

Service
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Service Manual

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1.0 TECHNICAL SPECIFICATION

Service Policy on PCBA of PET723

Type	/05	/12	/93
Main PCBA	MLR	MLR	MLR
TFT PCBA	MLR	MLR	MLR
BATTERY PCBA	MLR	MLR	MLR
KEY PCBA	MLR	MLR	MLR

MLR = module swap

1.0 TECHNICAL SPECIFICATION

General

Dimensions (W x H x D):	158 x 210 x 39.5 mm
Bear Unit Weight:	0.75 kg +/- 5%
Power supply:	
Supply voltage (AC adaptor 90~264)	AC 100~240V + / - 10%
Supply Power consumption (AC adaptor 100/240VAC)	9W + 10%
DC Power supply	DC 6.3-15.0V
Standby Power (AC adaptor, no load) 264VAC	<0.45W
Audio System	
Output voltage 1kHz:	2+/-0.2V
THD 20-20kHz (%):	<=1%
Dynamic range 1kHz	>/=80dB
Signal/Noise ratio:	>/=80dB
Frequency response (20-20kHz):	+/-3dB
Channel Separation 1kHz	>=80dB
Channel Balance 1kHz	<1dB

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 / SVCD / CD / JPEG / DivX
Audio Playback Format:	CD/MP3, MP3-DVD, DVD DivX
Disc Diameter	12cm

Pixel specification

Max. 0 bright-dot & max. 3 dark-dots

Current consumption

Playback time	
Battery Capacity – Lithium-ion 7.4V	≥1700mAh
Discharge cut-off voltage(3.0 V for single cell)	</=6.3V
Battery discharge cut-off current	</=50mA
Battery Charge voltage(1.2V for single cell)	</=8.5V
Charging time	3.5 +/- 0.5H

Factory Service Mode (FSM)

Headphone out (headphone output load 2x16 ohm)

Maximum output power:	2.0mW
Frequency response:	+/-3dB
SNR (A-wght):	>/=70dB
THD (0.2-20kHz):	1.0%
Left-Right Channel Separation:	>/=55dB
Left-Right Channel Balance:	</=2dB

Supported disc type

Video Playback Formats:



Audio Playback Formats:



1.0 TECHNICAL SPECIFICATION

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)

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.

GB Warning !

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

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.

S Varning !

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

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.

SF Varoitus !

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

DK Advarsel !

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

"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."

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.

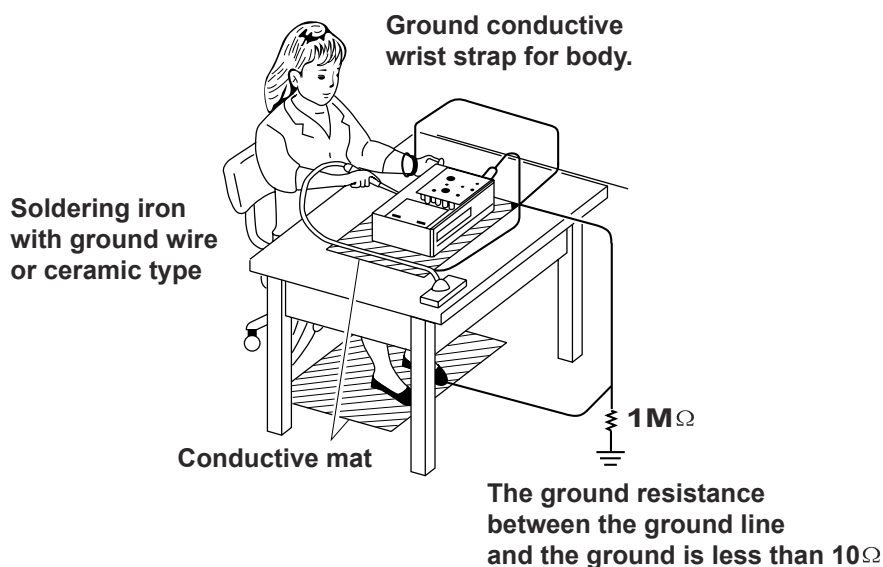
When the power supply is being turned on, you may not remove this laser cautions label. If it removes, radiation of laser may be received.

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.



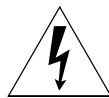
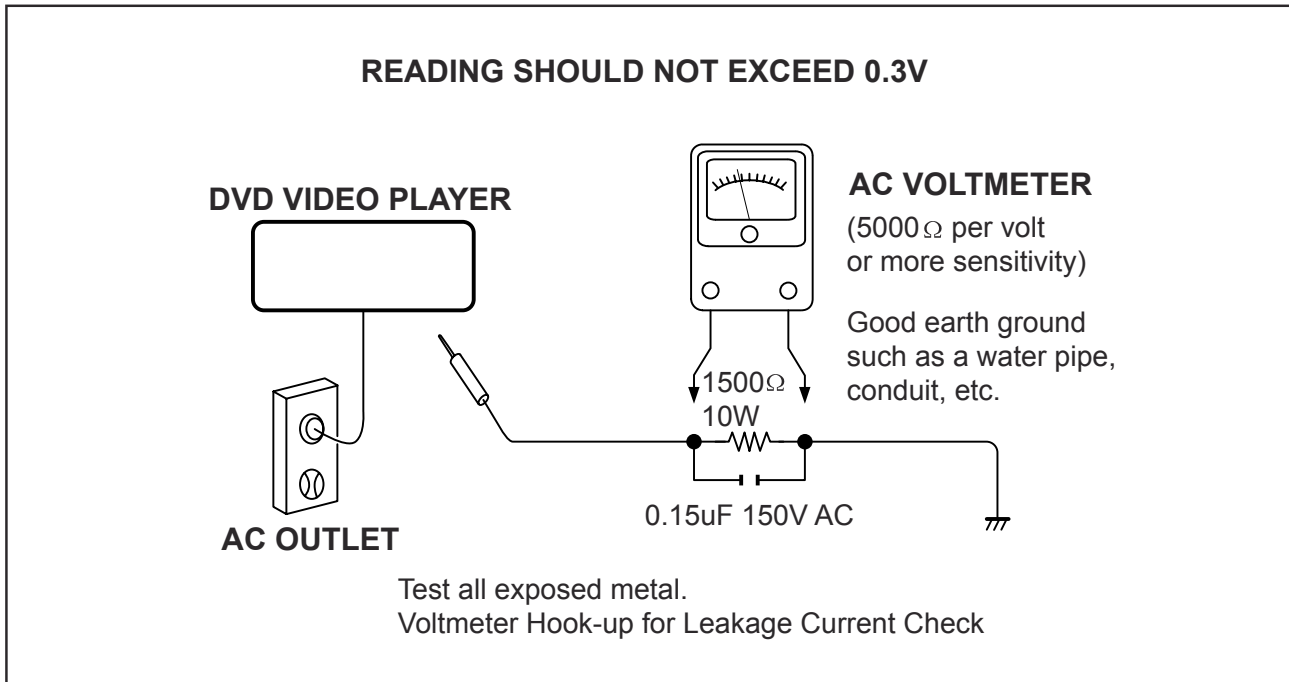
SAFTY NOTICE

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 ▲, ▼, ◀, ▶Navigate in a menu.
(◀ / ▶) Press and hold to search backward/forward in a disc at different speeds.
(◀ / ▶) Press briefly to skip to previous/next chapter, track or title.
- OKStart or interrupt playback.
Confirm a selection.
Power indicator (The indicator will turn off automatically about five seconds after you press a key).

Left of player (see figure 1)

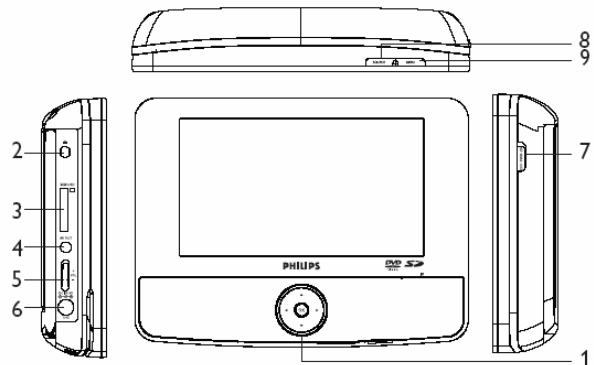
- ②Headphone jack.
- ③ MMC/SDSD card slot.
- ④ AV OUTAudio/Video output jack.
- ⑤ VOL +/-Volume control.
- ⑥ DC 9VPower supply socket.
 CHGCharge indicator.

Right of player (see figure 1)

- ⑦ OFF PWR ONSwitch the power on/off.

Top of player (see figure 1)

- ⑧ SOURCESwitch between DVD and SD modes.
- ⑨ MENUDisplay the MENU page.



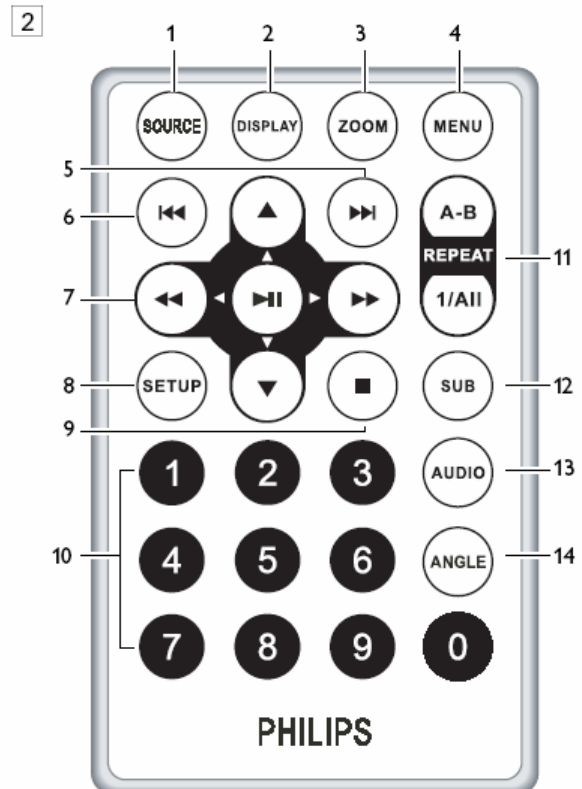
FUNCTIONAL OVERVIEW

Remote controls (see figure 2)

- ① SOURCESwitch between DVD and SD modes.
- ② DISPLAYDisplay information on TFT during playback.
- ③ ZOOMEnlarge or reduce a picture or active image on the TFT.
- ④ MENUEnter or exit the disc contents menu.
- ⑤ ►►Skip to the next chapter, track or title.
- ⑥ ◀◀Skip to the previous chapter, track or title.
- ⑦ ▲, ▼, ◀, ▶Navigate in a menu.
(◀◀ / ►►) search backward/forward in a disc at different speeds.
- IIConfirm a selection.
Start or interrupt playback.
- ⑧ SETUPEnter or exit the system menu.
- ⑨ ■Stop playback
- ⑩ 0-9Numeric Keypad
- ⑪ REPEAT 1/ALLRepeat a chapter/track/title.
 A-BRepeat playback of a specific section on a disc.
- ⑫ SUBSelect a subtitle language.
- ⑬ AUDIOSelect 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 ANGLESelect DVD camera angle

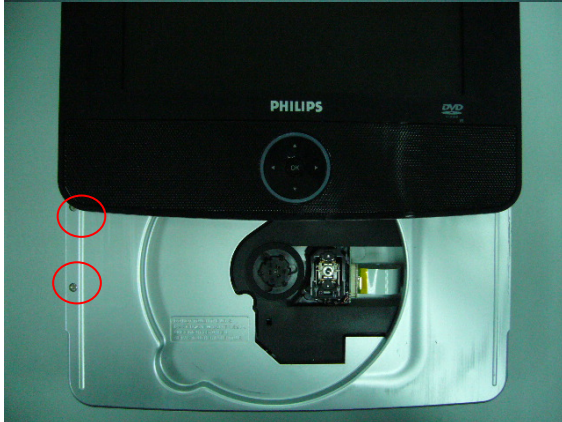
CAUTION

Use of controls or adjustments or performance of procedures other than herein may result in hazardous radiation exposure or other unsafe operation.



