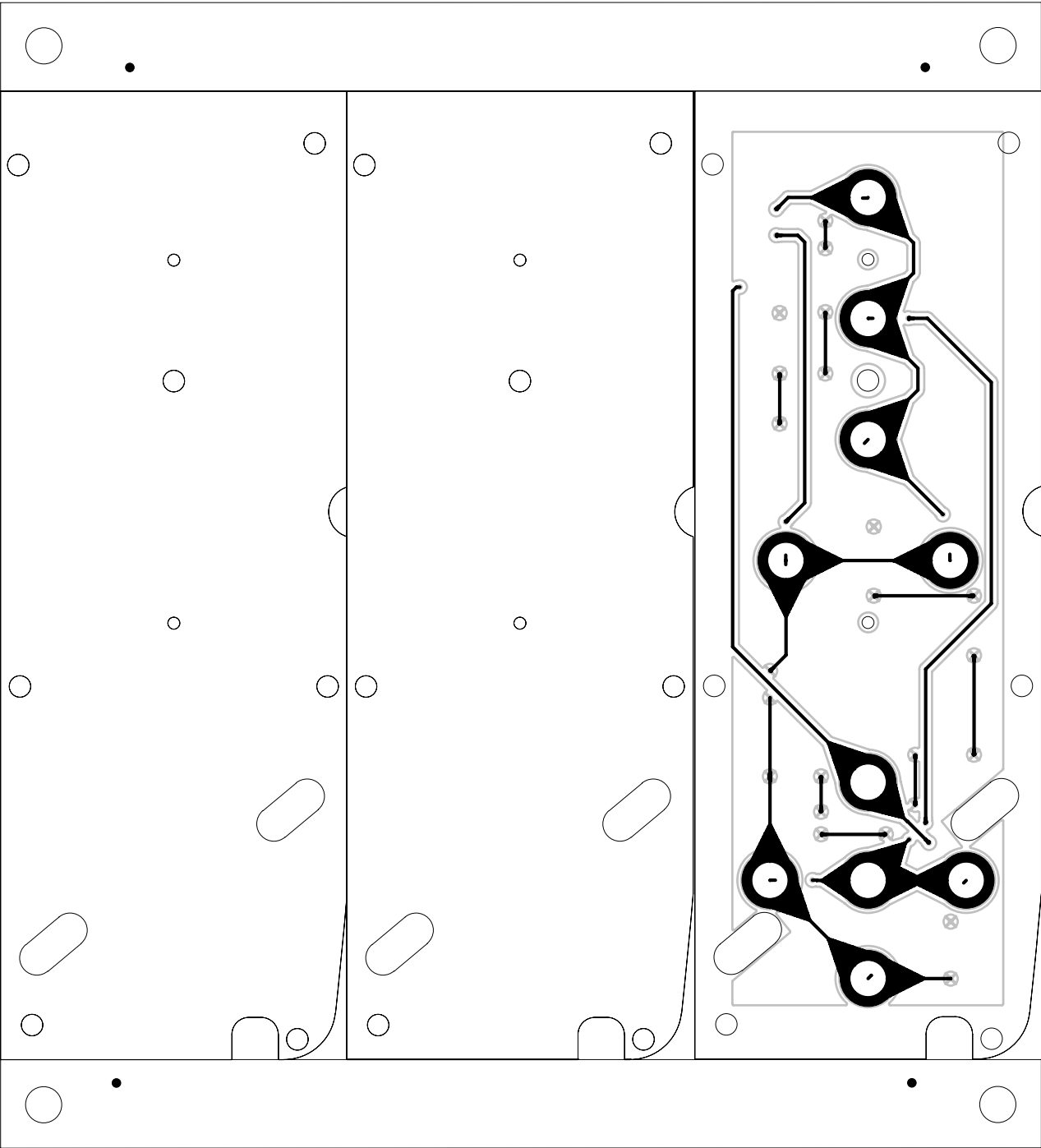
8.0 Component Layout Diagram - TFT & Charge board (Top View)