4.0 MECHANICAL INSTRUCTION

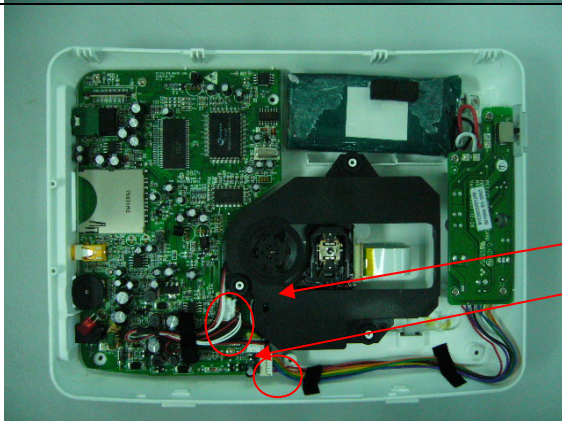
Disassembly Procedure



1. Remove 5pcs of screws on the side of bottom cabinet (including the one behind plastic stand).
2. And don't forget remove the screws when you slip the DVD cabinet



slip the TFT section, then you can open the bottom cabinet. Be-careful the FFC which connect with main board and TFT board.

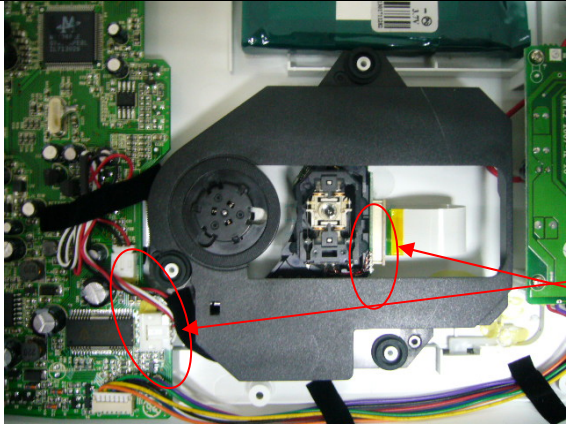


3. Open the bottom cabinet, up-plug all the wire connector from main board (including the FFC connect with TFT board and main board), The wire connector for: DVD loader, battery board.

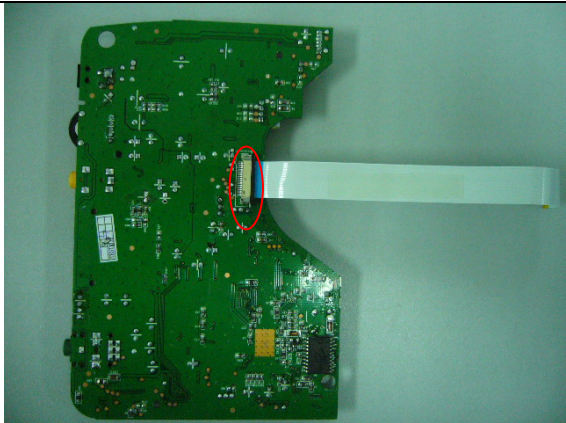


Remove all the screws on the main board (3 pcs) then take the main board from bottom cabinet.

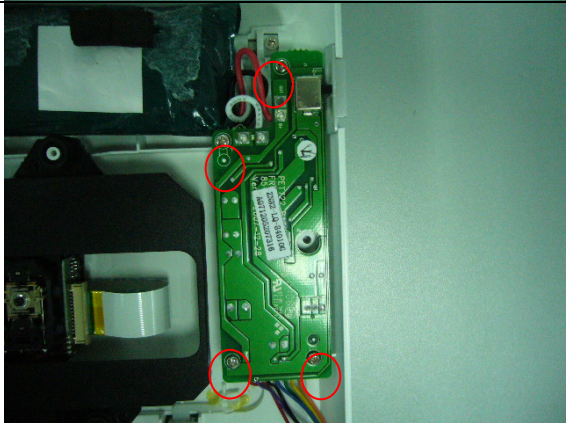
4.0 MECHANICAL INSTRUCTION



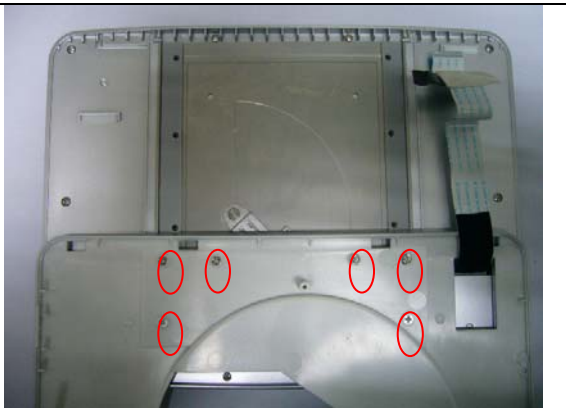
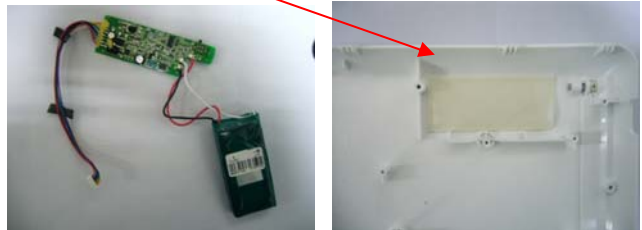
4. up-plug the FFC from DVD driver, then you can take out the DVD Driver.



5. Remove the flex FFC on the bottom side behind the black flannel.

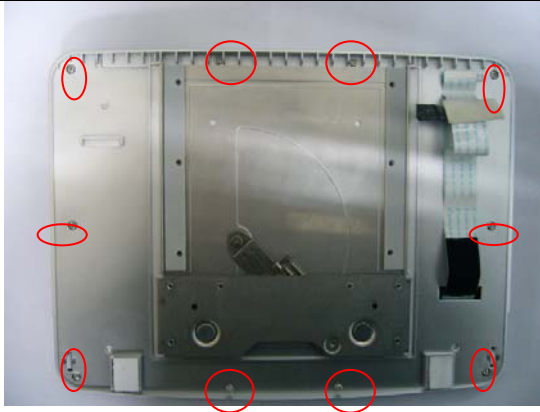


6. Remove 4 pcs of screws on the battery board.
Then take out the battery together with the battery board.
Note: the battery was fixed by a big two side tape!

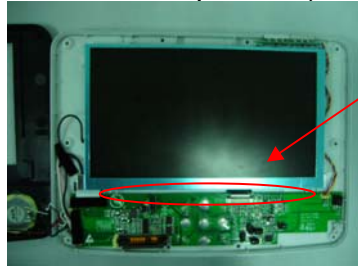


7. Remove 6pcs of screws on the DVD top cabinet, separate the DVD top cabinet and TFT bottom cabinet.

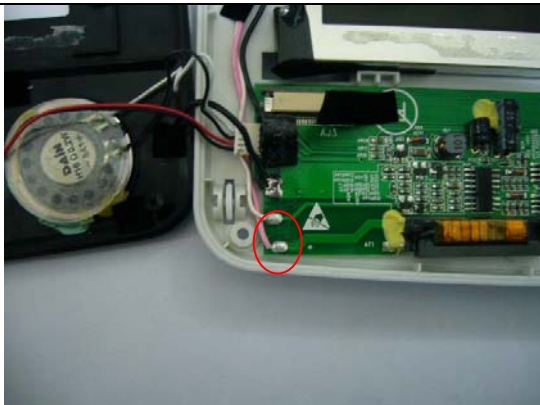
4.0 MECHANICAL INSTRUCTION



8. Remove 10pcs of screws on the TFT bottom cabinet. Then you can open the display frame, carefully! (There is a catch as shown in the pictures)



9. To remove the hinge, remove the screws on the hinge.



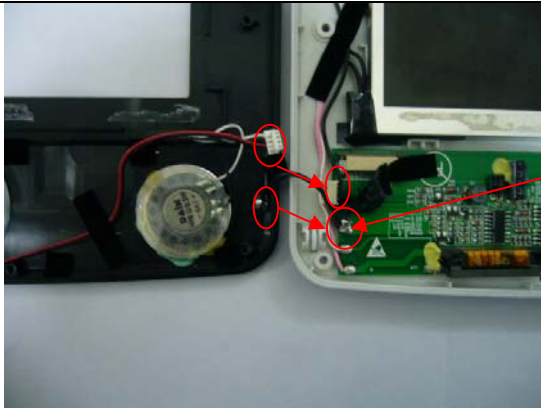
10. To remove the TFT, de-soldering the wire connected between panel and TFT board first; After this, up-plug the FFC from TFT board which behind the black flannel; Then you can separate the panel.



But be-careful, the panel is fixed by 4pcs two side tape.



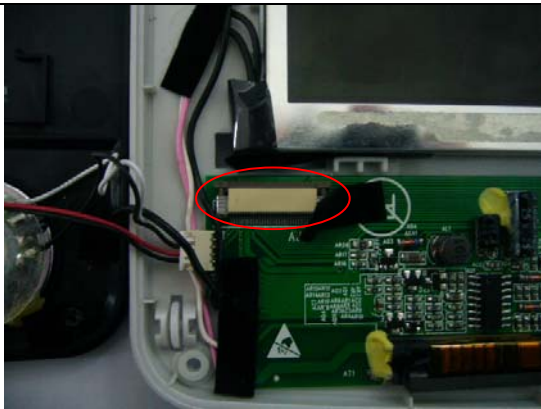
4.0 MECHANICAL INSTRUCTION



11. up-plug the speaker line from TFT board, and don't forget de-soldering the black ground wire behind black flannel.



At last you can take out the driver board from cabinet using eradicator.