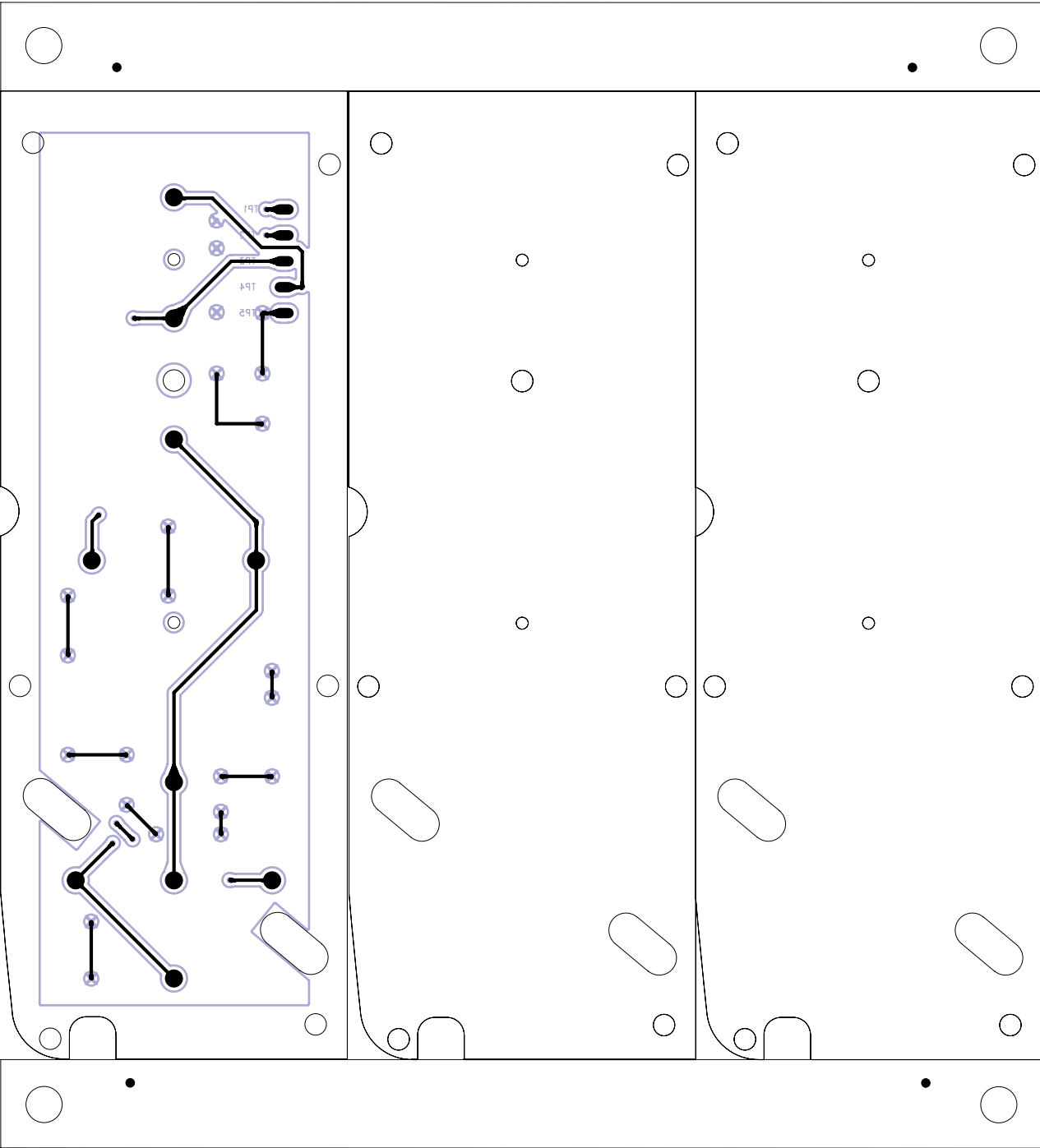
8.0 Component Layout Diagram - TFT & Charge board (Bottom View)



8.0 Component Layout Diagram - Key Board (Top View)



8.0 Component Layout Diagram - Key Board (Bottom View)





9.0 SERVICE PART LIST

Electrical Part List:

CTN	Service 12NC	Service Description	Photo	Pos. No.
PET703/98	996510012231	MAIN PCBA		100
PET703/98	996510019414	TFT PCBA WITH WIRE FOR E2 PANEL (GS1AXXXXXXXXXXX)		110
PET703/98	TBC	TFT PCBA WITH WIRE FOR J2 PANEL (GS2BXXXXXXXXXXXX)		110
PET703/98	996510019388	KEY PCBA		120
PET703/98	996510012236	BATTERY + BATT PCBA		130

Mechanical Part List:

CTN	Service 12NC	Service Description	Photo	Pos. No.
PET703/98	996510019415	7" LG E2 TFT PANEL (GS1AXXXXXXXXXXX)		200
PET703/98	TBC	7" LG J2 TFT PANEL (GS2BXXXXXXXXXXXX)		200
PET703/98	996510007686	DVD LOADER		210
PET703/98	996510002384	FFC 24P		220






9.0 SERVICE PART LIST

Mechanical Part List:

CTN	Service 12NC	Service Description	Photo	Pos. No.
PET703/98	996510019399	TOP CABINET		300
PET703/98	996510019400	BOTTOM CABINET		310
PET703/98	996510019401	DISPLAY FRAME & SPEAKER		320
PET703/98	996510019402	MIDDLE CABINET		330
PET703/98	996510019403	CD DOOR		340
PET703/98	996510007690	LENS		350
PET703/98	996510002356	HINGE		360





9.0 SERVICE PART LIST

Mechanical Part List:

CTN	Service 12NC	Service Description	Photo	Pos. No.
PET703/98	996510019404	KEY ASSY		400
PET703/98	996510019405	NAVIGATION BUTTON		410
PET703/98	996510019406	OK BUTTON		420
PET703/98	996510019407	OPEN KNOB FOR POWER BUTTON		430
PET703/98	996510019408	OPEN KNOB FOR CD DOOR		440
PET703/98	996510010454	CD DOOR SPRING		450
PET703/98	99651002366	POWER BUTTON SPRING		460

9.0 SERVICE PART LIST

Accessories Part List:

CTN	Service 12NC	Service Description	Photo	Pos. No.
PET703/98	996510010378	AC ADAPTER /98	 A black AC adapter with a power cord and a two-prong electrical plug.	ACAPT
PET703/98	996510004975	AV CABLE	 A black AV cable with a single-ended connector on one end and three RCA connectors (red, white, yellow) on the other.	AVCABLE
PET703/98	996510006564	CAR ADAPTER	 A black car adapter with a cigarette lighter plug on one end and a power cord on the other.	CARAPT
PET703/98	996510019409	REMOTE CONTROL	 A white remote control with a grid of buttons and a small display screen.	RC

10.0 REVISION LIST

Version 1.0 (3141 785 33150)

- Initial release PET703/98