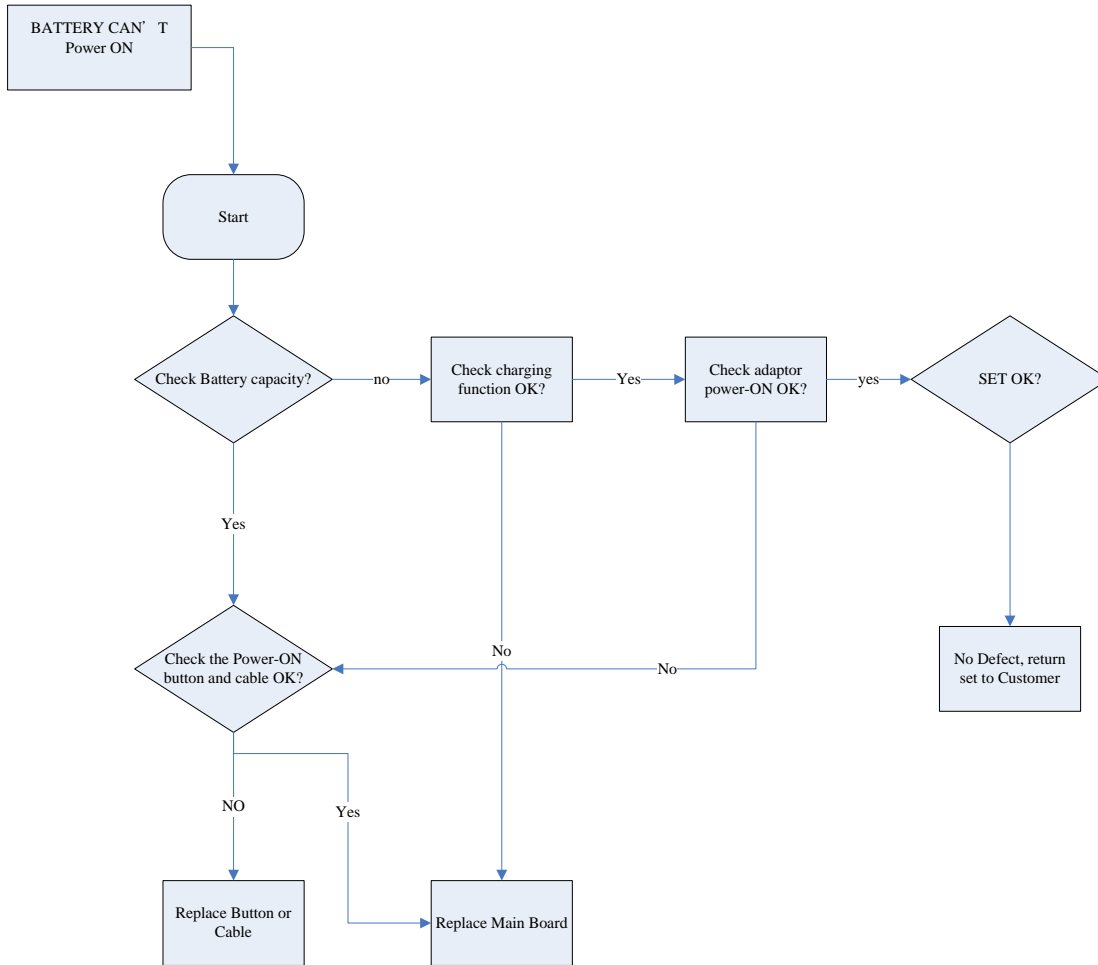


12. Don't forget to up-plug the FFC which connect with TFT board and main board



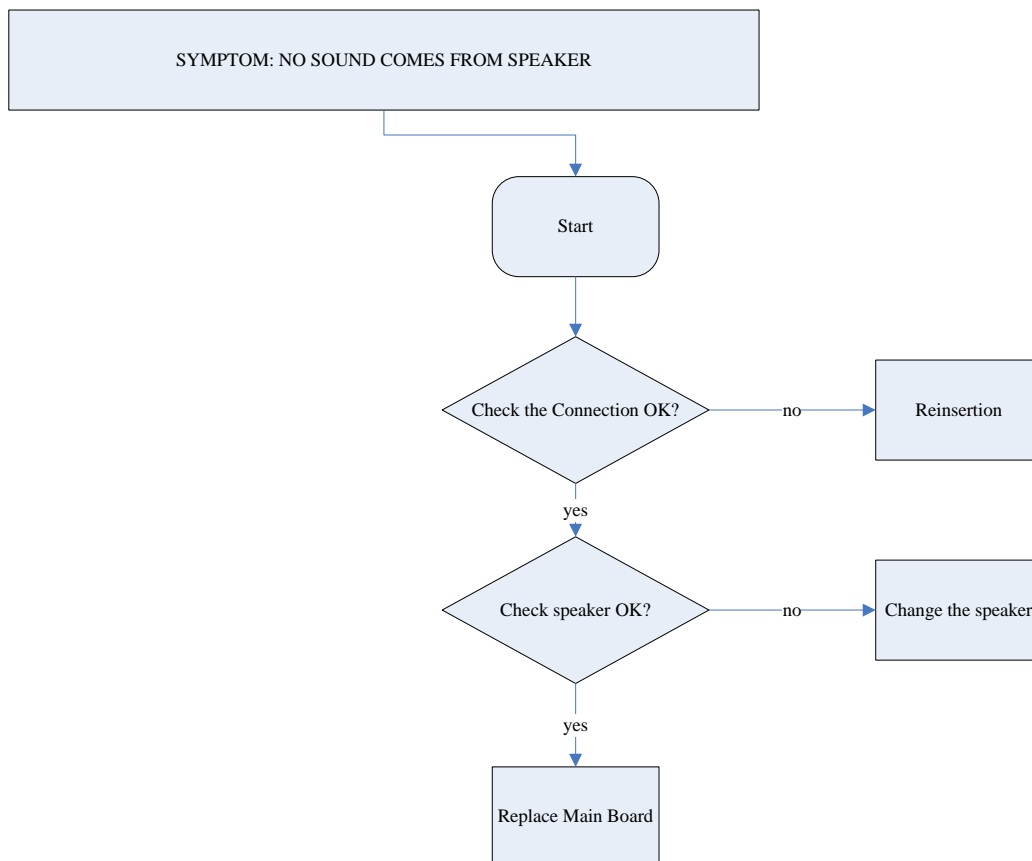
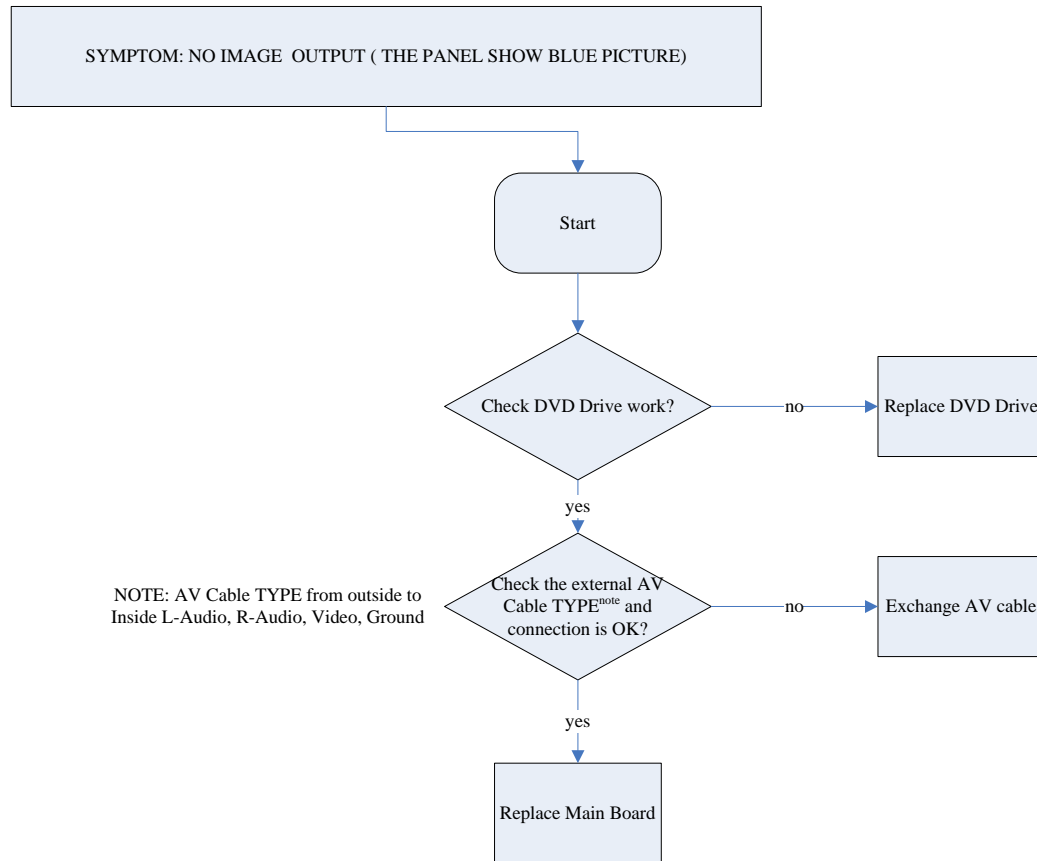
5.0 TROUBLESHOOTING

SYMPTOM: BATTERY NO POWER



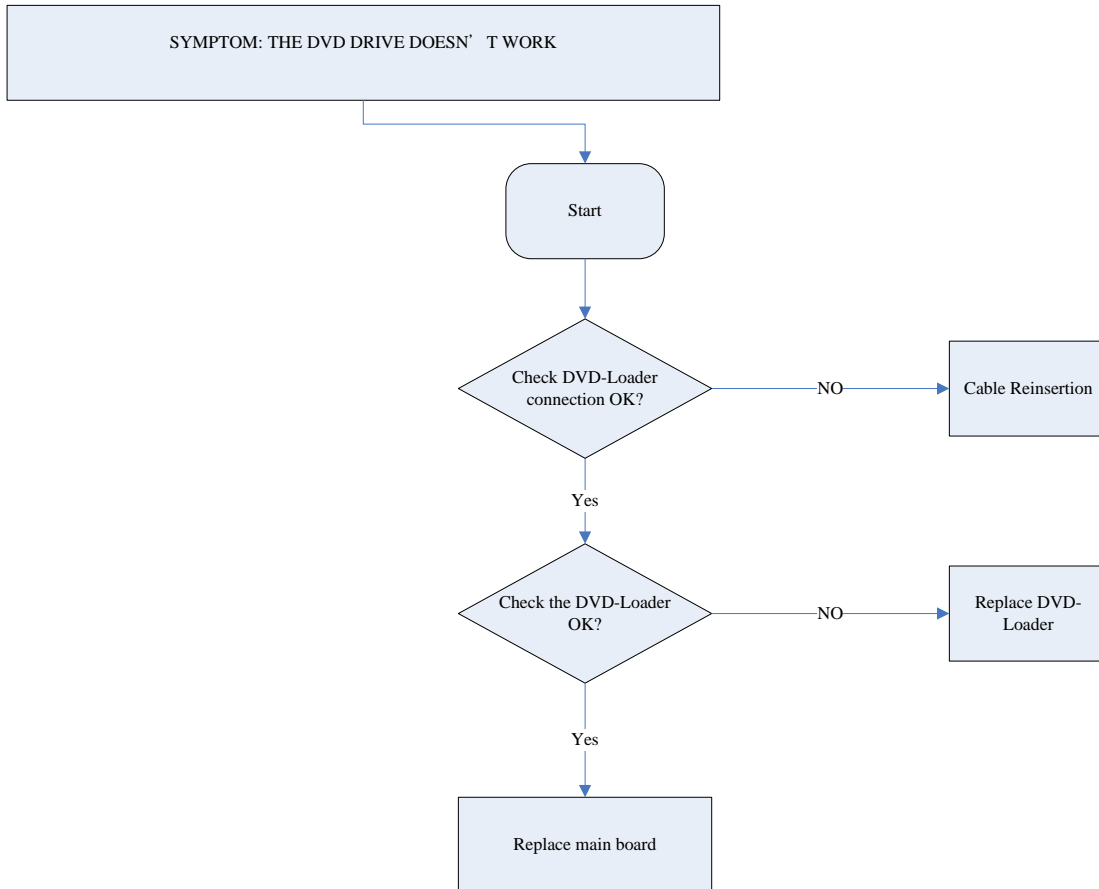
5.0 TROUBLESHOOTING

SYMPTOM: NO IMAGE / NO SOUND



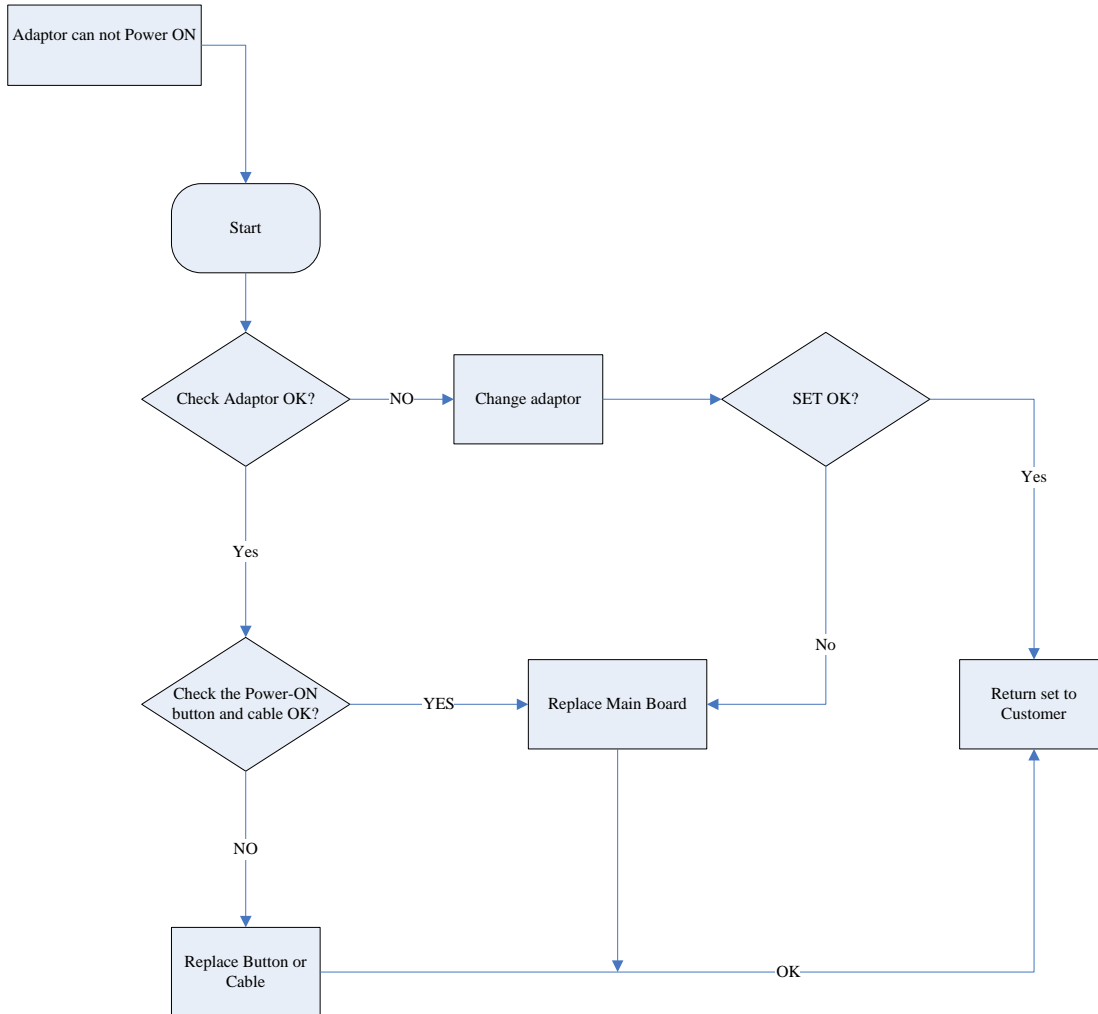
5.0 TROUBLESHOOTING

SYMPTOM: THE DVD DRIVE DOES NOT WORK



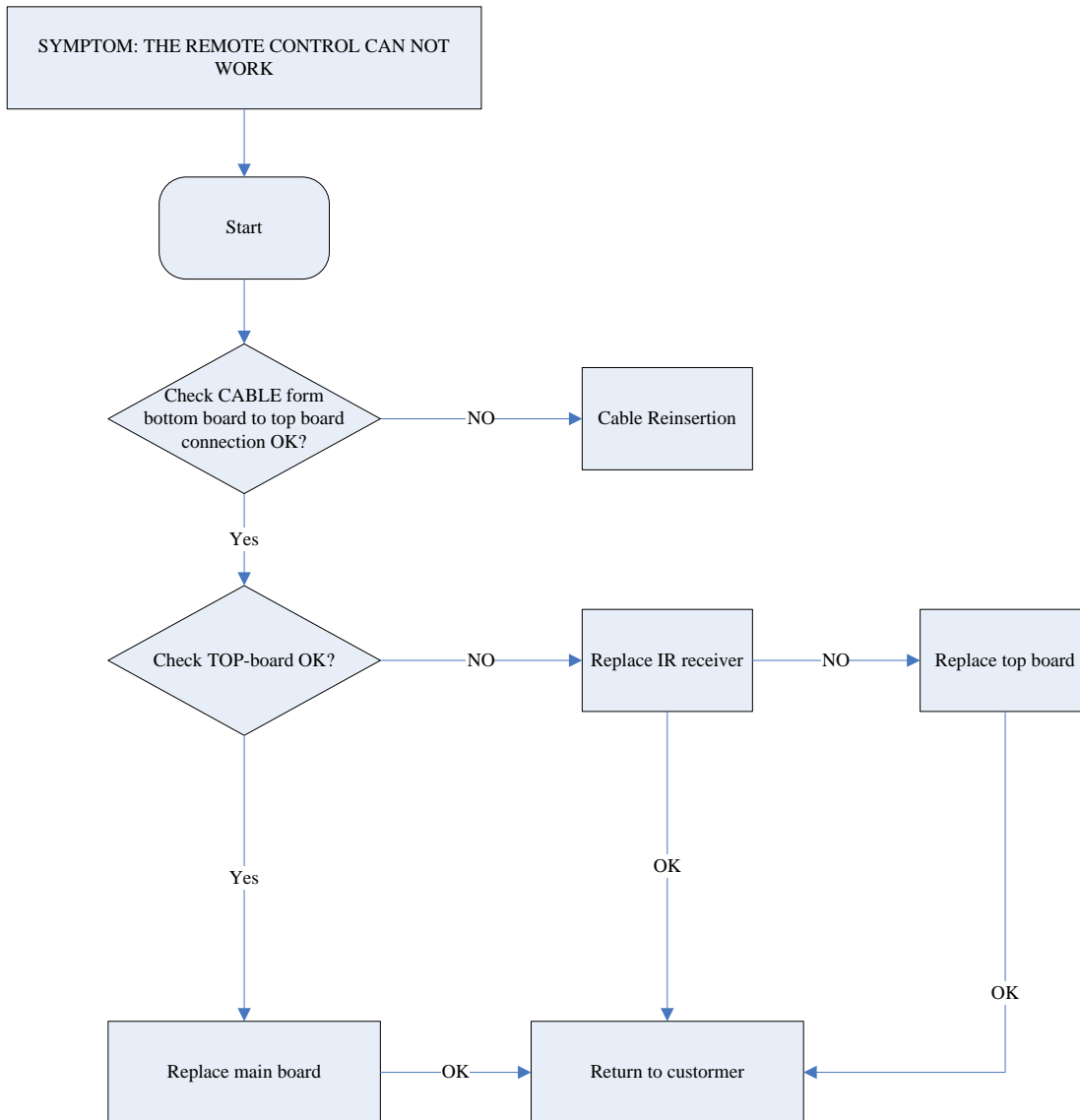
5.0 TROUBLESHOOTING

SYMPTOM: ADAPTOR CANNOT POWER ON



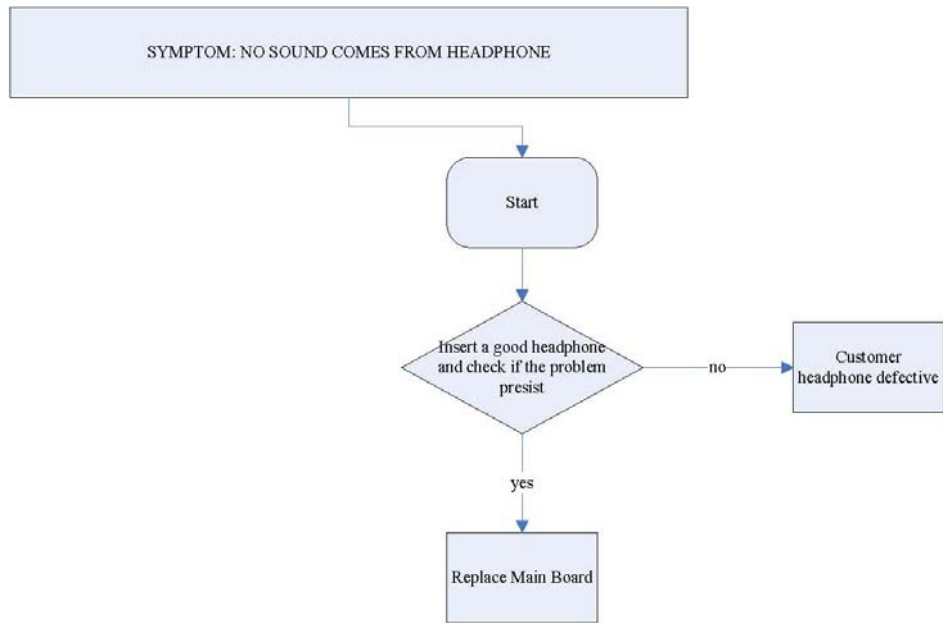
5.0 TROUBLESHOOTING

SYMPTOM: REMOTE CONTROL CANNOT WORK



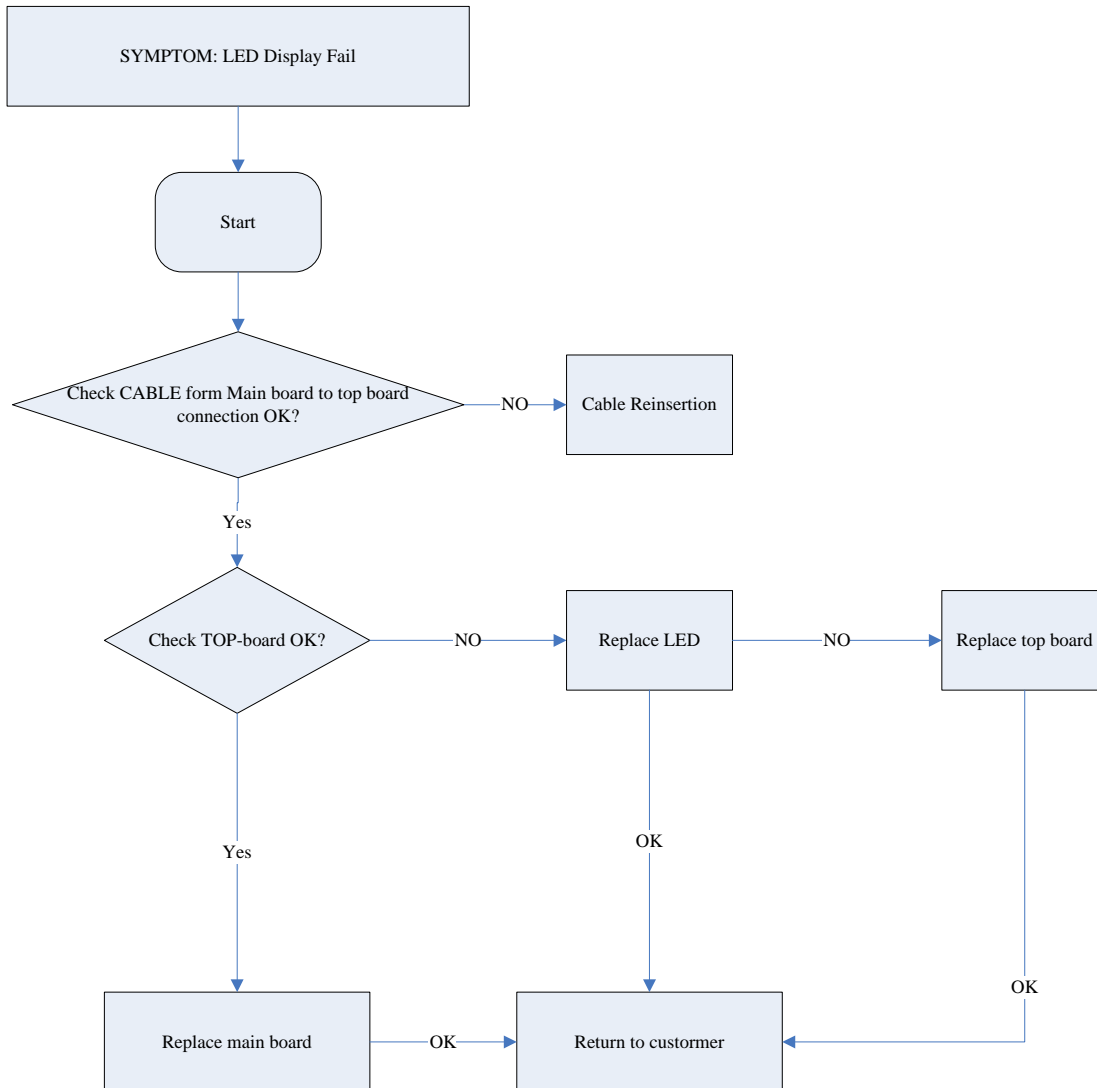
5.0 TROUBLESHOOTING

SYMPTOM: NO SOUND FROM HEADPHONE



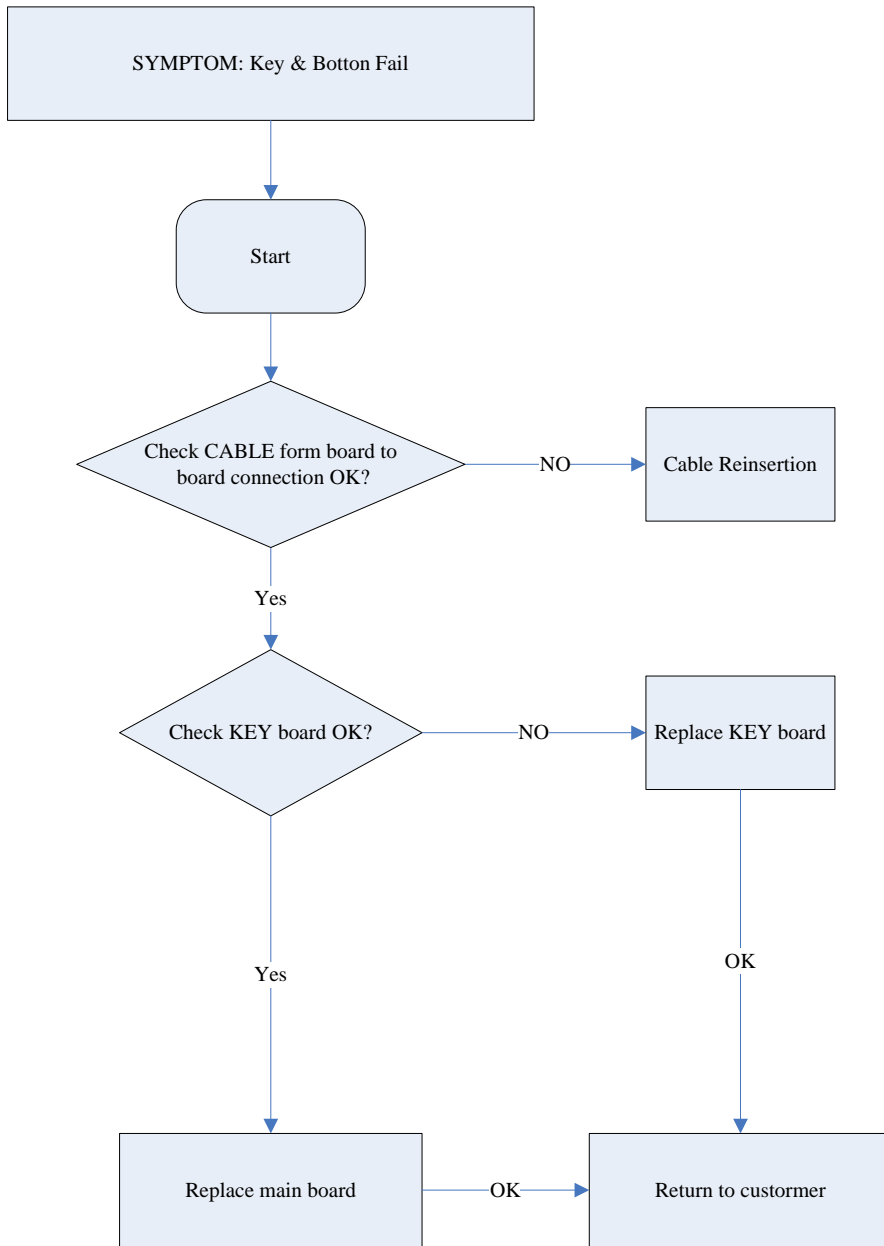
5.0 TROUBLESHOOTING

SYMPTOM: LED DISPLAY FAILURE

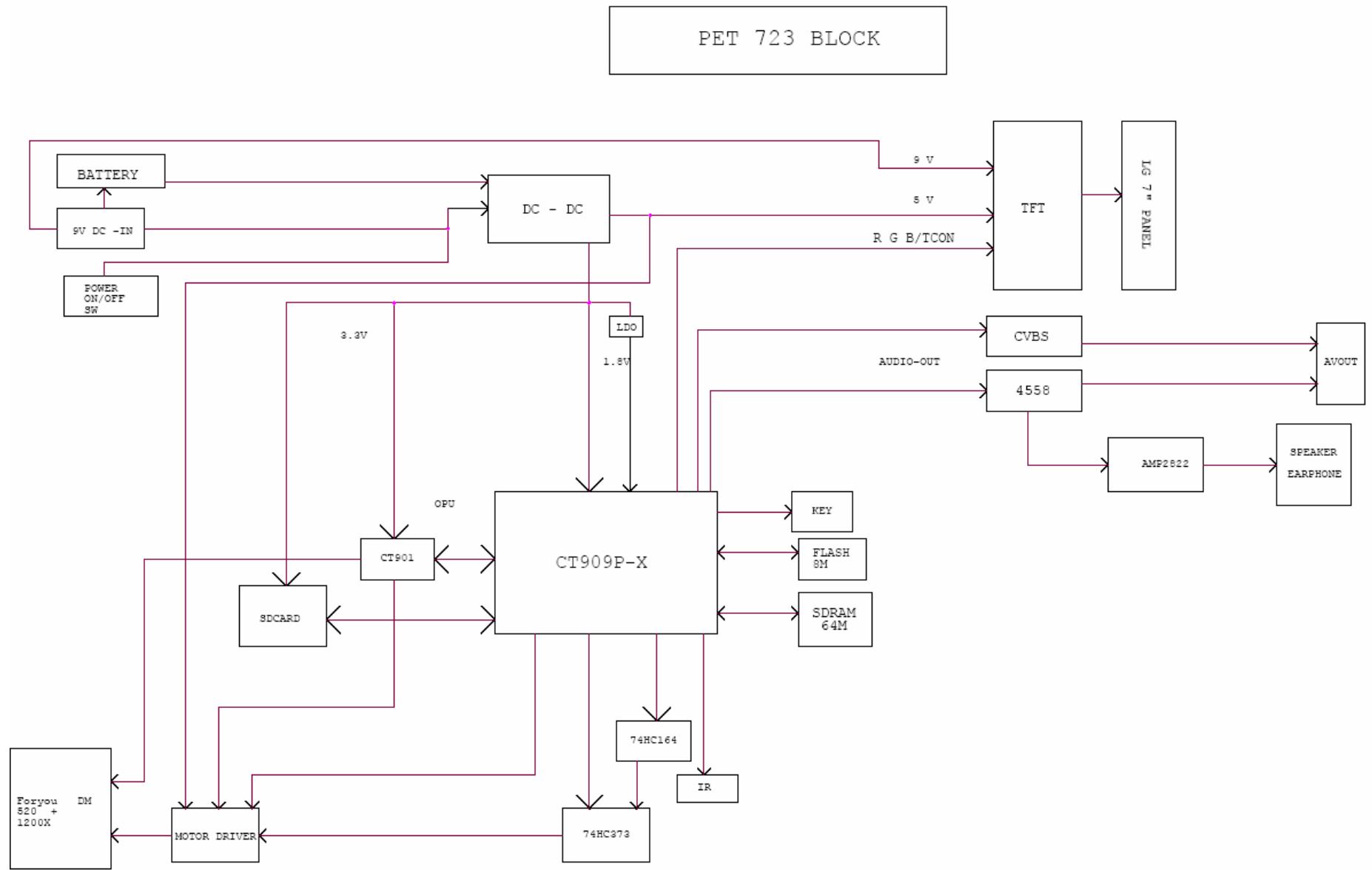


5.0 TROUBLESHOOTING

SYMPTOM: KEY & BOTTON FAILURE



6.0 BLOCK DIAGRAM



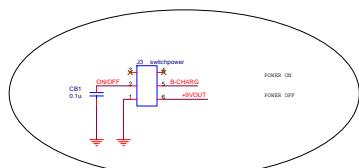
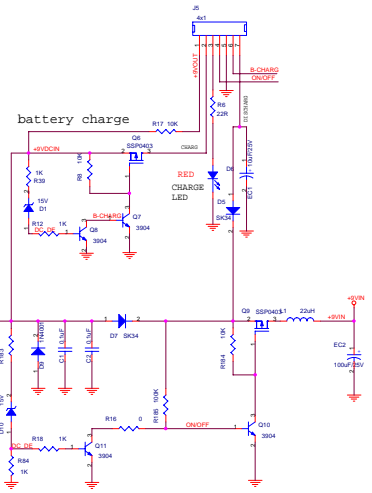
7.0 ELECTRICAL DIAGRAM

The following pages contain electrical diagram in below sequence:

1. Main board (5pages)
2. TFT driver board (1page)

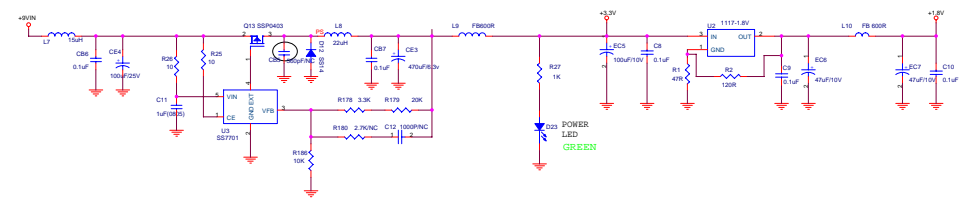
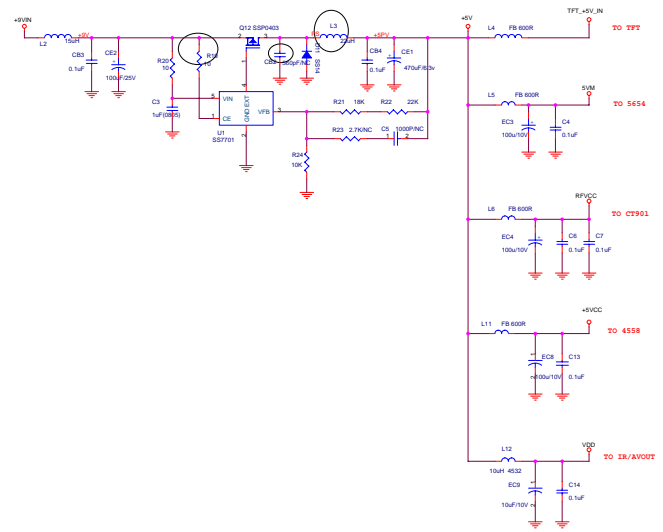
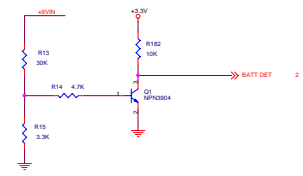


battery charge



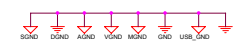
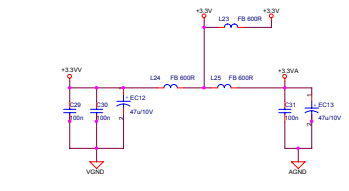
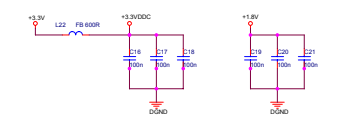
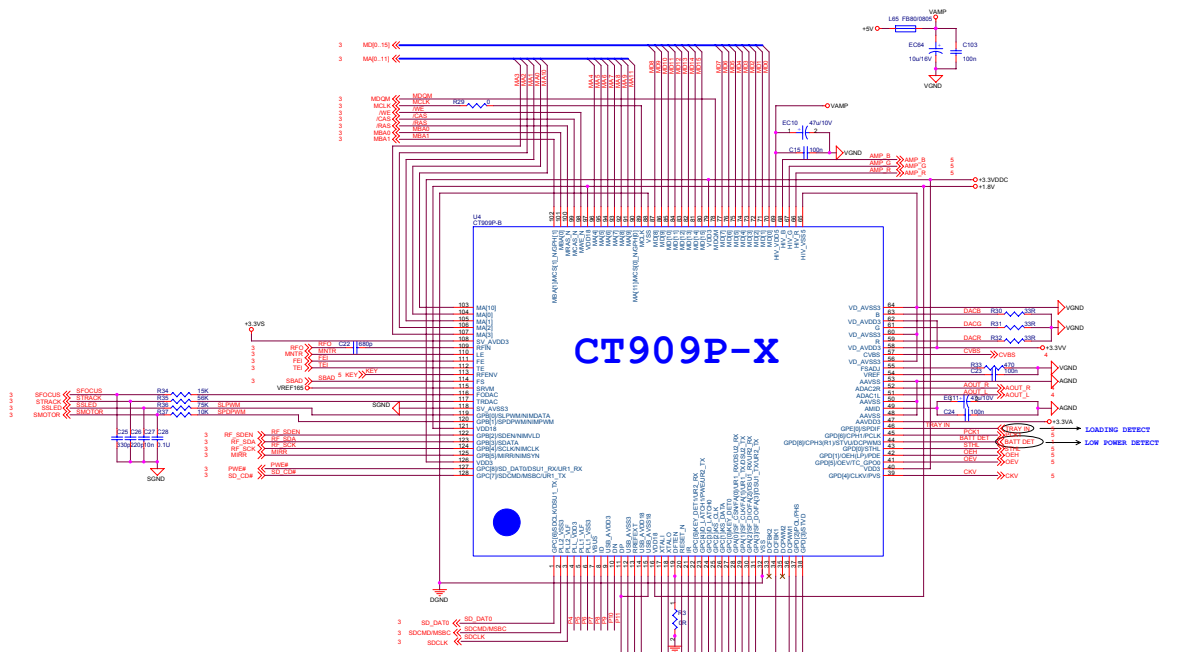
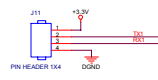
The power switch is on the battery board

- 4.5V IN → +5VIN 4.5
- 4.5V IN → +3.3V 2
- 4.5V IN → +3.3V 2.3
- TFT+5V_IN → TFT+5V_IN 5
- 5V IN → +5VIN 3
- 5V IN → +5VCC 3
- 5V IN → +5VCC 4
- 5V IN → +5V 2.4

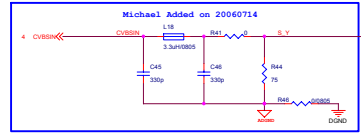


CT909P-X

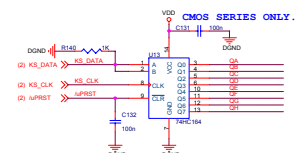
+3.3V → +3.3V 13
 +1.8V → +1.8V 1



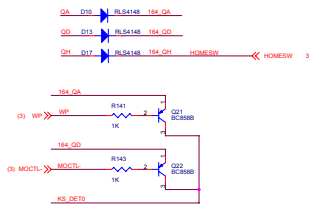
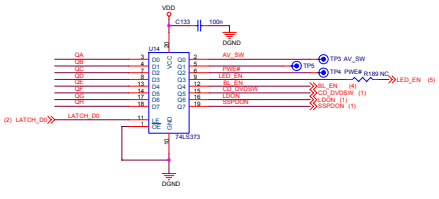
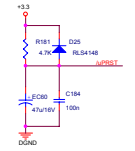
delete this circuit

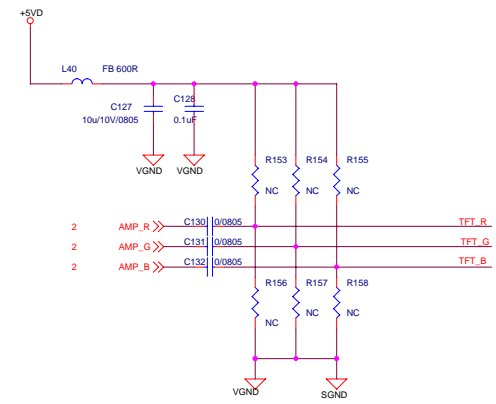
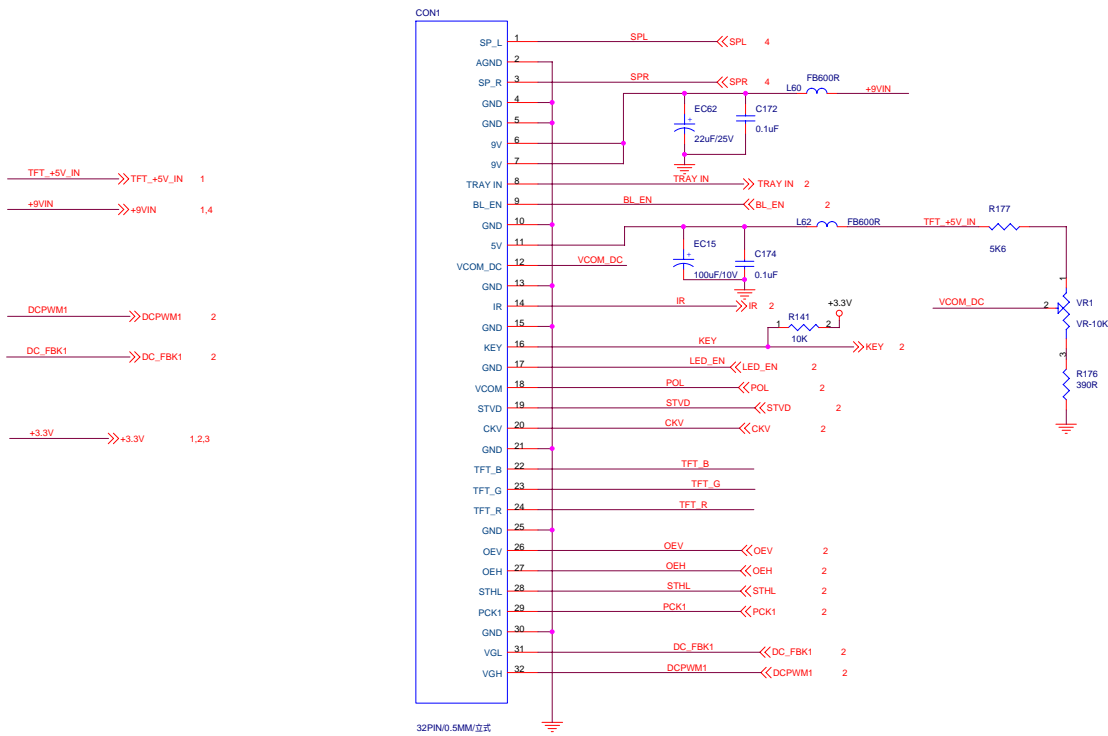


CRYSTAL

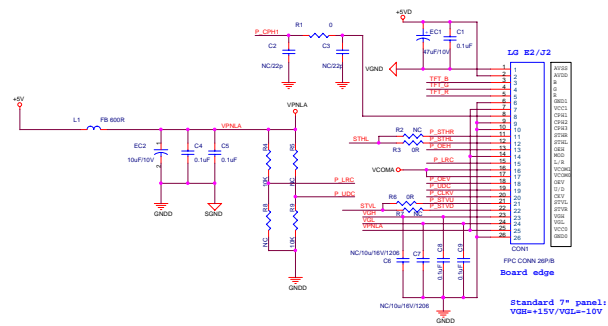
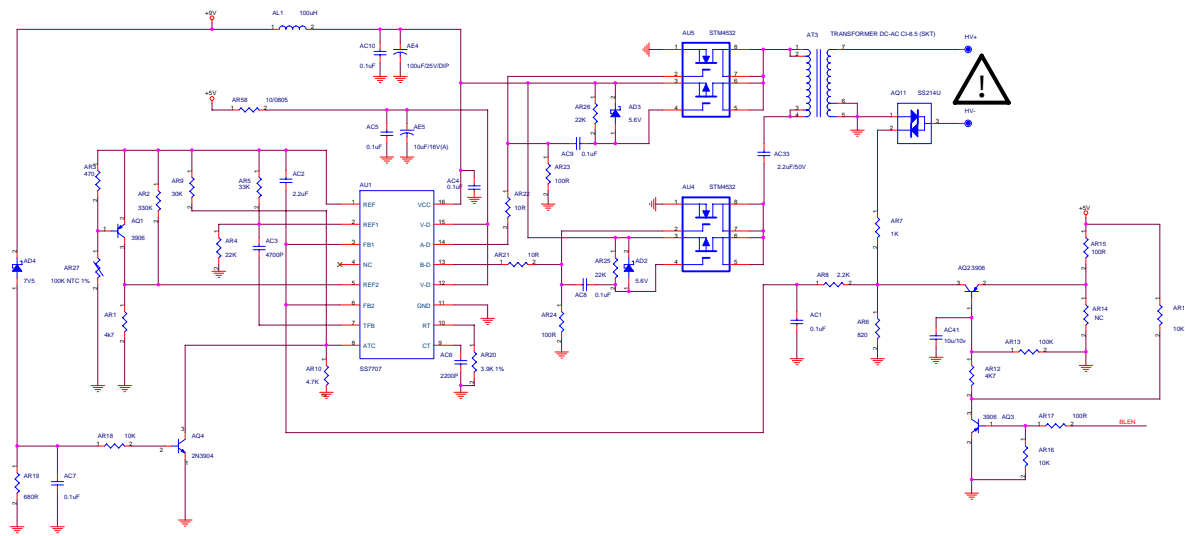


RESET CIRCUIT

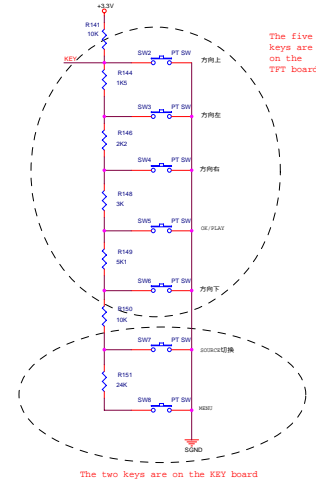
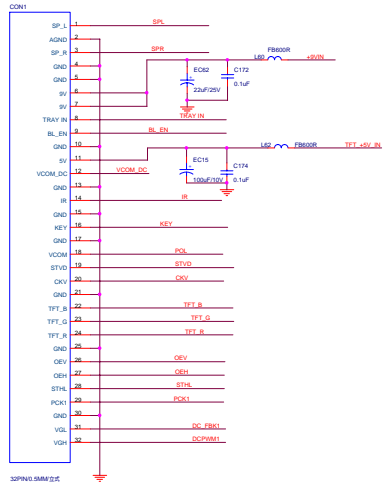
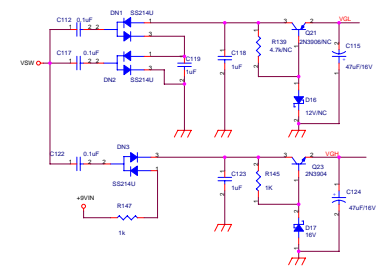
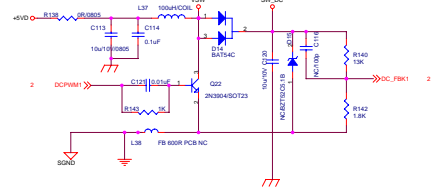
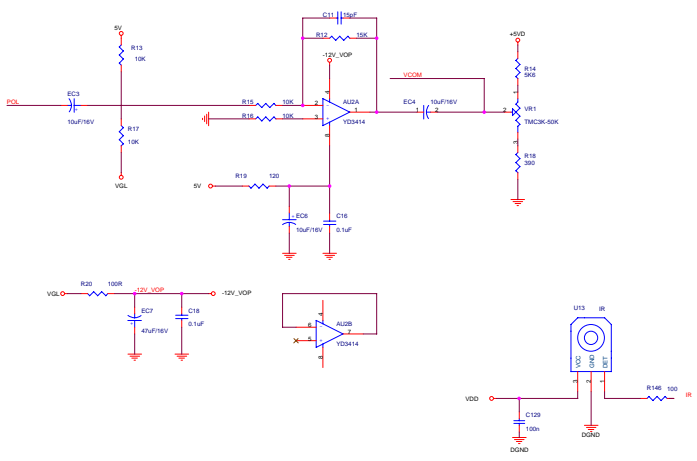




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Size	Document Number	Rev	
C	<Doc>	1.0	
Date:	Wednesday, March 19, 2008	Sheet	5 of 5

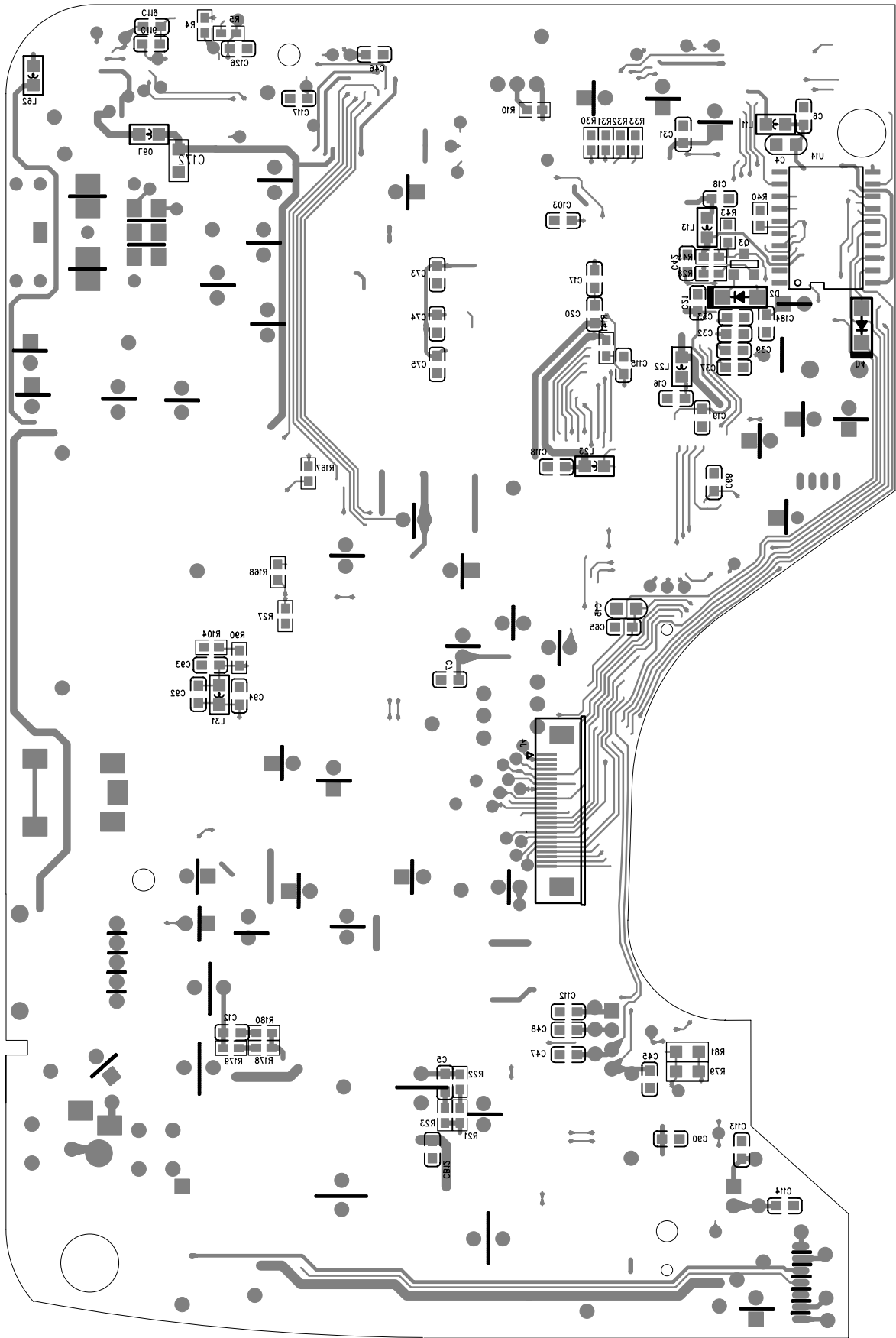


Standard 7" panel:
VGH=+15V/VGL=-10V

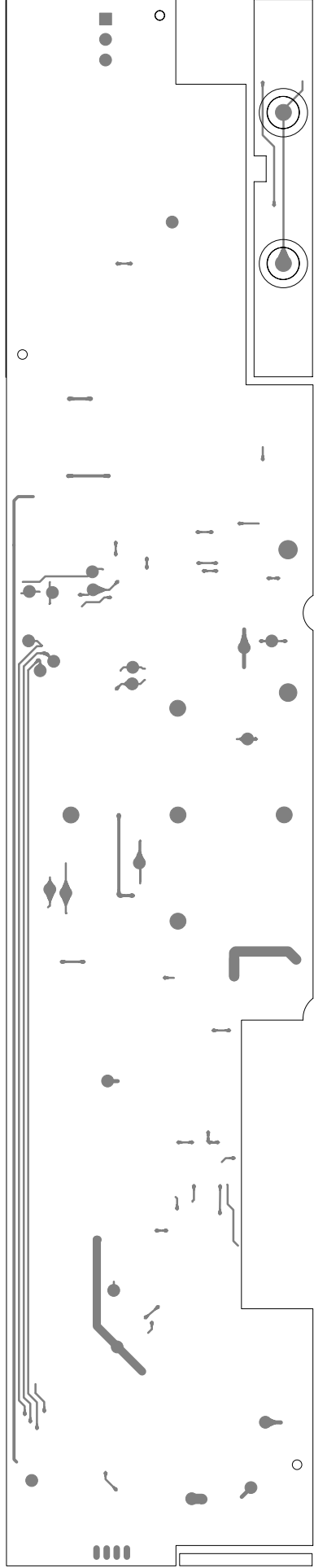


The two keys are on the KEY board

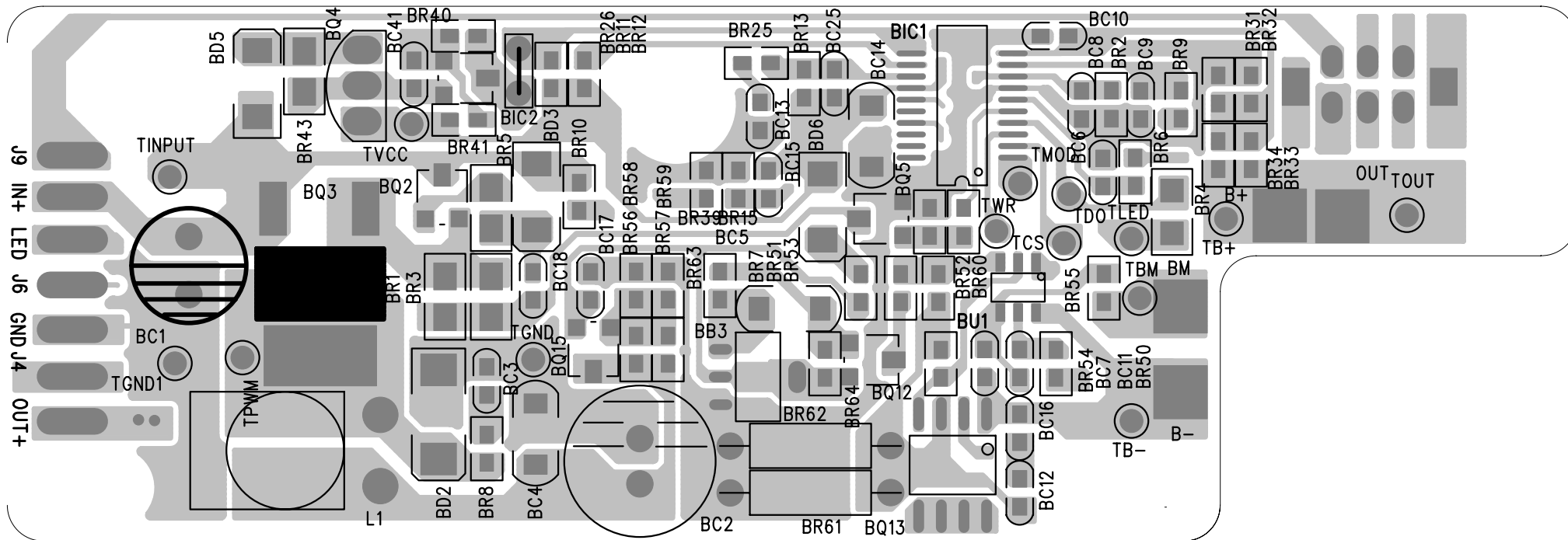
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Doc ID	Document Number
Doc Rev	01
Doc Date	Washington, March 11, 2008



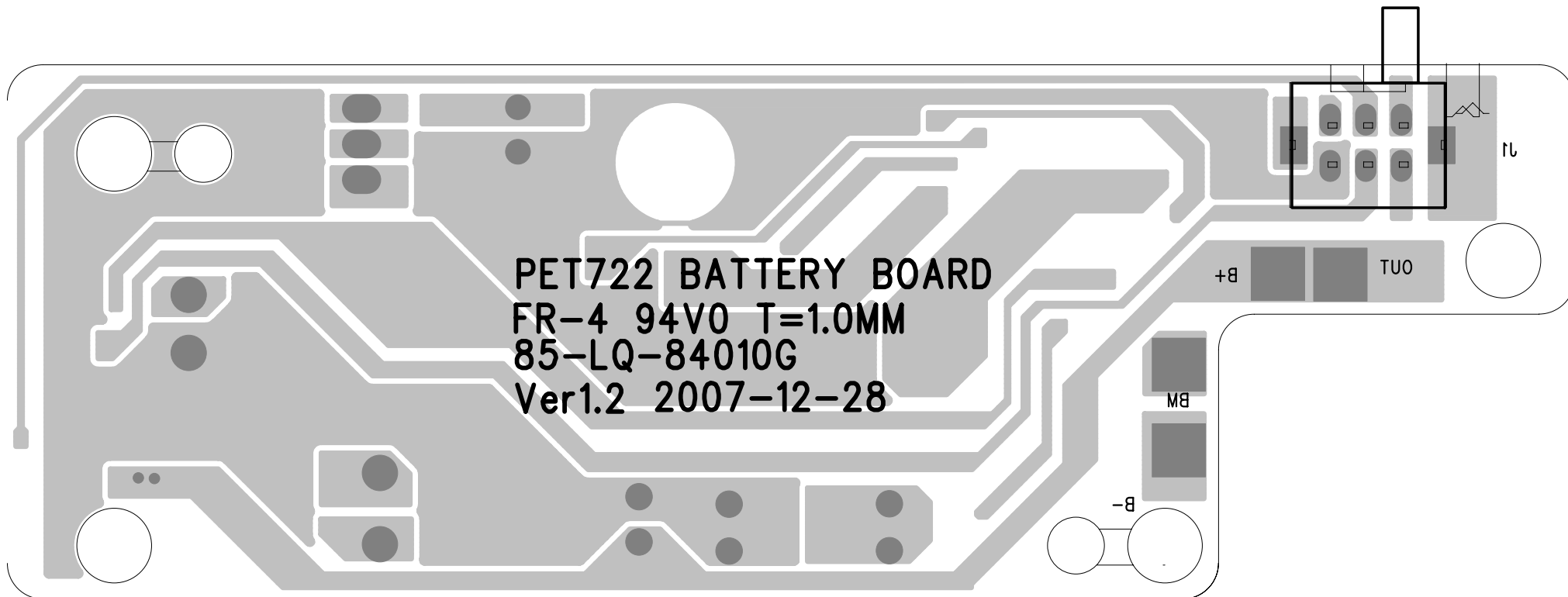
PET723 MAIN BOTTOM



PET723 DRIVER BOTTOM



PET722 BATTERY TOP



PET722 BATTERY BOTTOM







8.0 SERVICE PART LIST

Electrical Part List:

CTN	Service 12NC	Service Description	Photo	Pos. No.
PET723/05 PET723/12 PET723/93 PET723/98	996510013814	MAIN PCBA		100
PET723/05 PET723/12 PET723/93 PET723/98	996510013815	TFT DRIVER PCBA + KEY PCBA		110
PET723/05 PET723/12 PET723/93 PET723/98	996510013816	BATT & BATT PCBA ASSY		120
PET723/05 PET723/12 PET723/93 PET723/98	996510002384	FFC 24PIN		141
PET723/05 PET723/12 PET723/93 PET723/98	996510013818	FFC 32PIN		142

8.0 SERVICE PART LIST

Mechanical Part List:

CTN	Service 12NC	Service Description	Photo	Pos. No.
PET723/05 PET723/12	996510009852	7" LCD PANEL ASSY LG J2		200
PET723/93 PET723/98	996510002360	7" LCD PANEL ASSY LG E2		
PET723/05 PET723/12 PET723/93 PET723/98	996510007686	DVD LOADER 1200X		210
PET723/05 PET723/12 PET723/93 PET723/98	996510013819	MONITOR TOP CABINET & SPEAKER		300
PET723/05 PET723/12 PET723/93 PET723/98	996510013820	MONITOR BOTTOM CABINET		310
PET723/05 PET723/12 PET723/93 PET723/98	996510011216	DVD TOP CABINET		320
PET723/05 PET723/12 PET723/93 PET723/98	996510011217	DVD BOTTOM CABINET		330
PET723/05 PET723/12 PET723/93 PET723/98	996510011218	NAVIGATION BUTTON		340

8.0 SERVICE PART LIST

Mechanical Part List:

No.	Service 12NC	Service Description	Photo	Pos. No.
PET723/05 PET723/12 PET723/93 PET723/98	996510011219	OK BUTTON		350
PET723/05 PET723/12 PET723/93 PET723/98	996510011220	NENU BUTTON		360
PET723/05 PET723/12 PET723/93 PET723/98	996510011221	AV OUT / DVD BUTTON		370
PET723/05 PET723/12 PET723/93 PET723/98	996510011222	POWER BUTTON		380
PET723/05 PET723/12 PET723/93 PET723/98	996510011224	MONITOR LENS		390
PET723/05 PET723/12 PET723/93 PET723/98	996510011225	DVD LENS		400
PET723/05 PET723/12 PET723/93 PET723/98	996510011226	STAND PC		410
PET723/05 PET723/12 PET723/93 PET723/98	996510011227	STAND REEL		420


8.0 SERVICE PART LIST

Mechanical Part List:

CTN	Service 12NC	Service Description	Photo	Pos. No.
PET723/05 PET723/12 PET723/93 PET723/98	996510011228	R STAND LOCK POM		430
PET723/05 PET723/12 PET723/93 PET723/98	996510011229	L STAND LOCK POM		440
PET723/05 PET723/12 PET723/93 PET723/98	996510011230	WHEEL POM		450
PET723/05 PET723/12 PET723/93 PET723/98	996510011231	PLATE SLIDE STEEL		460
PET723/05 PET723/12 PET723/93 PET723/98	996510011232	PLATE MICRO-NET		470
PET723/05 PET723/12 PET723/93 PET723/98	996510011233	HINGE STEEL		480

8.0 SERVICE PART LIST

Accessories Part List:

Service 12NC	Service Description	Photo	Pos. No.
996510010377	AC/DC ADAPTER FOR PET723/05		ACAPT
996510002353	AC/DC ADAPTER FOR PET723/12		
996510011235	AC/DC ADAPTER FOR PET723/37		
996510012875	AC/DC ADAPTER FOR PET723/93		
996510010378	AC/DC ADAPTER FOR PET723/98		
996510004975	AV CABLE		AVCABLE
996510006564	CAR ADAPTER		CARAPT
996510013813	REMOTE CONTROL AY5510		RC

9.0 REVISION LIST

Version 1.0 (3141 785 32530)

- Initial release PET723/05, /12, /93, /98